DOCKETED	
Docket Number:	09-AFC-05C
Project Title:	Abengoa Mojave Compliance
TN #:	254939
Document Title:	Atlantica Comments - 5-Mojave Solar Project 2023 Annual Compliance Report
Description:	N/A
Filer:	System
Organization:	Atlantica/Mahnaz Ghamati
Submitter Role:	Applicant Representative
Submission Date:	3/8/2024 2:39:08 PM
Docketed Date:	3/8/2024

Comment Received From: Mahnaz Ghamati
Submitted On: 3/8/2024
Docket Number: 09-AFC-05C

5-Mojave Solar Project 2023 Annual Compliance Report (09-AFC-5C)

Additional submitted attachment is included below.

Atlantica
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Mojave Solar LLC

Automated Fire Systems Inspection Checklist

Plant: ALPHA ☐ BETA: ☐ Date: _____ Operator _____

Valve Shed # 1 by Condenser

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	SG Unit 1	B1-1	160	O/C	Y	Y N	
2	SG Unit 2	B1-2	160	O/C	Y	Y N	
3	Reheaters	B1-3	160	O/C	Y	Y N	
4	Rack 2 West HTF	B1-4	160	O/C	Y	Y N	
5	Rack 2 East HTF	B1-5	160	O/C	Y	Y N	
6	North Steel Pro	B1-6	160	O/C	Y	Y N	
7	HTF Pumps	B1 7	160	O/C	Y	Y N	
8	HTF Heaters	B1-8	160	O/C	Y	Y N	
9	South Steel Pro	B1-9	160	O/C	Y	Y N	
10	Lube Oil	B1-10	160	O/C	Y	Y N	
11	Turbine Base Stations	B1 11	160	O/C	Y	Y N	
12	Turbine Bearings	B1 12	160	O/C	Y	Y N	

Valve Shed # 2 by Overflow

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Expansion Vessels	B2-1	160	O/C	Y	Y N	
2	Village Area	B2-2	160	O/C	Y	Y N	
3	Village Structure	B2 11	160	O/C	Y	Y N	
4	Rack 1 Middle Area	B2 5	160	O/C	Y	Y N	
5	Overflow Tanks	B2 9	160	O/C	Y	Y N	
6	Rack 1 South Area	B2-6	160	O/C	Y	Y N	
7	Rack 1 West	B2-7	160	O/C	Y	Y N	
8	Rack 1 North Area	B2-4	160	O/C	Y	Y N	
9	Over flow AFFF	B2-8	160	O/C	Y	Y N	
10	Expansion Vessel AFFF	B2-3	160	O/C	Y	Y N	

Valve Shed # 3 by Bldg 35 GE Electrical Bldg

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Transformer Aux	160	O/C	Y	Y N	
2	Transformer Main	160	O/C	Y	Y N	

Valve Shed # 4 by Cooling Tower West Side

No.	System	PSI	Viv. Pos.	Signage		Comments
1	Cooling Tower West Side	160	O/C	Y	Y ☐ N	

Valve Shed # 5 by Control Bldg 10

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Control Room	B4-5	Locked	O/C		Y ☐ N ☐	
2	Offices	B4-3		O/C		Y ☐ N ☐	
3	Electrical Room	B4-4		O/C		Y ☐ N ☐	

Turbine Sprinkler Valves (These are to be locked in the open position)

No.	System	Locked	Viv. Pos.	Comments
1	Bearing 2	Y N	O/C	
2	Bearing 3	Y N	O/C	
3	Bearing 4	Y N	O/C	
4	Bearing 5	Y N	O/C	

HTF Deluge System Valves (To be Locked in the Open Position)

No.	System	Locked	Viv. Pos.	Comments
1	MP-201	Y ☐ N	O/C	
2	MP-200A	Y N ☐	O/C	
3	MP-200B	Y ☐ N	O/C	
4	MP-200C	Y N ☐	O/C	
5	MP-200D	Y N ☐	O/C	

Fire Pump House Deluge System

No.	System	PSI	O/C	Locked	Comments
1	Fire Pump House Deluge	120	O	Y N ☐	

PIV Checks

No.	System	Position	Cycled	Date Cycled	Comments
1	Maintenance Shop Drive Way #7	O/C			
2	Maintenance Shop Drive Way #8	O/C			
3	West Side Power Block by VS-3 # 9	O/C	#		
4	West Side Power Block by VS-1 # 10	O/C			
5	West Side Cooling Tower by VS-4 # 11	O/C			
6	West side Cooling Tower by VS-4 # 12	O/C			
7	N.W. Corner Chemical Storage #1	O/C			
8	N.E. Corner Chemical Storage # 2	O/C			
9	East Side W.T. by Multimedia Filters # 3	O/C			
10	East Side W.T. by Multimedia Filters # 5	O/C			
11	North Side Bldg 10 # 6	O/C			
12	Between MP-444's and Water Treat # 4	O/C			
13	West Side Power Block Valve Shed #1	O/C			

To Be Cycled First Saturday of Every Month

No.	System	Debris	Comments / Actions
1	Transformer Yard Refuse Check	Y ☐ N	

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Fire Pump Weekly Test Log

General Information

Plant: Alpha ☐ Beta ☑ | Date: 10-1-23

Operator: Erick Carrillo | *To be completed each time unit is operated.

Reason for running pumps: Weekly test ☑ Maintenance ☐ Emergency _

Jockey Electric Pump

Pre-start Inspection: Electrical Feed ☑ Mechanical ☑ Valves ☑

Check the jockey pump on pressure drop. Start up pressure: 155.

Discharge Pressure: 162.

Pump Suction Pressure: N/A Pump Discharge pressure: 162

Comments:

Electric Pump

Pre-start Inspection: Electrical Feed ☑ Mechanical ☑ Valves ☑

Start the pump on pressure drop. Start up pressure: 145

Start time:

Pump Suction Pressure: 12 Pump Discharge pressure:

Stop time: Total time running

Comments:

Diesel Pump

Pre-start Inspection: Coolant ☑ Oil ☑ Mechanical ☑ Valves ☑ Water Jacket Heater ☑

Fuel level > 2/3: Yes ☑ No ☐ Monthly Fuel Consumption: 1760 RPM

Battery volt Crank 1: 27.1 Battery volt Crank 2: 27.1 | Battery Condition: Good

Starting hour meter: 131.9 | Start time: 18:50

Oil pressure start: 55 | Oil Pressure finish: 34psi

Pump Suction Pressure: 24 Pump Discharge pressure: 150

Coolant temperature after 30 minutes running: 136°F start / 205

Stop time: 19:00 Stop hour meter: 132 Total run time: 10min January 1st hour meter: Total YTD hours:

Comments: High temp, charge air cooler.

NOTE TESTING FOR NFPA COMPLIANCE ONCE 10 HOURS YTD RUN TIME IS EXCEEDED

Sulfur Concentrations (less than or equal to 0.0015% on a weight per weight basis).

This new direct drive fire pump engine shall be limited to use for emergency fire suppression, defined as in response to a fire or due to low fire water pressure. In addition, this engine shall be operated no more than 30 minutes in any one hour and no more than 10 hours per year for initial start-up testing and compliance demonstrations. Additionally, this engine shall not be operated more than the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 "Standards for the Inspection, Testing, and Maintenance of Water Based Fire Systems" (current edition). The hours of operation for source testing will not be counted towards either of the allowable annual limits above.

Note: Fuel consumption 27 gal/h approximately.

There is no limit on engine operation for emergency use. [Title 17 CCR 93115.6(a)(1)]

Atlantica
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Mojave Solar LLC

Automated Fire Systems Inspection Checklist

Plant: ALPHA ☐ BETA: Date: 10/7/23 Operator Erick

Valve Shed # 1 by Condenser

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	SG Unit 1	B1-1	165	✓ O/C	✓	Y ☐ N ☐	
2	SG Unit 2	B1-2	160	✓ O/C	✓	Y ☐ N ☐	
3	Reheaters	B1-3	165	✓ O/C	✓	Y ☐ N ☐	
4	Rack 2 West HTF	B1-4	160	✓ O/C	✓	Y ☐ N ☐	
5	Rack 2 East 1	B1-5	160	✓ O/C	✓	Y ☐ N ☐	
6	North Steel Pro	B1-6	165	✓ O/C	✓	Y ☐ N ☐	
7	HTF Pumps	B1-7	160	✓ O/C	✓	Y ☐ N ☐	
8	HTF Heaters	B1-8	160	✓ O/C	✓	Y ☐ N ☐	
9	South Steel Pro	B1-9	165	✓ O/C	✓	Y ☐ N ☐	
10	Lube Oil	B1-10	160	✓ O/C	✓	Y ☐ N ☐	
11	Turbine Hose Stations	B1-11	160	✓ O/C	✓	Y ☐ N ☐	
12	Turbine Bearings	B1-12	160	✓ O/C	✓	Y ☐ N ☐	

Valve Shed # 2 by Overflow

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Expansion Vessels	B2-1	160	✓ O/C	✓	Y ☐ N ☐	
2	Ullage Area	B2-2	160	✓ O/C	✓	Y ☐ N ☐	
3	Ullage Structure	B2-3	160	✓ O/C	✓	Y ☐ N ☐	
4	Rack 1 Middle Area	B2-5	160	✓ O/C	✓	Y ☐ N ☐	
5	Overflow Tanks	B2-6	165	✓ O/C	✓	Y ☐ N ☐	
6	Rack 1 South Area	B2-6	165	✓ O/C	✓	Y ☐ N ☐	
7	Rack 1 West	B2-7	160	✓ O/C	✓	Y ☐ N ☐	
8	Rack 1 North Area	B2-4	160	✓ O/C	✓	Y ☐ N ☐	
9	Overflow ATF	B2-5	165	✓ O/C	✓	Y ☐ N ☐	
10	Expansion Vessel ATF	B2-5	160	✓ O/C	✓	Y ☐ N ☐	

Valve Shed # 3 by Bldg 35 GE Electrical Bldg

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Transformer Aux	155	✓ O/C	✓	Y ☐ N ☐	
2	Transformer Main	150	✓ O/C	✓	Y ☐ N ☐	

Valve Shed # 4 by Cooling Tower West Side

No.	System	PSI	Viv. Pos.	Signage		Comments
1	Cooling Tower West Side	160	✓ O/C	✓	Y ☐ N ☐	

Valve Shed # 5 by Control Bldg 10

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Control Room	B4-5	165	✓ O/C	✓	Y ☐ N ☐	
2	Offices	B4-3	165	✓ O/C	✓	Y ☐ N ☐	
3	Electrical Room	B4-4	160	✓ O/C	✓	Y ☐ N ☐	

Turbine Sprinkler Valves (These are to be locked in the open position)

No.	System	Locked	Viv. Pos.	Comments
1	Bearing 2	Y ☐ N ☐	✓ O/C	
2	Bearing 3	Y ☐ N ☐	✓ O/C	
3	Bearing 4	Y ☐ N ☐	✓ O/C	
4	Bearing 5	Y ☐ N ☐	✓ O/C	

HTF Deluge System Valves (To be Locked in the Open Position)

No.	System	Locked	Viv. Pos.	Comments
1	MP 201	Y ☐ N ☐	✓ O/C	
2	MP-200A	Y ☐ N ☐	✓ O/C	
3	MP 200B	Y ☐ N ☐	✓ O/C	
4	MP-200C	Y ☐ N ☐	✓ O/C	
5	MP 200D	Y ☐ N ☐	✓ O/C	

Fire Pump House Deluge System

No.	System	PSI	O/C	Locked	Comments
1	Fire Pump House Deluge	175	O	Y ☐ N ☐	

PIV Checks

No.	System	Position	Cycled	Date Cycled	Comments
1	Maintenance Shop Drive Way #7	O/C			
2	Maintenance Shop Drive Way #8	O/C			
3	West Side Power Block by VS-3 # 9	✓ O/C			
4	West Side Power Block by VS-1 # 10	✓ O/C			
5	West Side Cooling Tower by VS-4 # 11	✓ O/C			
6	West side Cooling Tower by VS-4 # 12	✓ O/C			
7	N.W. Corner Chemical Storage #1	✓ O/C			
8	N.E. Corner Chemical Storage # 2	✓ O/C			
9	East Side W.T. by Multimedia Filters # 3	✓ O/C			
10	East Side W.T. by Multimedia Filters # 5	✓ O/C			
11	North Side Bldg 10 # 6	✓ O/C			
12	Between MP 444's and Water Tank # 4	O/C ✓			
13	West Side Power Block Valve Shed #7	✓ O/C			

To Be Cycled First Saturday of Every Month

No.	System	Debris	Comments / Actions
1	Transformer Yard Refuse Check	Y ☐ N ☐	

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Sustainable Infrastructure

Mojave Solar LLC

Fire Pump Weekly Test Log

General Information

Plant: Alpha ☑ Beta ☐ Date: 11/26/23

*To be completed each time unit is operated.

Operator: Erick

Reason for running pumps: Weekly test ☑ Maintenance ☐ Emergency ☐

Jockey Electric Pump

Pre-start Inspection: Electrical Feed ☑ Mechanical ☑ Valves ☑

Check the jockey pump on pressure drop. Start up pressure: 155psi

Discharge Pressure: 165

Pump Suction Pressure: N/A Pump Discharge pressure: 165.

Comments:

Electric Pump

Pre-start Inspection: Electrical Feed ☑ Mechanical ☑ Valves ☑

Start the pump on pressure drop. Start up pressure: 145psi

Start time: 18:34.

Pump Suction Pressure: 12psi Pump Discharge pressure: 162.

Stop time: 18:44 Total time running 10min.

Comments:

Diesel Pump

Pre-start Inspection: Coolant ☐ Oil ☑ Mechanical ☑ Valves ☑ Water Jacket Heater ☑

Fuel level > 2/3: Yes ☐ No ☑ 1/3 Monthly Fuel Consumption:

Battery volt Crank 1: 27.3 Battery volt Crank 2: 27.3 Battery Condition: Good Corrosion on JA.

Starting hour meter: 129.2. Start time: 18:46

Oil pressure start: 58 Oil Pressure finish: 39 PSi

Pump Suction Pressure: 18 PSi Pump Discharge pressure: 165.

Coolant temperature after 30 minutes running: 129°F start, — 207.

Stop time: 18:54 Stop hour meter: 129.3 Total time running: 8 min.

Comments: RPM's 1763, Fault Charge Air Cooler. temp out of Range. Corrective Action, Increase raw water Flow.

Sulfur Concentrations (less than or equal to 0.0015% on a weight per weight basis).

This new diesel drive fire pump engine shall be limited to use for emergency fire suppression, defined as in response to a fire or due to low fire water pressure. In addition, this engine shall be operated no more than 30 minutes in any one hour and no more than 10 hours per year for initial start-up testing and compliance demonstrations. Additionally, this engine shall not be operated more than the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 "Standards for the Inspection, Testing, and Maintenance of Water Based Fire Systems" (current edition). The hours of operation for source testing will not be counted towards either of the allowable annual limits above.

The fuel consumption 27 gal/h approximately.

There is no limit on engine operation for emergency use. [Title 17 CCR 93115.6(a)(3)]

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Automated Fire Systems Inspection Checklist

Plant: ALPHA ☑ BETA: ☐ Date: 11/25/13 Operator: Diego R.

Valve Shed # 1 by Condenser

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	SG Unit 1	B1-1	155	O/C	✓	Y☑ N☐	
2	SG Unit 2	B1-2	160	O/C	✓	Y☑ N☐	
3	Reheaters	B1-3	160	O/C	✓	Y☑ N☐	
4	Rack 2 West HTF	B1-4	160	O/C	✓	Y☑ N☐	
5	Rack 2 East HTF	B1-5	160	O/C	✓	Y☑ N☐	
6	North Steel Pro	B1-6	160	O/C	✓	Y☑ N☐	
7	HTF Pumps	B1-7	155	O/C	✓	Y☑ N☐	
8	HTF Heaters	B1-8	160	O/C	✓	Y☑ N☐	
9	South Steel Pro	B1-9	160	O/C	✓	Y☑ N☐	
10	Lube Oil	B1-10	160	O/C	✓	Y☑ N☐	
11	Turbine Hose Stations	B1-11	150	O/C	✓	Y☑ N☐	
12	Turbine Bearings	B1-12	160	O/C	✓	Y☑ N☐	

Valve Shed # 2 by Overflow

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Expansion Vessels	B2-1	160	O/C	✓	Y☑ N☐	
2	Ullage Area	B2-2	160	O/C	✓	Y☑ N☐	
3	Ullage Structure	B2-11	160	O/C	✓	Y☑ N☐	~~valved out~~ open
4	Rack 1 Middle Area	B2-5	165	O/C	✓	Y☑ N☐	
5	Overflow Tanks	B2-9	160	O/C	✓	Y☑ N☐	
6	Rack 1 South Area	B2-6	165	O/C	✓	Y☑ N☐	
7	Rack 1 West	B2-7	160	O/C	✓	Y☑ N☐	
8	Rack 1 North Area	B2-4	160	O/C	✓	Y☑ N☐	
9	Over flow AFFF	B2-8	160	O/C	✓	Y☑ N☐	
10	Expansion Vessel AFFF	B2-3	155	O/C	✓	Y☑ N☐	VALVED OUT / closed.

Valve Shed # 3 by Bldg 35 GE Electrical Bldg

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Transformer Aux	160	O/C	✓	Y☑ N☐	
2	Transformer Main	155	O/C	✓	Y☑ N☐	

Valve Shed # 4 by Cooling Tower West Side

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Cooling Tower West Side	160	O/C	X	Y☑ N☐	Needs New Sign.

Valve Shed # 5 by Control Bldg 10

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Control Room	B4-5	160	O/C	✓	Y☑ N☐	
2	Offices	B4-3	160	O/C	✓	Y☑ N☐	
3	Electrical Room	B4-1	160	O/C	✓	Y☑ N☐	

Turbine Sprinkler Valves (These are to be locked in the open position)

No.	System	Locked	Viv. Pos.	Comments
1	Bearing 2	Y☑ N☐	O/C	
2	Bearing 3	Y☑ N☐	O/C	
3	Bearing 4	Y☑ N☐	O/C	
4	Bearing 5	Y☑ N☐	O/C	

HTF Deluge System Valves (To be Locked in the Open Position)

No.	System	Locked	Viv. Pos.	Comments
1	MP-201	Y☐ N☑	O/C	
2	MP 200A	Y☐ N☑	O/C	
3	MP-200B	Y☑ N☐	O/C	
4	MP-200C	Y☑ N☐	O/C	
5	MP-200D	Y☐ N☑	O/C	

Fire Pump House Deluge System

No.	System	PSI	O/C	Locked	Comments
1	Fire Pump House Deluge	[illegible]	O	Y☑ N☐	165 psi

PIV Checks

No.	System	Position	Cycled	Date Cycled	Comments
1	Maintenance Shop Drive Way #7	O/C			
2	Maintenance Shop Drive Way #8	O/C			
3	West Side Power Block by VS-3 # 9	O/C			
4	West Side Power Block by VS-3 # 10	O/C			
5	West Side Cooling Tower by VS-4 # 11	O/C			
6	West side Cooling Tower by VS-4 # 12	O/C			
7	N.W. Corner Chemical Storage #1	O/C			
8	N.E. Corner Chemical Storage # 2	O/C			
9	Gas Side W.T. by Multimedia Filters # 3	O/C			
10	East Side W.T. by Multimedia Filters # 5	O/C			
11	North Side Bldg 10 # 6	O/C			
12	Between MP-444's and Water Treat # 4	O/C			
13	West Side Power Block Valve Shed #7	O/C			

To Be Cycled First Saturday of Every Month

No.	System	Debris		Comments / Actions
1	Transformer Yard Refuse Check	Y☐ N☑		

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Fire Pump Weekly Test Log

General Information

Plant: Alpha ☑ Beta ☐ Date: 11/17/23

Operator: Diego Rodriguez *To be completed each time unit is operated.

Reason for running pumps: Weekly test ☑ Maintenance ☐ Emergency ☐

Jockey Electric Pump

Pre-start Inspection: Electrical Feed ☑ Mechanical ☑ Valves ☑

Check the jockey pump on pressure drop. Start up pressure: 155 psi

Discharge Pressure: 165 psi

Pump Suction Pressure: N/A Pump Discharge pressure: 165 psi

Comments:

Electric Pump

Pre-start Inspection: Electrical Feed ☑ Mechanical ☑ Valves ☑

Start the pump on pressure drop. Start up pressure: 145 psi

Start time: 1930

Pump Suction Pressure: 10 psi Pump Discharge pressure: 150 psi

Stop time: 1940 Total time running 10Mins.

Comments:

Diesel Pump

Pre-start Inspection: Coolant ☑ Oil ☑ Mechanical ☑ Valves ☑ Water Jacket Heater ☑

Fuel level > 2/3: Yes ☐ No ☑ Monthly Fuel Consumption: N/A

Battery volt Crank 1: 26.5 Battery volt Crank 2: 26.5 Battery Condition: Need cleaning

Starting hour meter: 129.1 Start time: 1942

Oil pressure start: 67 psi Oil Pressure finish: 44 psi

Pump Suction Pressure: 15 psi Pump Discharge pressure: 165 psi

Coolant temperature after 30 minutes running: 201°F

Stop time: 1952 Stop hour meter: 129. Total time running: 10Mins

Comments:

High Temp ALARM

Sulfur Concentrations (less than or equal to 0.0015% on a weight per weight basis).

his new direct drive fire pump engine shall be limited to use for emergency fire suppression, defined as in response to a fire or due to low fire water pressure. In addition, this engine shall be operated no more than 30 minutes in any one hour and no more than 50 hours per year for initial start-up testing and compliance demonstrations. Additionally, this engine shall not be operated more than the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 "Standards for the Inspection, Testing, and Maintenance of Water Based Fire Systems" (current edition). The hours of operation for source testing will not be counted towards either of the allowable annual limits above.

- Fuel consumption 27 gal/h approximately.
- s no limit on engine operation for emergency use. [Title 17 CCR 93115.6(a)(4)]

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Automated Fire Systems Inspection Checklist

Plant: ALPHA ☑ BETA: ☐ Date: 11/18/27 Operator: Erick C.

Valve Shed # 1 by Condenser

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	SG Unit 1 B1-1	155	✓ O/C	✓	Y☑ N☐	
2	SG Unit 2 B1-2	160	✓ O/C	✓	Y☑ N☐	
3	Reheaters B1-3	160	✓ O/C	✓	Y☑ N☐	
4	Rack 2 West HTF B1-4	160	✓ O/C	✓	Y☑ N☐	
5	Rack 2 East HTF B1-5	160	✓ O/C	✓	Y☑ N☐	
6	North Steel Pro B1-6	160	✓ O/C	✓	Y☑ N☐	
7	HTF Pumps B1-7	155	✓ O/C	✓	Y☑ N☐	
8	HTF Heaters B1-8	160	✓ O/C	✓	Y☑ N☐	
9	South Steel Pro B1-9	160	✓ O/C	✓	Y☑ N☐	
10	Lube Oil B1-10	160	✓ O/C	✓	Y☑ N☐	
11	Turbine Hose Stations B1-11	155	✓ O/C	✓	Y☑ N☐	
12	Turbine Bearings B1-12	160	✓ O/C	✓	Y☑ N☐	

Valve Shed # 2 by Overflow

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Expansion Vessels B2-1	160	✓O/C	✓	Y☑ N☐	
2	Ullage Area B2-2	167	✓O/C	✓	Y☑ N☐	
3	Ullage Structure B2-11	165	✓O/C	✓	Y☑ N☐	
4	Rack 1 Middle Area B2-5	165	✓O/C	✓	Y☑ N☐	
5	Overflow Tanks B2-9	165	✓O/C	✓	Y☑ N☐	
6	Rack 1 South Area B2-6	170	✓O/C	✓	Y☑ N☐	
7	Rack 1 West B2-7	160	✓O/C	✓	Y☑ N☐	
8	Rack 1 North Area B2-4	165	✓O/C	✓	Y☑ N☐	
9	Over flow AFFF B2-8	165	✓O/C	✓	Y☑ N☐	no Fum.
10	Expansion Vessel AFFF B2-3	160	✓O/C	✓	Y☑ N☐	no Fum.

Valve Shed # 3 by Bldg 35 GE Electrical Bldg

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Transformer Aux	160	✓O/C	✓	Y☑ N☐	
2	Transformer Main	155	✓O/C	✓	Y☑ N☐	

Valve Shed # 4 by Cooling Tower West Side

No.	System	PSI	Viv. Pos.	Signage		Comments
1	Cooling Tower West Side	162	✓O/C	✓	Y☑ N☐	

Valve Shed # 5 by Control Bldg 10

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Control Room B4-5	180	✓O/C	✓	Y☑ N☐	
2	Offices B4-3	185	✓O/C	✓	Y☑ N☐	
3	Electrical Room B4-4	195	✓O/C	✓	Y☑ N☐	

Turbine Sprinkler Valves (These are to be locked in the open position)

No.	System	Locked	Viv. Pos.	Comments
1	Bearing 2	Y☑ N☐	✓O/C	
2	Bearing 3	Y☑ N☐	✓O/C	
3	Bearing 4	Y☑ N☐	✓O/C	
4	Bearing 5	Y☑ N☐	✓O/C	

HTF Deluge System Valves (To be Locked in the Open Position)

No.	System	Locked	Viv. Pos.	Comments
1	MP-201	Y☐ N☑	✓ O/C	
2	MP-200A	Y☐ N☑	✓ O/C	
3	MP-200B	Y☑ N☐	✓O/C	
4	MP-200C	Y☑ N☐	✓ O/C	
5	MP-200D	Y☐ N☑	✓O/C	

Fire Pump House Deluge System

No.	System	PSI	O/C	Locked	Comments
1	Fire Pump House Deluge	190	O	Y☑ N☐	

PIV Checks

No.	System	Position	Cycled	Date Cycled	Comments
1	Maintenance Shop Drive Way #7	O/C ✓			
2	Maintenance Shop Drive Way #8	✓ O/C			
3	West Side Power Block by VS-3 # 9	✓ O/C			
4	West Side Power Block by VS-1 # 10	✓ O/C			
5	West Side Cooling Tower by VS-4 # 11	✓ O/C			
6	West side Cooling Tower by VS-4 # 12	✓ O/C			
7	N.W. Corner Chemical Storage #1	✓ O/C			
8	N.E. Corner Chemical Storage # 2	✓ O/C			
9	East Side W.T. by Multimedia Filters # 3	✓ O/C			
10	East Side W.T. by Multimedia Filters # 5	✓ O/C			
11	North Side Bldg 10 # 6	✓ O/C			
12	Between MP-444's and Water Treat # 4	O/C ✓			
13	West Side Power Block Valve Shed #1	✓O/C			

To Be Cycled First Saturday of Every Month

No.	System	Debris	Comments / Actions
1	Transformer Yard Refuse Check	Y☐ N☑	

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Fire Pump Weekly Test Log

General Information

Plant: Alpha ☒ Beta ☐	Date: 4/5/2023
Operator: JASON	*To be completed each time unit is operated.
Reason for running pumps: Weekly test ✓ Maintenance ☐ Emergency ☐	

Jockey Electric Pump

Pre-start Inspection: Electrical Feed ☑ Mechanical ☑ Valves ☑

Check the jockey pump on pressure drop. Start up pressure: 155

Discharge Pressure: 165

Pump Suction Pressure: ——— Pump Discharge pressure: ———

Comments:

Electric Pump

Pre-start Inspection: Electrical Feed ☑ Mechanical ☑ Valves ☑

Start the pump on pressure drop. Start up pressure: 145

Start time: 10:20pm

Pump Suction Pressure: 20 Pump Discharge pressure: 150

Stop time: 10:30 Total time running 10min

Comments:

Diesel Pump

Pre-start Inspection: Coolant ☑ Oil ☑ Mechanical ☑ Valves ☑ Water Jacket Heater ☑

Fuel level > 2/3: Yes ☐ No ☑ Monthly Fuel Consumption:

Battery volt Crank 1: 24 Battery volt Crank 2: 24	Battery Condition: good
Starting hour meter: 128.8	Start time: 10:32pm
Oil pressure start:	Oil Pressure finish: 40
Pump Suction Pressure: 2	Pump Discharge pressure: 150
Coolant temperature after 30 minutes running: 199	
Stop time: 10:48 Stop hour meter: 129.0	Total time running: 16m.

Comments:

Sulfur Concentrations (less than or equal to 0.0015% on a weight per weight basis).

his new direct drive fire pump engine shall be limited to use for emergency fire suppression, defined as in response to a fire or due to low fire water pressure. In addition, this engine shall be operated no more than 30 minutes in any one hour and no more than 13 hours per year for initial start-up testing and compliance demonstrations. Additionally, this engine shall not be operated more than the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25-"Standards for the Inspection, Testing, and Maintenance of Water Based Fire Systems" (current edition). The hours of operation for source testing will not be counted towards either of the allowable annual limits above.

- fuel consumption 27 gal/h approximately.
- is no limit on engine operation for emergency use. [title 17 CCR 93115.6(a)(3)]

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Mojave Solar LLC

Automated Fire Systems Inspection Checklist

Plant: ALPHA ☑ BETA: ☐ Date: 11-5-23 Operator [illegible]

Valve Shed # 1 by Condenser

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	SG Unit 1	155	O/C	✓	Y☑ N☐	
2	SG Unit 2	160	O/C	✓	Y☑ N☐	
3	Reheaters	165	O/C	✓	Y☑ N☐	
4	Rack 2 West HTF	B1-4	O/C	✓	Y☑ N☐	
5	Rack 2 East HTF	B1-5	O/C	✓	Y☑ N☐	
6	North Steel Pro	B1-6	O/C	✓	Y☑ N☐	
7	HTF Pumps	B1-7	O/C	✓	Y☑ N☐	
8	HTF Heaters	B1-8	O/C	✓	Y☑ N☐	
9	South Steel Pro	B1-9	O/C	✓	Y☑ N☐	
10	Lube Oil	B1-10	O/C	✓	Y☑ N☐	
11	Turbine Hose Stations	B1-11	O/C	✓	Y☑ N☐	
12	Turbine Bearings	B1-12	O/C	✓	Y☑ N☐	

Valve Shed # 2 by Overflow

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Expansion Vessels	B2-1	O/C	✓	Y☑ N☐	
2	Ullage Area	B2-2	O/C	✓	Y☑ N☐	
3	Ullage Structure	B2-11	O/C	✓	Y☑ N☐	
4	Rack 1 Middle Area	B2-5	O/C	✓	Y☑ N☐	
5	Overflow Tanks	B2-9	O/C	✓	Y☑ N☐	
6	Rack 1 South Area	B2-6	O/C	✓	Y☑ N☐	
7	Rack 1 West	B2-7	O/C	✓	Y☑ N☐	
8	Rack 1 North Area	B2-4	O/C	✓	Y☑ N☐	
9	Overflow AFFF	B2-8	O/C	✓	Y☑ N☐	
10	Expansion Vessel AFFF	B2-3	O/C	✓	Y☑ N☐	

Valve Shed # 3 by Bldg 35 GE Electrical Bldg

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Transformer Aux	165	O/C	✓	Y☑ N☐	
2	Transformer Main	160	O/C	✓	Y☑ N☐	

Valve Shed # 4 by Cooling Tower West Side

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Cooling Tower West Side	160	O/C	✓	Y☑ N☐	

Valve Shed # 5 by Control Bldg 10

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Control Room	B4-5	O/C	✓	Y☑ N☐	
2	Offices	B4-3	O/C	✓	Y☑ N☐	
3	Electrical Room	B4-4	O/C	✓	Y☑ N☐	

Turbine Sprinkler Valves (These are to be locked in the open position)

No.	System	Locked	Viv. Pos.	Comments
1	Bearing 2	Y☑ N☐	O/C	
2	Bearing 3	Y☑ N☐	O/C	
3	Bearing 4	Y☑ N☐	O/C	
4	Bearing 5	Y☑ N☐	O/C	

HTF Deluge System Valves (To be Locked in the Open Position)

No.	System	Locked	Viv. Pos.	Comments
1	MP-201	Y☑ N☐	O/C	
2	MP-200A	Y☑ N☐	O/C	
3	MP-200B	Y☑ N☐	O/C	
4	MP-200C	Y☑ N☐	O/C	
5	MP-200D	Y☑ N☐	O/C	

Fire Pump House Deluge System

No.	System	PSI	O/C	Locked	Comments
1	Fire Pump House Deluge	200	O	Y☑ N☐	

PIV Checks

No.	System	Position	Cycled	Date Cycled	Comments
1	Maintenance Shop Drive Way #7	O/C	✓		
2	Maintenance Shop Drive Way #8	O/C	✓		
3	West Side Power Block by VS-3 # 9	O/C	✓		
4	West Side Power Block by VS-1 # 10	O/C	✓		
5	West Side Cooling Tower by VS-4 # 11	O/C	✓		
6	West side Cooling Tower by VS-4 # 12	O/C	✓		
7	N.W. Corner Chemical Storage #1	O/C	✓		
8	N.E. Corner Chemical Storage # 2	O/C	✓		
9	East Side W.T. by Multimedia Filters # 3	O/C	✓		
10	East Side W.T. by Multimedia Filters # 5	O/C	✓		
11	North Side Bldg 10 # 6	O/C	✓		
12	Between MP-444's and Water Treat # 1	O/C	✓		
13	West Side Power Block Valve Shed #1	O/C			

To Be Cycled First Saturday of Every Month

No.	System	Debris		Comments / Actions
1	Transformer Yard Refuse Check	Y☐ N☐		

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Fire Pump Weekly Test Log

General Information

Plant: Alpha ☑ Beta ☐ Date: 11/11/23

Operator: Diego Rodriguez *To be completed each time unit is operated.

Reason for running pumps: Weekly test ☑ Maintenance ☐ Emergency ☐

Jockey Electric Pump

Pre-start Inspection: Electrical Feed ☑ Mechanical ☑ Valves ☑

Check the jockey pump on pressure drop. Start up pressure: 155psi

Discharge Pressure: 165psi

Pump Suction Pressure: N/A Pump Discharge pressure: 165 psi

Comments:

Electric Pump

Pre-start Inspection: Electrical Feed ☑ Mechanical ☑ Valves ☑

Start the pump on pressure drop. Start up pressure: 145psi

Start time: 1900

Pump Suction Pressure: 10psi Pump Discharge pressure: 150psi

Stop time: 1910 Total time running 10 Mins

Comments:

Diesel Pump

Pre-start Inspection: Coolant ☑ Oil ☑ Mechanical ☑ Valves ☑ Water Jacket Heater ☑

Fuel level > 2/3: Yes ☐ No ☒ 1/4 Monthly Fuel Consumption: N/A

Battery volt Crank 1: 26 Battery volt Crank 2: 26. Battery Condition: ✓ Need To Be cleaned

Starting hour meter: 129.0 Start time: 1912

Oil pressure start: 62 psi Oil Pressure finish: 43 psi

Pump Suction Pressure: 15 psi Pump Discharge pressure: 165 psi

Coolant temperature after 30 minutes running: 196 °F High Temp ALARM

Stop time: 1924 Stop hour meter: 129.1 Total time running: 12 mins.

Comments:

Needs Fuel NOT @ 2/3's

Sulfur Concentrations (less than or equal to 0.0015% on a weight per weight basis).

This new diesel drive fire pump engine shall be limited to use for emergency fire suppression, defined as in response to a fire or due to low fire water pressure. In addition, the engine shall be operated no more than 30 minutes in any one hour and no more than 10 hours per year for initial start-up testing and compliance demonstrations. Additionally, the engine shall not be operated more than the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 "Standards for the Inspection, Testing, and Maintenance of Water Based Fire Systems" (current edition). The hours of operation for source testing will not be counted towards either of the allowable annual limits above.

The Fuel consumption 27 gal / h approximately.

There is no limit on engine operation for emergency use. [Title 17 CCR §3115.6(a)(1)]

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Automated Fire Systems Inspection Checklist

Plant: ALPHA ☑ BETA: ☐ Date: 11/10/21 Operator Erick

Valve Shed # 1 by Condenser

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	SG Unit 1	B1-1	165	✓O/C	✓	Y☑ N☐	
2	SG Unit 2	B1-2	160	✓O/C	✓	Y☑ N☐	
3	Reheaters	B1-3	160	✓O/C	✓	Y☑ N☐	
4	Rack 2 West HTF	B1-4	160	✓O/C	✓	Y☑ N☐	
5	Rack 2 East HTF	B1-5	160	✓O/C	✓	Y☑ N☐	
6	North Steel Pip	B1-6	160	✓O/C	✓	Y☑ N☐	
7	HTF Pumps	B1-7	160	✓O/C	✓	Y☑ N☐	
8	HTF Heaters	B1-8	160	✓O/C	✓	Y☑ N☐	
9	South Steel Pip	B1-9	160	✓O/C	✓	Y☑ N☐	
10	Surge Oil	B1-10	160	✓O/C	✓	Y☑ N☐	
11	Turbine Hose Stations	B1-11	160	✓O/C	✓	Y☑ N☐	
12	Turbine Bearings	B1-12	160	✓O/C	✓	Y☑ N☐	

Valve Shed # 2 by Overflow

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Expansion Vessels	B2-1	165	✓O/C	✓	Y☑ N☐	
2	Ullage Area	B2-2	165	✓O/C	✓	Y☑ N☐	
3	Ullage Structure	B2-11	165	✓O/C	✓	Y☑ N☐	
4	Rack 1 Middle Area	B2-5	165	✓O/C	✓	Y☑ N☐	
5	Overflow Tanks	B2-9	165	✓O/C	✓	Y☑ N☐	
6	Rack 1 South Area	B2-6	165	✓O/C	✓	Y☑ N☐	
7	Rack 1 West	B2-7	170	✓O/C	✓	Y☑ N☐	
8	Rack 1 North Area	B2-4	160	✓O/C	✓	Y☑ N☐	
9	Overflow AFFF	B2-8	160	✓O/C	✓	Y☑ N☐	NO Foam
10	Expansion Vessel AFFF	B2-3	160	✓O/C	✓	Y☑ N☐	NO Foam

Valve Shed # 3 by Bldg 35 GE Electrical Bldg

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Transformer Aux	160	✓O/C	✓	Y☑ N☐	
2	Transformer Main	155	✓O/C	✓	Y☑ N☐	

Valve Shed # 4 by Cooling Tower West Side

No.	System	PSI	Viv. Pos.	Signage		Comments
1	Cooling Tower West Side	160	✓O/C	✓	Y☑ N☐	60 psi Har Side.

Valve Shed # 5 by Control Bldg 10

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Control Room	B4-5	195	✓O/C	✓	Y☑ N☐	
2	Offices	B4-3	195	✓O/C	✓	Y☑ N☐	
3	Electrical Room	B4-4	195	✓O/C	✓	Y☑ N☐	

Turbine Sprinkler Valves (These are to be locked in the open position)

No.	System	Locked	Viv. Pos.	Comments
1	Bearing 2	Y☑ N☐	✓O/C	
2	Bearing 3	Y☑ N☐	✓O/C	
3	Bearing 4	Y☑ N☐	✓O/C	
4	Bearing 5	Y☑ N☐	✓O/C	

HTF Deluge System Valves (To be Locked in the Open Position)

No.	System	Locked	Viv. Pos.	Comments
1	MP-200	Y☐ N☑	✓O/C	
2	MP-200A	Y☑ N☑	✓O/C	
3	MP-200B	Y☑ N☐	✓O/C	
4	MP-200C	Y☑ N☐	✓O/C	
5	MP-200D	Y☐ N☑	✓O/C	

Fire Pump House Deluge System

No.	System	PSI	O/C	Locked	Comments
1	Fire Pump House Deluge	195	O	Y☑ N☐	

PIV Checks

No.	System	Position	Cycled	Date Cycled	Comments
1	Maintenance Shop Drive Way #7	O/C✓			
2	Maintenance Shop Drive Way #8	✓O/C			
3	West Side Power Block by VS-3 # 9	✓O/C			
4	West Side Power Block by VS-1 # 10	✓O/C			
5	West Side Cooling Tower by VS 4 # 11	✓O/C			
6	West side Cooling Tower by VS-4 # 12	✓O/C			
7	N.W. Corner Chemical Storage #1	✓O/C			
8	N.E. Corner Chemical Storage # 2	✓O/C			
9	East Side W.T. by Multimedia Filters # 3	✓O/C			
10	East Side W.T. by Multimedia Filters # 5	✓O/C			
11	North Side Bldg 10 # 6	✓O/C			
12	Between MP-444's and Water Treat # 4	O/C✓			
13	West Side Power Block Valve Shed #1 -N/A	O/C			

To Be Cycled First Saturday of Every Month

No.	System	Debris		Comments / Actions
1	Transformer Yard Refuse Check	Y☐ N☐		

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Fire Pump Weekly Test Log

General Information

Plant: Alpha ☑ Beta ☐ | Date: 10/28/23

Operator: [illegible] | *To be completed each time unit is operated.

Reason for running pumps: Weekly test ☐ Maintenance ☐ Emergency ☐

Jockey Electric Pump

Pre-start Inspection: Electrical Feed ☐ Mechanical ☐ Valves ☐

Check the jockey pump on pressure drop. Start up pressure: 155

Discharge Pressure: 162

Pump Suction Pressure: ——— Pump Discharge pressure: ———

Comments:

Electric Pump

Pre-start Inspection: Electrical Feed ☑ Mechanical ☑ Valves ☑

Start the pump on pressure drop. Start up pressure: 145

Start time: 10:55

Pump Suction Pressure: 20 Pump Discharge pressure: 150

Stop time: 11:05 Total time running 10 min

Comments:

Diesel Pump

Pre-start Inspection: Coolant ☑ Oil ☑ Mechanical ☑ Valves ☑ Water Jacket Heater ☑

Fuel level > 2/3: Yes ☐ No ☑ Monthly Fuel Consumption:

Battery volt Crank 1: 26 Battery volt Crank 2: 26v	Battery Condition: good
Starting hour meter: 128.4	Start time: 11:13
Oil pressure start:	Oil Pressure finish: 39
Pump Suction Pressure: 20	Pump Discharge pressure: 150
Coolant temperature after 30 minutes running: Overheated @ 199°f at 15 min	
Stop time: 11:28 Stop hour meter: 128.8	Total time running: 15

Comments:

Sulfur Concentrations (less than or equal to 0.0015% on a weight per weight basis).

his new direct drive fire pump engine shall be limited to use for emergency fire suppression, defined as a response to a fire or due to low fire water pressure. In addition, this engine shall be operated no more than 30 minutes in any one hour and no more than 10 hours per year for initial start-up testing and compliance demonstrations. Additionally, the engine shall not be operated more than the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 "Standards for the Inspection, Testing, and Maintenance of Water Based Fire Systems" (current edition). The hours of operation for source testing will not be counted towards either of the allowable annual limits above.

e. Fuel consumption 27 gal / h approximately

ere is no limit on engine operation for emergency use. [Title 17 CCR §93115.6(a)(1)]

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Automated Fire Systems Inspection Checklist

Plant: ALPHA ☒ BETA: ☐ Date: 10-28-23 Operator: ISaiah L

Valve Shed # 1 by Condenser

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	SG Unit 1	B1-1	155	O/C	✓	Y ☑ N ☐
2	SG Unit 2	B1-2	160	O/C	✓	Y ☑ N ☐
3	Reheaters	B1-3	160	O/C	✓	Y ☑ N ☐
4	Rack 2 West - TF	B1-4	160	O/C	✓	Y ☑ N ☐
5	Rack 2 East - TF	B1-5	160	O/C	✓	Y ☑ N ☐
6	North Steel Pro	B1-6	165	O/C	✓	Y ☑ N ☐
7	HTF Pumps	B1-7	155	O/C	✓	Y ☑ N ☐
8	HTF Heaters	B1-8	160	O/C	✓	Y ☑ N ☐
9	South Steel Pro	B1-9	160	O/C	✓	Y ☑ N ☐
10	Lube Oil	B1-10	165	O/C	✓	Y ☑ N ☐
11	Turbine Hose Stations	B1-11	160	O/C	✓	Y ☑ N ☐
12	Turbine Bearings	B1-12	165	O/C	✓	Y ☑ N ☐

Valve Shed # 2 by Overflow

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Expansion Vessels	B2-1	165	O/C	✓	Y ☑ N ☐
2	Ullage Area	B2-2	165	O/C	✓	Y ☑ N ☐
3	Ullage Structure	B2-11	165	O/C	✓	Y ☑ N ☐
4	Rack 1 Middle Area	B2-5	165	O/C	✓	Y ☑ N ☐
5	Overflow Tanks	B2-9	160	O/C	✓	Y ☑ N ☐
6	Rack 1 South Area	B2-6	165	O/C	✓	Y ☑ N ☐
7	Rack 1 West	B2-7	160	O/C	✓	Y ☑ N ☐
8	Rack 1 North Area	B2-4	160	O/C	✓	Y ☑ N ☐
9	Overflow AFFF	B2-8	165	O/C	✓	Y ☑ N ☐
10	Expansion Vessel AFFF	B2-3	165	O/C	✓	Y ☑ N ☐

Valve Shed # 3 by Bldg 35 GE Electrical Bldg

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Transformer Aux	165	O/C	✓	Y ☑ N ☐	
2	Transformer Main	160	O/C	✓	Y ☑ N ☐	

Valve Shed # 4 by Cooling Tower West Side

No.	System	PSI	Viv. Pos.	Signage		Comments
1	Cooling Tower West Side	165	O/C	✓	Y ☑ N ☐	

Valve Shed # 5 by Control Bldg 10

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Control Room	B4-1	160	O/C	✓	Y ☑ N ☐
2	Offices	B4-3	160	O/C	✓	Y ☑ N ☐
3	Electrical Room	B4-2	158	O/C	✓	Y ☑ N ☐

Turbine Sprinkler Valves (These are to be locked in the open position)

No.	System	Locked	Viv. Pos.	Comments
1	Bearing 2	Y ☑ N ☐	O/C	
2	Bearing 3	Y ☑ N ☐	O/C	
3	Bearing 4	Y ☑ N ☐	O/C	
4	Bearing 5	Y ☑ N ☐	O/C	

HTF Deluge System Valves (To be Locked in the Open Position)

No.	System	Locked	Viv. Pos.	Comments
1	MP-200	Y ☑ N ☐	O/C	
2	MP-200A	Y ☑ N ☐	O/C	
3	MP-200B	Y ☑ N ☐	O/C	
4	MP-200C	Y ☑ N ☐	O/C	
5	MP-200D	Y ☑ N ☐	O/C	

Fire Pump House Deluge System

No.	System	PSI 170	O/C	Locked	Comments
1	Fire Pump House Deluge	165	O	Y ☑ N ☐	

PIV Checks

No.	System	Position	Cycled	Date Cycled	Comments
1	Maintenance Shop Drive Way #7	O/C	✓		
2	Maintenance Shop Drive Way #8	O/C	✓		
3	West Side Power Block by VS-3 # 9	O/C	✓		
4	West Side Power Block by VS-1 # 10	O/C	✓		
5	West Side Cooling Tower by VS-4 # 11	O/C	✓		
6	West side Cooling Tower by VS-4 # 12	O/C	✓		
7	N.W. Corner Chemical Storage #1	O/C	✓		
8	N.E. Corner Chemical Storage # 2	O/C	✓		
9	East Side W.T. by Multimedia Filters # 3	O/C	✓		
10	East Side W.T. by Multimedia Filters # 5	O/C	✓		
11	North Side Bldg 70 # 6	O/C	✓		
12	Between MP 444s and Water Tnsr # 4	O/C	✓		
13	West Side Power Block Valve Shed #1	O/C			

To Be Cycled First Saturday of Every Month

No.	System	Debris	Comments / Actions
1	Transformer Yard Refuse Check	Y ☐ N ☐	

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Automated Fire Systems Inspection Checklist

Plant: ALPHA ☑ BETA: ☐ Date: 10/22/23 Operator Diego P.

Valve Shed # 1 by Condenser

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	SG Unit 1	B1-1	150	O/C	✓	Y☑ N☐
2	SG Unit 2	B1-2	165	O/C	✓	Y☑ N☐
3	Reheaters	B1-3	170	O/C	✓	Y☑ N☐
4	Rack 2 West HTF	B1-4	160	O/C	✓	Y☑ N☐
5	Rack 2 East HTF	B1-5	160	O/C	✓	Y☑ N☐
6	North Steel Pro	B1-6	160	O/C	✓	Y☑ N☐
7	HTF Pumps	B1-7	155	O/C	✓	Y☑ N☐
8	HTF Heaters	B1-8	165	O/C	✓	Y☑ N☐
9	South Steel Pro	B1-9	160	O/C	✓	Y☑ N☐
10	Lube Oil	B1-10	165	O/C	✓	Y☑ N☐
11	Turbine Hose Stations	B1-11	155	O/C	✓	Y☑ N☐
12	Turbine Bearings	B1-12	165	O/C	✓	Y☑ N☐

Valve Shed # 2 by Overflow

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Expansion Vessels	B2-1	165	O/C	✓	Y☑ N☐
2	Ullage Area	B2-2	160	O/C	✓	Y☑ N☐
3	Ullage Structure	B2-11	160	O/C	✓	Y☑ N☐
4	Rack 1 Middle Area	B2-5	165	O/C	✓	Y☑ N☐
5	Overflow Tanks	B2-9	160	O/C	✓	Y☑ N☐
6	Rack 1 South Area	B2-6	165	O/C	✓	Y☑ N☐
7	Rack 1 West	B2-7	165	O/C	✓	Y☑ N☐
8	Rack 1 North Area	B2-4	160	O/C	✓	Y☑ N☐
9	Overflow AFFF	B2-8	150	O/C	✓	Y☑ N☐
10	Expansion Vessel AFFF	B2-3	160	O/C	✓	Y☑ N☐ valved out.

Valve Shed # 3 by Bldg 35 GE Electrical Bldg

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Transformer Aux	160	O/C	✓	Y☑ N☐	Open
2	Transformer Main	160	O/C	✓	Y☑ N☐	Open

Valve Shed # 4 by Cooling Tower West Side

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Cooling Tower West Side	155	O/C	✓	Y☑ N☐	needs new sign.

Valve Shed # 5 by Control Bldg 10

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Control Room	B4-5	160	O/C	✓	Y☑ N☐
2	Offices	B4-3	160	O/C	✓	Y☑ N☐
3	Electrical Room	B4-4	160	O/C	✓	Y☑ N☐

Turbine Sprinkler Valves (These are to be locked in the open position)

No.	System	Locked	Viv. Pos.	Comments
1	Bearing 2	Y☑ N☐	O/C	
2	Bearing 3	Y☑ N☐	O/C	
3	Bearing 4	Y☑ N☐	O/C	
4	Bearing 5	Y☑ N☐	O/C	

HTF Deluge System Valves (To be Locked in the Open Position)

No.	System	Locked	Viv. Pos.	Comments
1	MP-200	Y☐ N☑	O/C	
2	MP-200A	Y☐ N☑	O/C	
3	MP 200B	Y☑ N☐	O/C	
4	MP-200C	Y☑ N☐	O/C	
5	MP 200D	Y☐ N☑	O/C	

Fire Pump House Deluge System

No.	System	PSI	O/C	Locked	Comments
1	Fire Pump House Deluge	170	O	Y☑ N☐	

PIV Checks

No.	System	Position	Cycled	Date Cycled	Comments
1	Maintenance Shop Drive Way #7	O/C			
2	Maintenance Shop Drive Way #8	O/C			
3	West Side Power Block by VS 3 # 9	O/C			
4	West Side Power Block by VS-2 # 10	O/C			
5	West Side Cooling Tower by VS-1 # 11	O/C			
6	West side Cooling Tower by VS 4 # 12	O/C			
7	N.W. Corner Chemical Storage #1	O/C			
8	N.E. Corner Chemical Storage # 2	O/C			
9	East Side W.T. by Multimedia Filters # 3	O/C			
10	East Side W.T. by Multimedia Filters # 5	O/C			
11	North Side Bldg 10 # 6	O/C			
12	Between MP 444's and Water Tnnk # 4	O/C			
13	West Side Power Block Valve Shed #1	O/C			

To Be Cycled First Saturday of Every Month

No.	System	Debris	Comments / Actions
1	Transformer Yard Refuse Check	Y☐ N☑	

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Fire Pump Weekly Test Log

General Information

Plant: Alpha ☐ Beta ☑ | Date: 12/9/23

Operator: Anthony | *To be completed each time unit is operated.

Reason for running pumps: Weekly test ☑ Maintenance ☐ Emergency ☐

Jockey Electric Pump

Pre-start Inspection: Electrical Feed ☑ Mechanical ☑ Valves ☑

Check the jockey pump on pressure drop. Start up pressure: 155

Discharge Pressure: 162

Pump Suction Pressure: — Pump Discharge pressure: —

Comments:

Electric Pump

Pre-start Inspection: Electrical Feed ☑ Mechanical ☑ Valves ☑

Start the pump on pressure drop. Start up pressure: 145

Start time: 2236

Pump Suction Pressure: 20 Pump Discharge pressure: 150

Stop time: 2240 Total time running 10 min

Comments:

Diesel Pump

Pre-start Inspection: Coolant ☑ Oil ☑ Mechanical ☑ Valves ☑ Water Jacket Heater ☑

Fuel level > 2/3: Yes ☐ No ☑ Monthly Fuel Consumption: —

Battery volt Crank 1: 26 Battery volt Crank 2: 25	Battery Condition: Good
Starting hour meter: 133.4	Start time: 2242
Oil pressure start: 1	Oil Pressure finish: 30

Pump Suction Pressure: 20 Pump Discharge pressure: 150

Coolant temperature after 30 minutes running: Overheated after 9 min @ 223

Stop time: 2251 Stop hour meter: 133.5 Total time running: 9 min

Comments: Fuel injection malfunction alarm came in

Sulfur Concentrations (less than or equal to 0.0015% on a weight per weight basis).

his new diesel drive fire pump engine shall be limited to use for emergency fire suppression, defined as in response to a fire or due to low fire water pressure. In addition, this engine shall be operated no more than 30 minutes in any one hour and no more than 50 hours per year for initial start-up testing and compliance demonstrations. Additionally, this engine shall not be operated more than the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25-"Standards for the Inspection, Testing, and Maintenance of Water Based Fire Systems" (current edition). The hours of operation for source testing will not be counted towards either of the allowable annual limits above.

e: Fuel consumption 2.7 gal/h approximately.

ere is no limit on engine operation for emergency use. [Title 17 CCR 93115.6(a)(4)]

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Automated Fire Systems Inspection Checklist

Plant: ALPHA ☐ BETA: ☑ Date: 12/10/23 Operator: Caleb Sowards

Valve Shed # 1 by Condenser

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	SG Unit 1	B1-1	155	O/C ✓	✓	Y ☑ N ☐
2	SG Unit 2	B1-2	165	O/C ✓	✓	Y ☑ N ☐
3	Reheaters	B1-3	170	O/C ✓	✓	Y ☑ N ☐
4	Rack 2 West HTF	B1-4	165	O/C ✓	✓	Y ☑ N ☐
5	Rack 2 East HTF	B1-5	170	O/C ✓	✓	Y ☑ N ☐
6	North Steel Pro	B1-6	165	O/C ✓	✓	Y ☑ N ☐
7	HTF Pumps	B1-7	170	O/C ✓	✓	Y ☑ N ☐
8	HTF Heaters	B1-8	160	O/C ✓	✓	Y ☑ N ☐
9	South Steel Pro	B1-9	165	O/C ✓	✓	Y ☑ N ☐
10	Lube Oil	B1-10	Max	O/C ✓	✓	Y ☑ N ☐
11	Turbine Hose Stations	B1-11	Max	O/C ✓	✓	Y ☑ N ☐
12	Turbine Bearings	B1-12	25	O/C ✓	✓	Y ☑ N ☐

Valve Shed # 2 by Overflow

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Expansion Vessels	B2-1	165	O/C ✓	✓	Y ☑ N ☐
2	Ullage Area	B2-2	160	O/C ✓	✓	Y ☑ N ☐
3	Ullage Structure	B2-11	165	O/C ✓	✓	Y ☑ N ☐
4	Rack 1 Middle Area	B2-5	170	O/C ✓	✓	Y ☑ N ☐
5	Overflow Tanks	B2-9	160	O/C ✓	✓	Y ☑ N ☐
6	Rack 1 South Area	B2-6	160	O/C ✓	✓	Y ☑ N ☐
7	Rack 1 West	B2-7	155	O/C ✓	✓	Y ☑ N ☐
8	Rack 1 North Area	B2-4	160	O/C ✓	✓	Y ☑ N ☐
9	Overflow AFFF	B2-8	165	O/C ✓	✓	Y ☑ N ☐
10	Expansion Vessel AFFF	B2-3	160	O/C ✓	✓	Y ☑ N ☐

Valve Shed # 3 by Bldg 35 GE Electrical Bldg

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Transformer Aux	160	O/C		Y ☐ N ☐	
2	Transformer Main	165	O/C		Y ☐ N ☐	

Valve Shed # 4 by Cooling Tower West Side

No.	System	PSI	Viv. Pos.	Signage		Comments
1	Cooling Tower West Side	160	O/C ✓		Y ☐ N ☐	

Valve Shed # 5 by Control Bldg 10

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Control Room	B4-3	155	O/C ✓	✓	Y ☐ N ☐
2	Offices	B4-3	160	O/C ✓	✓	Y ☐ N ☐
3	Electrical Room	B4-4	160	O/C ✓	✓	Y ☐ N ☐

Turbine Sprinkler Valves (These are to be locked in the open position)

No.	System	Locked	Viv. Pos.	Comments
1	Bearing 2	Y ☑ N ☐	O/C	
2	Bearing 3	Y ☑ N ☐	O/C	
3	Bearing 4	Y ☑ N ☐	O/C	
4	Bearing 5	Y ☑ N ☐	O/C	

HTF Deluge System Valves (To be Locked in the Open Position)

No.	System	Locked	Viv. Pos.	Comments
1	MP-201	✓ ☐ N ☐	O/C	
2	MP-200A	✓ ☑ N ☐	O/C	
3	MP-200B	✓ ☑ N ☐	O/C	
4	MP-200C	✓ ☑ N ☐	O/C	
5	MP-200D	✓ ☑ N ☐	O/C	

Fire Pump House Deluge System

No.	System	PSI	O/C	Locked	Comments
1	Fire Pump House Deluge	168		Y ☐ N ☐	

PIV Checks

No.	System	Position	Cycled	Date Cycled	Comments
1	Maintenance Shop Drive Way #7	O/C ✓			
2	Maintenance Shop Drive Way #8	✓ O/C			
3	West Side Power Block by VS-3 # 9	✓ O/C			
4	West Side Power Block by VS-1 # 10	✓ O/C			
5	West Side Cooling Tower by VS 4 # 11	✓ O/C			
6	West side Cooling Tower by VS-4 # 12	✓ O/C			
7	N.W. Corner Chemical Storage #1	✓ O/C			
8	N.E. Corner Chemical Storage # 2	✓ O/C			
9	East Side W.T. by Multimedia Filters # 3	✓ O/C			
10	East Side W.T. by Multimedia Filters # 5	✓ O/C			
11	North Side Bldg 10 # 6	✓ O/C			
12	Between MP-442's and Water Treat # 4	✓ O/C ✓			
13	West Side Power Block Valve Shed #1	O/C			

To Be Cycled First Saturday of Every Month

No.	System	Debris	Comments / Actions
1	Transformer Yard Refuse Check	Y ☐ N ☑ ✓	

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Fire Pump Weekly Test Log

General Information

Plant: Alpha ☐ Beta ☑ | Date: 12/3/23

Operator: PA | *To be completed each time unit is operated

Reason for running pumps: Weekly test ☑ Maintenance ☐ Emergency ☐

Jockey Electric Pump

Pre-start Inspection: Electrical Feed ☑ Mechanical ☑ Valves ☑

Check the jockey pump on pressure drop. Start up pressure: 155

Discharge Pressure: 170 psi

Pump Suction Pressure: 16 psi Pump Discharge pressure: 164 psi

Comments:

Electric Pump

Pre-start Inspection: Electrical Feed ☑ Mechanical ☑ Valves ☑

Start the pump on pressure drop. Start up pressure: 145

Start time: 19:07

Pump Suction Pressure: 16 psi Pump Discharge pressure: 149 psi

Stop time: 19:12 Total time running 10 min.

Comments:

Diesel Pump

Pre-start Inspection: Coolant ☑ Oil ☑ Mechanical ☑ Valves ☑ Water Jacket Heater ☑

Fuel level > 2/3: Yes ☐ No ☑ Monthly Fuel Consumption:

Battery volt Crank 1: 27.1 Battery volt Crank 2: 27.3 Battery Condition: good

Starting hour meter: 132.3 Start time: 19:14

Oil pressure start: 55 psi Oil Pressure finish: 32

Pump Suction Pressure: 24 psi Pump Discharge pressure: 146 psi

Coolant temperature after 30 minutes running: 225 after 7 min.

Stop time: 19:21 Stop hour meter: 132.4 Total time running:

Comments:

Sulfur Concentrations (less than or equal to 0.0015% on a weight per weight basis).

This new direct drive fire pump engine shall be limited to use for emergency fire suppression, defined as in response to a fire or due to low fire water pressure. In addition, this engine shall be operated no more than 30 minutes in any one hour and no more than 10 hours per year for initial start-up testing and compliance demonstrations. Additionally, this engine shall not be operated more than the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 "Standards for the Inspection, Testing, and Maintenance of Water Based Fire Systems" (current edition). Fire hours of operation for source testing will not be counted towards either of the allowable annual limits above.

Note: Fuel consumption 27 gal/ h approximately.

There is no limit on engine operation for emergency use. [Title 17 CCR §93115.6(a)(4)]

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Automated Fire Systems Inspection Checklist

Plant: ALPHA ☐ BETA: ☑ Date: 12/3/23 Operator: CalebS.

Valve Shed # 1 by Condenser

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	SG Unit 1	B1-1	165	✓O/C	✓	Y☑ N☐	
2	SG Unit 2	B1-2	160	✓O/C	✓	Y☑ N☐	
3	Repeaters	B1-3	160	✓O/C	✓	Y☑ N☐	
4	Rack 2 West HTF	B1-4	155	✓O/C	✓	Y☑ N☐	
5	Rack 2 East HTF	B1-5	150	✓O/C	✓	Y☑ N☐	
6	North Steel Pro	B1-6	160	✓O/C	✓	Y☑ N☐	
7	HTF Pumps	B1-7	180	✓O/C	✓	Y☑ N☐	
8	HTF Heaters	B1-8	165	✓O/C	✓	Y☑ N☐	
9	South Stee Pro	B1-9	150	✓O/C	✓	Y☑ N☐	
10	Lube Oil	B1-10	160	✓O/C	✓	Y☑ N☐	
11	Turbine Hose Stations	B1-11	160	✓O/C	✓	Y☑ N☐	
12	Turbine Bearings	B1-12	165	✓O/C	✓	Y☑ N☐	

Valve Shed # 2 by Overflow

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Expansion Vessels	B2-1	160	✓O/C	✓	Y☑ N☐	
2	Ullage Area	B2-2	155	✓O/C	✓	Y☑ N☐	
3	Ullage Structure	B2-11	165	✓O/C	✓	Y☑ N☐	
4	Rack 1 Middle Area	B2-5	160	✓O/C	✓	Y☑ N☐	
5	Overflow Tanks	B2-9	160	✓O/C	✓	Y☑ N☐	
6	Rack 1 South Area	B2-6	160	✓O/C	✓	Y☑ N☐	
7	Rack 1 West	B2-7	155	✓O/C	✓	Y☑ N☐	
8	Rack 1 North Area	B2-4	155	✓O/C	✓	Y☑ N☐	
9	Overflow ATFF	B2-8	160	✓O/C	✓	Y☑ N☐	
10	Expansion Vessel ATFF	B2-3	165	✓O/C	✓	Y☑ N☐	

Valve Shed # 3 by Bldg 35 GE Electrical Bldg

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Transformer Aux	165	✓O/C	✓	Y☑ N☐	
2	Transformer Main	160	✓O/C	✓	Y☑ N☐	

Valve Shed # 4 by Cooling Tower West Side

No.	System	PSI	Viv. Pos.	Signage		Comments
1	Cooling Tower West Side	140	✓O/C	✓	Y☑ N☐	

Valve Shed # 5 by Control Bldg 10

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Control Room	B2-5	165	✓O/C	✓	Y☑ N☐	
2	Offices	B2-3	160	✓O/C	✓	Y☑ N☐	
3	Electrical Room	B2-4	165	✓O/C	✓	Y☑ N☐	

Turbine Sprinkler Valves (These are to be locked in the open position)

No.	System	Locked	Viv. Pos.	Comments
1	Bearing 2	Y☑ N☐	✓O/C	
2	Bearing 3	Y☑ N☐	✓O/C	
3	Bearing 4	Y☑ N☐	✓O/C	
4	Bearing 5	Y☐ N☑	✓O/C	

HTF Deluge System Valves (To be Locked in the Open Position)

No.	System	Locked	Viv. Pos.	Comments
1	MP-201	Y☑ N☐	✓O/C	
2	MP-200A	Y☑ N☐	✓O/C	
3	MP-200B	Y☑ N☐	✓O/C	
4	MP-200C	Y☑ N☐	✓O/C	
5	MP-200D	Y☐ N☑	✓O/C	

Fire Pump House Deluge System

No.	System	PSI	O/C	Locked	Comments
1	Fire Pump House Deluge	168	✓	Y☑ N☐	

PIV Checks

No.	System	Position	Cycled	Date Cycled	Comments
1	Maintenance Shop Drive Way #7	O/C ✓			
2	Maintenance Shop Drive Way #8	✓O/C			
3	West Side Power Block by VS 3 # 9	✓O/C			
4	West Side Power Block by VS-3 # 10	✓O/C			
5	West Side Cooling Tower by VS-4 # 11	✓O/C			
6	West Side Cooling Tower by VS 4 # 12	✓O/C			
7	N.W. Corner Chemical Storage # 1	✓O/C			
8	N.E. Corner Chemical Storage # 2	✓O/C			
9	East Side W.T. by Multimedia Filters # 3	✓O/C			
10	East Side W.T. by Multimedia Filters # 5	✓O/C			
11	North Side Bldg 10 # 6	✓O/C			
12	Between MP-444's and Water Treat # 4	O/C ✓			
13	West Side Power Block Valve Shed #1	✓O/C			

To Be Cycled First Saturday of Every Month

No.	System	Debris	Comments / Actions
1	Transformer Yard Refuse Check	Y☐ N☑	

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Fire Pump Weekly Test Log

General Information

Plant: Alpha ☐ Beta ☑ Date: 11/26/23

Operator: PAT *To be completed each time unit is operated.

Reason for running pumps: Weekly test ☐ Maintenance ☐ Emergency ☐

Jockey Electric Pump

Pre-start Inspection: Electrical Feed ☑ Mechanical ☑ Valves ☑

Check the jockey pump on pressure drop. Start up pressure: 155 psi

Discharge Pressure: 170 psi

Pump Suction Pressure: 18 psi Pump Discharge pressure: 167 psi

Comments:

Electric Pump

Pre-start Inspection: Electrical Feed ☑ Mechanical ☑ Valves ☑

Start the pump on pressure drop. Start up pressure: 145 psi

Start time: 19:31

Pump Suction Pressure: 18 psi Pump Discharge pressure: 167 psi

Stop time: 19:41 Total time running 10 min.

Comments:

Diesel Pump

Pre-start Inspection: Coolant ☑ Oil ☑ Mechanical ☑ Valves ☑ Water Jacket Heater ☑

Fuel level > 2/3: Yes ☐ No ☑ 1/2 Monthly Fuel Consumption:

Battery volt Crank 1: 27.3 Battery volt Crank 2: 28.1 Battery Condition: good

Starting hour meter: 133.2 Start time: 19:38

Oil pressure start: 59 psi Oil Pressure finish: 35 psi

Pump Suction Pressure: 20 psi Pump Discharge pressure: 146 psi

Coolant temperature after 30 minutes running:

Stop time: 19:58 Stop hour meter: 133.3 Total time running: 10 min.

Comments: "High Temp Alarm"

Sulfur Concentrations (less than or equal to 0.0015% on a weight per weight basis).

This new diesel drive fire pump engine shall be limited to use for emergency fire suppression, defined as in response to a fire or due to low fire water pressure. In addition, this engine shall be operated no more than 30 minutes in any one hour and no more than 16 hours per year for initial start-up testing and compliance demonstrations. Additionally, this engine shall not be operated more than the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 "Standards for the Inspection, Testing, and Maintenance of Water Based Fire Systems" (current edition). The hours of operation for source testing will not be counted towards either of the allowable annual limits above.

Note: Fuel consumption 27 gal/h approximately.

There is no limit on engine operation for emergency use. [Title 17 CCR 93115.6(a)(3)]

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Automated Fire Systems Inspection Checklist

Plant: ALPHA ☑ BETA: ☐ Date: 12/31/23 Operator: Anthony

Valve Shed # 1 by Condenser

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	SG Unit 1	B1-1	160	O/C	✓	Y ☑ N ☐	
2	SG Unit 2	B1-2	165	O/C	✓	Y ☑ N ☐	
3	Reheaters	B1-3	165	O/C	✓	Y ☑ N ☐	
4	Rack 2 West HTF	B1-4	160	O/C	✓	Y ☑ N ☐	
5	Rack 2 East HTF	B1-5	165	O/C	✓	Y ☑ N ☐	
6	North Steel Pro	B1-6	165	O/C	✓	Y ☑ N ☐	
7	HTF Pumps	B1-7	160	O/C	✓	Y ☑ N ☐	
8	HTF Heaters	B1-8	160	O/C	✓	Y ☑ N ☐	
9	South Steel Pro	B1-9	165	O/C	✓	Y ☑ N ☐	
10	Lube Oil	B1-10	165	O/C	✓	Y ☑ N ☐	
11	Turbine Hose Stations	B1 11	160	O/C	✓	Y ☑ N ☐	
12	Turbine Bearings	B1-12	160	O/C	✓	Y ☑ N ☐	

Valve Shed # 2 by Overflow

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Expansion Vessels	B2-1	155	O/C	✓	Y ☑ N ☐	
2	Ullage Area		170	O/C	✓	Y ☑ N ☐	
3	Ullage Structure	B2-11	165	O/C	✓	Y ☑ N ☐	
4	Rack 1 Middle Area	B2-5	165	O/C	✓	Y ☑ N ☐	
5	Overflow Tanks		165	O/C	✓	Y ☑ N ☐	
6	Rack 1 South Area	B2-6	165	O/C	✓	Y ☑ N ☐	
7	Rack 1 West		155	O/C	✓	Y ☑ N ☐	
8	Rack 1 North Area	B2-7	165	O/C	✓	Y ☑ N ☐	
9	Overflow AFFF		160	O/C	✓	Y ☑ N ☐	
10	Expansion Vessel AFFF	B2-3	165	O/C	✓	Y ☑ N ☐	

Valve Shed # 3 by Bldg 35 GE Electrical Bldg

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Transformer Aux	165	O/C	✓	Y ☑ N ☐	
2	Transformer Main	160	O/C	✓	Y ☑ N ☐	

Valve Shed # 4 by Cooling Tower West Side

No.	System	PSI	Viv. Pos.	Signage		Comments
1	Cooling Tower West Side	155	O/C	✓	Y ☑ N ☐	

Valve Shed # 5 by Control Bldg 10

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Control Room		165	O/C	✓	Y ☑ N ☐	
2	Offices	B4-3	170	O/C	✓	Y ☑ N ☐	
3	Electrical Room	B4-4	170	O/C	✓	Y ☑ N ☐	

Turbine Sprinkler Valves (These are to be locked in the open position)

No.	System	Locked	Viv. Pos.	Comments
1	Bearing 2	Y ☑ N ☐	O/C	
2	Bearing 3	Y ☑ N ☐	O/C	
3	Bearing 4	Y ☑ N ☐	O/C	
4	Bearing 5	Y ☑ N ☐	O/C	

HTF Deluge System Valves (To be Locked in the Open Position)

No.	System	Locked	Viv. Pos.	Comments
1	MP-200	Y ☑ N ☐	O/C	
2	MP-200A	Y ☑ N ☐	O/C	
3	MP-200B	Y ☑ N ☐	O/C	
4	MP-200C	Y ☑ N ☐	O/C	
5	MP-200D	Y ☑ N ☐	O/C	

Fire Pump House Deluge System

No.	System	PSI	O/C	Locked	Comments
1	Fire Pump House Deluge	190	Open	Y ☑ N ☐	

PIV Checks

No.	System	Position	Cycled	Date Cycled	Comments
1	Maintenance Shop Drive Way #7	O/C ✓			
2	Maintenance Shop Drive Way #8	✓ O/C			
3	West Side Power Block by VS-3 # 9	✓ O/C			
4	West Side Power Block by VS-1 # 10	✓ O/C			
5	West Side Cooling Tower by VS-4 # 11	✓ O/C			
6	West side Cooling Tower by VS 4 # 12	✓ O/C			
7	N.W. Corner Chemical Storage #1	✓ O/C			
8	N.E. Corner Chemical Storage # 2	✓ O/C			
9	East Side W.T. by Multimedia Filters # 3	✓ O/C			
10	East Side W.T. by Multimedia Filters # 5	✓ O/C			
11	North Side Bldg 10 # 6	✓ O/C			
12	Between MP-444's and Water Treat # 4	✓ O/C ✓			
13	West Side Power Block Valve Shed #1	✓ O/C			

To Be Cycled First Saturday of Every Month

No.	System	Debris	Comments / Actions
1	Transformer Yard Refuse Check	Y ☐ N ☐	

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Automated Fire Systems Inspection Checklist

Plant: ALPHA ☒ BETA: ☐ Date: 12/23/23 Operator: E. Ruiz

Valve Shed # 1 by Condenser

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	SG Unit 1	B1-1	165	✓ O/C	✓	Y☑ N☐	
2	SG Unit 2	B1-2	165	✓ O/C	✓	Y☑ N☐	
3	Reheaters	B1-3	165	✓ O/C	✓	Y☑ N☐	
4	Rack 2 West HTF	B1-4	165	✓ O/C	✓	Y☑ N☐	
5	Rack 2 East HTF	B1-5	165	✓ O/C	✓	Y☑ N☐	
6	North Steel Pro	B1-6	165	✓ O/C	✓	Y☑ N☐	
7	HTF Pumps	B1-7	165	✓ O/C	✓	Y☑ N☐	
8	HTF Heaters	B1-8	165	✓ O/C	✓	Y☑ N☐	
9	South Steel Pro	B1-9	165	✓ O/C	✓	Y☑ N☐	
10	Lube Oil	B1-10	165	✓ O/C	✓	Y☑ N☐	
11	Turbine Hose Stations	B1-11	165	✓ O/C	✓	Y☑ N☐	
12	Turbine Bearings	B1-12	165	✓ O/C	✓	Y☑ N☐	

Valve Shed # 2 by Overflow

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Expansion Vessels	B2-1	165	✓ O/C	✓	Y☑ N☐	
2	Ullage Area	B2-2	165	✓ O/C	✓	Y☑ N☐	
3	Ullage Structure	B2-11	165	✓ O/C	✓	Y☑ N☐	
4	Rack 1 Middle Area	B2-5	165	✓ O/C	✓	Y☑ N☐	
5	Overflow Tanks	B2-9	165	✓ O/C	✓	Y☑ N☐	
6	Rack 1 South Area	B2-6	165	✓ O/C	✓	Y☑ N☐	
7	Rack 1 West	B2-7	165	✓ O/C	✓	Y☑ N☐	
8	Rack 1 North Area	B2-4	165	✓ O/C	✓	Y☑ N☐	
9	Overflow AFFF	B2-8	165	✓ O/C	✓	Y☑ N☐	Foam Pump
10	Expansion Vessel AFFF	B2-3	165	✓ O/C	✓	Y☑ N☐	Foam Out

Valve Shed # 3 by Bldg 35 GE Electrical Bldg

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Transformer Aux	160	✓ O/C	✓	Y☑ N☐	
2	Transformer Main	160	✓ O/C	✓	Y☑ N☐	

Valve Shed # 4 by Cooling Tower West Side

No.	System	PSI	Viv. Pos.	Signage		Comments
1	Cooling Tower West Side	165	✓ O/C	✓	Y☑ N☐	

Valve Shed # 5 by Control Bldg 10

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Control Room	B4-5	170	✓ O/C	✓	Y☑ N☐	
2	Offices	B4-3	170	✓ O/C	✓	Y☑ N☐	
3	Electrical Room	B4-4	170	✓ O/C	✓	Y☑ N☐	

Turbine Sprinkler Valves (These are to be locked in the open position)

No.	System	Locked	Viv. Pos.	Comments
1	Bearing 2	Y☑ N☐	✓ O/C	
2	Bearing 3	Y☑ N☐	✓ O/C	
3	Bearing 4	Y☑ N☐	✓ O/C	
4	Bearing 5	Y☑ N☐	✓ O/C	

HTF Deluge System Valves (To be Locked in the Open Position)

No.	System	Locked	Viv. Pos.	Comments
1	MP-200A	Y☑ N☐	✓ O/C	
2	MP-200A	Y☑ N☐	✓ O/C	
3	MP-200B	Y☑ N☐	✓ O/C	
4	MP-200C	Y☑ N☐	✓ O/C	
5	MP-200D	Y☑ N☐	✓ O/C	

Fire Pump House Deluge System

No.	System	PSI	O/C	Locked	Comments
1	Fire Pump House Deluge	190	✓	Y☑ N☐	

PIV Checks

No.	System	Position	Cycled	Date Cycled	Comments
1	Maintenance Shop Drive Way #7	O/C ✓			
2	Maintenance Shop Drive Way #8	✓ O/C			
3	West Side Power Block by VS-3 # 9	✓ O/C			
4	West Side Power Block by VS-3 # 10	✓ O/C			
5	West Side Cooling Tower by VS-4 # 11	✓ O/C			
6	West Side Cooling Tower by VS-4 # 12	✓ O/C			
7	N.W. Corner Chemical Storage #1	✓ O/C			
8	N.E. Corner Chemical Storage # 2	✓ O/C			
9	East Side W.T. by Multimedia Filters # 3	✓ O/C			
10	East Side W.T. by Multimedia Filters # 5	✓ O/C			
11	North Side Bldg 10 # 6	✓ O/C			
12	Between MP-44's and Water Treat # 4	O/C ✓			
13	West Side Power Block Valve Shed #1	O/C			

To Be Cycled First Saturday of Every Month

No.	System	Debris		Comments / Actions
1	Transformer Yard Refuse Check	Y☐ N☒		

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Automated Fire Systems Inspection Checklist

Plant: ALPHA ☑ BETA: ☐ Date: 12/15/23 Operator: Erick C.

Valve Shed # 1 by Condenser

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	SG Unit 1 B1-1	160	✓ O/C	✓	Y ☑ N ☐	
2	SG Unit 2 B1-2	160	✓ O/C	✓	Y ☑ N ☐	
3	Reheaters B1-3	160	✓ O/C	✓	Y ☑ N ☐	
4	Rack 2 West HTF B1-4	160	✓ O/C	✓	Y ☑ N ☐	
5	Rack 2 East HTF B1-5	160	✓ O/C	✓	Y ☑ N ☐	
6	North Steel Pro B1-6	160	✓ O/C	✓	Y ☑ N ☐	
7	HTF Pumps B1-7	135	✓ O/C	✓	Y ☑ N ☐	
8	HTF Heaters B1-8	160	✓ O/C	✓	Y ☑ N ☐	
9	South Steel Pro B1-9	165	✓ O/C	✓	Y ☑ N ☐	
10	Lube Oil B1-10	160	✓ O/C	✓	Y ☑ N ☐	
11	Turbine Hose Stations B1-11	155	✓ O/C	✓	Y ☑ N ☐	
12	Turbine Bearings B1-12	160	✓ O/C	✓	Y ☑ N ☐	

Valve Shed # 2 by Overflow

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Expansion Vessels B2-1	160	✓ O/C	✓	Y ☑ N ☐	
2	Ullage Area B2-2	160	✓ O/C	✓	Y ☑ N ☐	
3	Ullage Structure B2-11	160	✓ O/C	✓	Y ☑ N ☐	
4	Rack 1 Middle Area B2-5	165	✓ O/C	✓	Y ☑ N ☐	
5	Overflow Tanks B2-9	160	✓ O/C	✓	Y ☑ N ☐	
6	Rack 1 South Area B2-6	165	✓ O/C	✓	Y ☑ N ☐	
7	Rack 1 West B2-7	165	✓ O/C	✓	Y ☑ N ☐	
8	Rack 1 North Area B2-4	160	✓ O/C	✓	Y ☑ N ☐	
9	Overflow AFFF B2-8	160	✓ O/C	✓	Y ☑ N ☐	
10	Expansion Vessel A-HH B2-3	160	✓ O/C	✓	Y ☑ N ☐	From Secure.

Valve Shed # 3 by Bldg 35 GE Electrical Bldg

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Transformer Aux	160	✓ O/C	✓	Y ☑ N ☐	
2	Transformer Main	155	✓ O/C	✓	Y ☑ N ☐	

Valve Shed # 4 by Cooling Tower West Side

No.	System	PSI	Viv. Pos.	Signage		Comments
1	Cooling Tower West Side	160	✓ O/C	✓	Y ☑ N ☐	

Valve Shed # 5 by Control Bldg 10

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Control Room B2-5	170	✓ O/C	✓	Y ☑ N ☐	
2	Offices B1-3	170	✓ O/C	✓	Y ☑ N ☐	
3	Electrical Room B4-4	170	✓ O/C	✓	Y ☑ N ☐	

Turbine Sprinkler Valves (These are to be locked in the open position)

No.	System	Locked	Viv. Pos.	Comments
1	Bearing 2	Y ☑ N ☐	✓ O/C	
2	Bearing 3	Y ☑ N ☐	✓ O/C	
3	Bearing 4	Y ☑ N ☐	✓ O/C	
4	Bearing 5	Y ☑ N ☐	✓ O/C	

HTF Deluge System Valves (To be Locked in the Open Position)

No.	System	Locked	Viv. Pos.	Comments
1	MP-200	Y ☐ N ☑	✓ O/C	
2	MP-200A	Y ☐ N ☑	✓ O/C	
3	MP-200B	Y ☑ N ☐	✓ O/C	
4	MP-200C	Y ☑ N ☐	✓ O/C	
5	MP-200D	Y ☐ N ☑	✓ O/C	

Fire Pump House Deluge System

No.	System	PSI	O/C	Locked	Comments
1	Fire Pump House Deluge	190	O	Y ☑ N ☐	

PIV Checks

No.	System	Position	Cycled	Date Cycled	Comments
1	Maintenance Shop Drive Way #7	O/C ✓			
2	Maintenance Shop Drive Way #8	✓ O/C			
3	West Side Power Block by VS-3 # 9	✓ O/C			
4	West Side Power Block by VS-1 # 10	✓ O/C			
5	West Side Cooling Tower by VS-4 # 11	✓ O/C			
6	West side Cooling Tower by VS-4 # 12	✓ O/C			
7	N.W. Corner Chemical Storage #1	✓ O/C			
8	N.E. Corner Chemical Storage # 2	✓ O/C			
9	East Side W.T. by Multi media Filters # 3	✓ O/C			
10	East Side W.T. by Multimedia Filters # 5	✓ O/C			
11	North Side Bldg 10 # 6	✓ O/C			
12	Between MP-444's and Water Treat # 4	O/C ✓			
13	West Side Power Block Valve Shed #1 N/A	O/C			

To Be Cycled First Saturday of Every Month

No.	System	Debris		Comments / Actions
1	Transformer Yard Refuse Check	Y ☐ N ☐		

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Automated Fire Systems Inspection Checklist

Plant: ALPHA ☐ BETA: ☑ Date: 1/28/24 Operator Caleb

Valve Shed # 1 by Condenser

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	SG Unit 1	B1-1	Valved	O/C		Y☐ N☐	
2	SG Unit 2	B1-2	out	O/C		Y☐ N☐	
3	Reheaters	B1-3		O/C		Y☐ N☐	
4	Rack 2 West HTF	B1-4		O/C		Y☐ N☐	
5	Rack 2 East HTF	B1-5		O/C		Y☐ N☐	
6	North Steel Pro	B1-6		O/C		Y☐ N☐	
7	HTF Pumps	B1-7		O/C		Y☐ N☐	
8	HTF Heaters	B1-8		O/C		Y☐ N☐	
9	South Steel Pro	B1-9		O/C		Y☐ N☐	
10	Lube Oil	B1-10		O/C		Y☐ N☐	
11	Turbine Hose Stations	B1-11		O/C		Y☐ N☐	
12	Turbine Bearings	B1-12		O/C		Y☐ N☐	

Valve Shed # 2 by Overflow

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Expansion Vessels	B2-1	Valved	O/C	out	Y☐ N☑	
2	Ullage Area	B2-2	160	✓O/C	✓	Y☑ N☐	
3	Ullage Structure	B2-11	165	✓O/C	✓	Y☑ N☐	
4	Rack 1 Middle Area	B2-5	165	✓O/C	✓	Y☑ N☐	
5	Overflow Tanks	B2-9	165	✓O/C	✓	Y☑ N☐	
6	Rack 1 South Area	B2-6	Valved	O/C	out	Y☐ N☑	
7	Rack 1 West	B2-7	180	✓O/C	✓	Y☑ N☐	
8	Rack 1 North Area	B2-4	160	✓O/C	✓	Y☑ N☐	
9	Over flow AFFF	B2-8	160	✓O/C	✓	Y☑ N☐	
10	Expansion Vessel AFFF	B2-3	165	✓O/C	✓	Y☑ N☐	

Valve Shed # 3 by Bldg 35 GE Electrical Bldg

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Transformer Aux	165	✓O/C	✓	Y☑ N☐	
2	Transformer Main	160	✓O/C	✓	Y☑ N☐	

Valve Shed # 4 by Cooling Tower West Side

No.	System	PSI	Viv. Pos.	Signage		Comments
1	Cooling Tower West Side	Valved	O/C ✓	out ✓	Y☐ N☑	

Valve Shed # 5 by Control Bldg 10

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Control Room	B4-5	165	✓O/C	✓	Y☑ N☐	
2	Offices	B4-3	160	✓O/C	✓	Y☑ N☐	
3	Electrical Room	B4-4	165	✓O/C	✓	Y☑ N☐	

Turbine Sprinkler Valves (These are to be locked in the open position)

No.	System	Locked	Viv. Pos.	Comments
1	Bearing 2	Y☑ N☐	✓O/C	
2	Bearing 3	Y☑ N☐	✓O/C	
3	Bearing 4	Y☑ N☐	✓O/C	
4	Bearing 5	Y☑ N☐	✓O/C	

HTF Deluge System Valves (To be Locked in the Open Position)

No.	System	Locked	Viv. Pos.	Comments
1	MP-201	Y☑ N☐	✓O/C	
2	MP-200A	Y☑ N☐	✓O/C	
3	MP-200B	Y☑ N☐	✓O/C	
4	MP-200C	Y☑ N☐	✓O/C	
5	MP-200D	Y☑ N☐	✓O/C	

Fire Pump House Deluge System

No.	System	PSI	O/C	Locked	Comments
1	Fire Pump House Deluge	168	O	Y☑ N☐	

PIV Checks

No.	System	Position	Cycled	Date Cycled	Comments
1	Maintenance Shop Drive Way #7	✓O/C	No		
2	Maintenance Shop Drive Way #8	O/C ✓			
3	West Side Power Block by VS-3 # 9	✓O/C			
4	West Side Power Block by VS-1 # 10	✓O/C ✓			
5	West Side Cooling Tower by VS-4 # 11	✓O/C			
6	West side Cooling Tower by VS-2 # 12	✓O/C			
7	N.W. Corner Chemical Storage #1	✓O/C			
8	N.E. Corner Chemical Storage # 2	✓O/C			
9	East Side W.T. by Multimedia Filters # 3	✓O/C			
10	East Side W.T. by Multimedia Filters # 5	✓O/C			
11	North Side Bldg 10 # 6	✓O/C			
12	Between MP-444's and Water Treat. # 4	O/C ✓			
13	West Side Power Block Valve Shed #1	O/C			

To Be Cycled First Saturday of Every Month

No.	System	Debris	Comments / Actions
1	Transformer Yard Refuse Check	Y☐ N☑	

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Automated Fire Systems Inspection Checklist

Plant: ALPHA ☐ BETA: ☑ Date: 12-28-23 Operator Jose Garcia

Valve Shed # 1 by Condenser

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	SG Unit 1	B1-1	168	✓ O/C	✓	Y ☑ N ☐	
2	SG Unit 2	B1-2	160	✓ O/C	✓	Y ☑ N ☐	
3	Reheaters	B1-3	160	✓ O/C	✓	Y ☑ N ☐	
4	Rack 2 West -TF	B1-4	160	✓ O/C	✓	Y ☑ N ☐	
5	Rack 2 East HTF	B1-5	160	✓ O/C	✓	Y ☑ N ☐	
6	North Steel Pro	B1-6	160	✓ O/C	✓	Y ☑ N ☐	
7	HTF Pumps	B1-7	160	✓ O/C	✓	Y ☑ N ☐	
8	HTF Heaters	B1-8	160	✓ O/C	✓	Y ☑ N ☐	
9	South Steel Pro	B1-9	160	✓ O/C	✓	Y ☑ N ☐	
10	Lube Oil	B1-10	160	✓ O/C	✓	Y ☑ N ☐	
11	Turbine Hose Stations	B1-11	160	✓ O/C	✓	Y ☑ N ☐	
12	Turbine Bearings	B1-12	160	✓ O/C	✓	Y ☑ N ☐	

Valve Shed # 2 by Overflow

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Expansion Vessels	B2-1	165	✓ O/C	✓	Y ☑ N ☐	
2	Ullage Area	B2-2	160	✓ O/C	✓	Y ☑ N ☐	
3	Ullage Structure	B2-11	134	✓ O/C	✓	Y ☑ N ☐	
4	Rack 1 Middle Area	B2-5	160	✓ O/C	✓	Y ☑ N ☐	
5	Overflow Tanks	B2-9	160	✓ O/C	✓	Y ☑ N ☐	
6	Rack 1 South Area	B2-6	160	✓ O/C	✓	Y ☑ N ☐	
7	Rack 1 West	B2-7	160	✓ O/C	✓	Y ☑ N ☐	
8	Rack 1 North Area	B2-4	160	✓ O/C	✓	Y ☑ N ☐	
9	Over flow AFFF	B2-8	160	✓ O/C	✓	Y ☑ N ☐	
10	Expansion Vessel AFFF	B2-3	160	✓ O/C	✓	Y ☑ N ☐	

Valve Shed # 3 by Bldg 35 GE Electrical Bldg

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Transformer Aux	165	✓ O/C	✓	Y ☑ N ☐	
2	Transformer Main	160	✓ O/C	✓	Y ☑ N ☐	

Valve Shed # 4 by Cooling Tower West Side

No.	System	PSI	Viv. Pos.	Signage		Comments
1	Cooling Tower West Side	160	✓ O/C	✓	Y ☑ N ☐	

Valve Shed # 5 by Control Bldg 10

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Control Room	B4-5	165	✓ O/C	✓	Y ☑ N ☐	
2	Offices	B4-3	165	✓ O/C	✓	Y ☑ N ☐	
3	Electrical Room	B4-4	165	✓ O/C	✓	Y ☑ N ☐	

Turbine Sprinkler Valves (These are to be locked in the open position)

No.	System	Locked	Viv. Pos.	Comments
1	Bearing 2	Y ☑ N ☐	✓ O/C	
2	Bearing 3	Y ☑ N ☐	✓ O/C	
3	Bearing 4	Y ☑ N ☐	✓ O/C	
4	Bearing 5	Y ☑ N ☐	✓ O/C	

HTF Deluge System Valves (To be Locked in the Open Position)

No.	System	Locked	Viv. Pos.	Comments
1	MP 201	Y ☑ N ☐	✓ O/C	
2	MP-200A	Y ☑ N ☐	✓ O/C	
3	MP-200B	Y ☑ N ☐	✓ O/C	
4	MP-200C	Y ☑ N ☐	✓ O/C	
5	MP-200D	Y ☑ N ☐	✓ O/C	

Fire Pump House Deluge System

No.	System	PSI	O/C	Locked	Comments
1	Fire Pump House Deluge	165	✓	Y ☑ N ☐	

PIV Checks

No.	System	Position	Cycled	Date Cycled	Comments
1	Maintenance Shop Drive Way #7	O/C ✓			
2	Maintenance Shop Drive Way #8	✓ O/C			
3	West Side Power Block by VS-3 # 9	✓ O/C			
4	West Side Power Block by VS-1 # 10	✓ O/C			
5	West Side Cooling Tower by VS-4 # 11	✓ O/C			
6	West side Cooling Tower by VS-4 # 12	✓ O/C			
7	N.W. Corner Chemical Storage #1	✓ O/C			
8	N.E. Corner Chemical Storage # 2	✓ O/C			
9	East Side W.T. by Multimedia Filters # 3	✓ O/C			
10	East Side W.T. by Multimedia Filters # 5	✓ O/C			
11	North Side Bldg 10 # 6	✓ O/C			
12	Between MP-444's and Water Treat # 4	O/C ✓			
13	West Side Power Block Valve Shed #1	✓ O/C			

To Be Cycled First Saturday of Every Month

No.	System	Debris	Comments / Actions
1	Transformer Yard Refuse Check	Y ☐ N ☑	

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Automated Fire Systems Inspection Checklist

Plant: ALPHA ☐ BETA: ☑ Date: 12/23/23 Operator Anthony

Valve Shed # 1 by Condenser

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	SG Unit 1	B1-1	160	✓O/C	✓	Y☑ N☐	
2	SG Unit 2	B1-2	155	✓O/C	✓	Y☑ N☐	
3	Reheaters	B1 3	160	✓O/C	✓	Y☑ N☐	
4	Rack 2 West HTF	B1 4	160	✓O/C	✓	Y☑ N☐	
5	Rack 2 East HTF	B1-5	155	✓O/C	✓	Y☑ N☐	
6	North Steel Pro	B1 6	155	✓O/C	✓	Y☑ N☐	
7	HTF Pumps	B1 7	155	✓O/C	✓	Y☑ N☐	
8	HTF Heaters	B1-8	155	✓O/C	✓	Y☑ N☐	
9	South Steel Pro	B1-9	160	✓O/C	✓	Y☑ N☐	
10	Lube Oil	B1-10	160	✓O/C	✓	Y☑ N☐	
11	Turbine Hose Stations	91 11	155	✓O/C	✓	Y☑ N☐	
12	Turbine Bearings	B1-12	160	✓O/C	✓	Y☑ N☐	

Valve Shed # 2 by Overflow

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Expansion Vessels	B2 1	160	✓O/C	✓	Y☑ N☐	
2	Ullage Area	B2-2	165	✓O/C	✓	Y☑ N☐	
3	Ullage Structure	B2 3	160	✓O/C	✓	Y☑ N☐	
4	Rack 1 Middle Area	B2 5	160	✓O/C	✓	Y☑ N☐	
5	Overflow Tanks	B2-9	160	✓O/C	✓	Y☑ N☐	
6	Rack 1 South Area	B2-6	160	✓O/C	✓	Y☑ N☐	
7	Rack 1 West	B2-7	160	✓O/C	✓	Y☑ N☐	
8	Rack 1 North Area	B2 4	165	✓O/C	✓	Y☑ N☐	
9	Overflow AFFF	22 8	160	✓O/C	✓	Y☑ N☐	
10	Expansion Vessel AFFF	B2-3	160	✓O/C	✓	Y☑ N☐	

Valve Shed # 3 by Bldg 35 GE Electrical Bldg

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Transformer Aux	155	✓O/C	✓	Y☑ N☐	
2	Transformer Main	155	✓O/C	✓	Y☑ N☐	

Valve Shed # 4 by Cooling Tower West Side

No.	System	PSI	Viv. Pos.	Signage		Comments
1	Cooling Tower West Side	155	✓O/C	✓	Y☑ N☐	

Valve Shed # 5 by Control Bldg 10

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Control Room	B4 3	160	✓O/C	✓	Y☑ N☐	
2	Offices	34-3	160	✓O/C	✓	Y☑ N☐	
3	Electrical Room	34 4	165	✓O/C	✓	Y☑ N☐	

Turbine Sprinkler Valves (These are to be locked in the open position)

No.	System	Locked	Viv. Pos.	Comments
1	Bearing 2	Y☑ N☐	✓O/C	
2	Bearing 3	Y☑ N☐	✓O/C	
3	Bearing 4	Y☑ N☐	✓O/C	
4	Bearing 5	Y☑ N☐	✓O/C	

HTF Deluge System Valves (To be Locked in the Open Position)

No.	System	Locked	Viv. Pos.	Comments
1	MP 201	Y☑ N☐	✓O/C	
2	MP-200A	Y☑ N☐	✓O/C	
3	MP-200B	Y☑ N☐	✓O/C	
4	MP-200C	Y☑ N☐	✓O/C	
5	MP-200D	Y☑ N☐	✓O/C	

Fire Pump House Deluge System

No.	System	PSI	O/C	Locked	Comments
1	Fire Pump House Deluge	170	Open	Y☑ N☐	

PIV Checks

No.	System	Position	Cycled	Date Cycled	Comments
1	Maintenance Shop Drive Way #Y	O/C ✓			
2	Maintenance Shop Drive Way #B	✓O/C			
3	West Side Power Block by VS-3 # 9	✓O/C			
4	West Side Power Block by VS-1 # 10	✓O/C			
5	West Side Cooling Tower by VS-4 # 11	✓O/C			
6	West side Cooling Tower by VS-4 # 12	✓O/C			
7	N.W. Corner Chemical Storage #1	✓O/C			
8	N.E. Corner Chemical Storage # 2	✓O/C			
9	East Side W.T. by Multimedia Filters # 3	✓O/C			
10	East Side W.T. by Multimedia Filters # 5	✓O/C			
11	North Side Bldg 10 # 6	✓O/C			
12	Between MP-444's and Water Treat # 4	O/C✓			
13	West Side Power Block Valve Shed #1	✓O/C			

To Be Cycled First Saturday of Every Month

No.	System	Debris	Comments / Actions
1	Transformer Yard Refuse Check	~~Y☐ N☐~~	

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Automated Fire Systems Inspection Checklist

Plant: ALPHA ☐ BETA: ☑ Date: 12/16/23 Operator: Anthony

Valve Shed # 1 by Condenser

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	SG Unit 1	B1-1	165	✓O/C	✓	Y☑ N☐	
2	SG Unit 2	B1-2	160	✓O/C	✓	Y☑ N☐	
3	Reheaters	B1-3	160	✓O/C	✓	Y☑ N☐	
4	Rack 2 West HTF	B1-4	160	✓O/C	✓	Y☑ N☐	
5	Rack 2 East HTF	B1-5	160	✓O/C	✓	Y☑ N☐	
6	North Side Pre	B1-6	160	✓O/C	✓	Y☑ N☐	
7	HTF Pumps	B1-7	160	✓O/C	✓	Y☑ N☐	
8	HTF Heaters	B1-8	160	✓O/C	✓	Y☑ N☐	
9	South Steel Pit		160	✓O/C	✓	Y☑ N☐	
10	Lube Oil	B1-10	165	✓O/C	✓	Y☑ N☐	
11	Turbine Hose Stations	B1-11	175	✓O/C	✓	Y☑ N☐	
12	Turbine Bearings	B1-12	165	✓O/C	✓	Y☑ N☐	

Valve Shed # 2 by Overflow

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Expansion Vessels	B2-1	160	✓O/C	✓	Y☑ N☐	
2	Ullage Area	B2-2	160	✓O/C	✓	Y☑ N☐	
3	Ullage Structure	B2-11	160	✓O/C	✓	Y☑ N☐	
4	Rack 1 Middle Area	B2-5	160	✓O/C	✓	Y☑ N☐	
5	Overflow Tanks	B2-9	160	✓O/C	✓	Y☑ N☐	
6	Rack 1 South Area	B2-6	160	✓O/C	✓	Y☑ N☐	
7	Rack 1 West	B2-7	160	✓O/C	✓	Y☑ N☐	
8	Rack 1 North Area	B2-4	160	✓O/C	✓	Y☑ N☐	
9	Over Flow AFFF	B2-8	155	✓O/C	✓	Y☑ N☐	
10	Expansion Vessel AFFF	B2-3	160	✓O/C	✓	Y☑ N☐	

Valve Shed # 3 by Bldg 35 GE Electrical Bldg

No.	System	PSI	Viv. Pos.	Signage	Locked	Comments
1	Transformer Aux	160	✓O/C	✓	Y☑ N☐	
2	Transformer Main	160	✓O/C	✓	Y☑ N☐	

Valve Shed # 4 by Cooling Tower West Side

No.	System	PSI	Viv. Pos.	Signage		Comments
1	Cooling Tower West Side	160	✓O/C	✓	Y☑ N☐	

Valve Shed # 5 by Control Bldg 10

No.	System		PSI	Viv. Pos.	Signage	Locked	Comments
1	Control Room	B1-5	160	✓O/C	✓	Y☑ N☐	
2	Offices		160	✓O/C	✓	Y☑ N☐	
3	Electrical Room	B4-4	160	✓O/C	✓	Y☑ N☐	

Turbine Sprinkler Valves (These are to be locked in the open position)

No.	System	Locked	Viv. Pos.	Comments
1	Bearing 2	Y☑ N☐	✓O/C	
2	Bearing 3	Y☑ N☐	✓O/C	
3	Bearing 4	Y☑ N☐	✓O/C	
4	Bearing 5	Y☑ N☐	✓O/C	

HTF Deluge System Valves (To be Locked in the Open Position)

No.	System	Locked	Viv. Pos.	Comments
1	MP-201	Y☑ N☐	✓O/C	
2	MP-200A	Y☑ N☐	✓O/C	
3	MP-200B	Y☑ N☐	✓O/C	
4	MP-200C	Y☑ N☐	✓O/C	
5	MP-200D	Y☑ N☐	✓O/C	

Fire Pump House Deluge System

No.	System	PSI	O/C	Locked	Comments
1	Fire Pump House Deluge	165	Open	Y☑ N☐	

PIV Checks

No.	System	Position	Cycled	Date Cycled	Comments
1	Maintenance Shop Drive Way #7	✓O/C			
2	Maintenance Shop Drive Way #8	✓O/C			
3	West Side Power Block by VS-3 # 9	✓O/C			
4	West Side Power Block by VS-1 # 10	✓O/C			
5	West Side Cooling Tower by VS-4 # 11	✓O/C			
6	West side Cooling Tower by VS-4 # 12	✓O/C			
7	N.W. Corner Chemical Storage #1	✓O/C			
8	N.E. Corner Chemical Storage # 2	✓O/C			
9	East Side W.T. by Multimedia Filters # 3	✓O/C			
10	East Side W.T. by Multimedia Filters # 5	✓O/C			
11	North Side Bldg 10 # 6	✓O/C			
12	Between MP-444 s and Water Treat # 4	O/C✓			
13	West Side Power Block Valve Shed #1	✓O/C			

To Be Cycled First Saturday of Every Month

No.	System	Debris	Comments / Actions
1	Transformer Yard Refuse Check	Y☐ N☐	

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

Fire Pump Weekly Test Log

General Information

Plant: Alpha ☑ Beta ☐ Date: 10/1/23

Operator: VM *To be completed each time unit is operated.

Reason for running pumps: Weekly test ☑ Maintenance ☐ Emergency ☐

Jockey Electric Pump

Pre-start Inspection: Electrical Feed ☐ Mechanical ☐ Valves ☐

Check the jockey pump on pressure drop. Start up pressure: 155 PSI

Discharge Pressure: 165 PSI

Pump Suction Pressure: 20 PSI Pump Discharge pressure: 166 PSI

Comments:

Electric Pump

Pre-start Inspection: Electrical Feed ☐ Mechanical ☐ Valves ☐

Start the pump on pressure drop. Start up pressure: 195 PSI

Start time: 19:48

Pump Suction Pressure: 20 PSI Pump Discharge pressure: 150 PSI

Stop time: Total time running 10 min.

Comments:

Diesel Pump

Pre-start Inspection: Coolant ☑ Oil ☑ Mechanical ☑ Valves ☑ Water Jacket Heater ☑

Fuel level > 2/3: Yes ☐ No ☑ Monthly Fuel Consumption:

Battery volt Crank 1: 26.6 Battery volt Crank 2: 26.6 Battery Condition: good

Starting hour meter: 127.9 Start time: 20:02

Oil pressure start: 58 PSI Oil Pressure finish: 41 PSI

Pump Suction Pressure: 21 PSI Pump Discharge pressure: 161 PSI

Coolant temperature after 30 minutes running: 205 F after 14 minutes running

Stop time: 2026 Stop hour meter: 128.1 Total run time: 14 min January 1st hour meter: Total YTD hours:

Comments: High Temp Alarm

NOTE TESTING FOR NFPA COMPLIANCE ONCE 10 HOURS YTD RUN TIME IS EXCEEDED

Sulfur Concentrations (less than or equal to 0.0015% on a weight per weight basis).

This new diesel drive fire pump engine shall be limited to use for emergency fire suppression, defined as in response to a fire or due to low fire water pressure. In addition, this engine shall be operated no more than 20 minutes in any one hour and no more than 10 hours per year for initial start up testing and compliance demonstrations. Additionally this engine shall not be operated more than the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 "Standards for the Inspection, Testing, and Maintenance of Water Based Fire Systems" (current edition). The hours of operation for source testing will not be counted towards either of the allowable annual limits above.

Note: Fuel consumption= 27 gal/ 1 approximately

There is no limit on engine operation for emergency use. [Title 17 CCR 93115.6(b)(3)]

Appendix I

Air Quality 54

Gasoline Tank Annual Test

Mojave Solar LLC

42134 Harper Lake Road Phone: 760 308 0400
Hinkley, California 92347

Submitted Electronically

Subject:	**09-AFC-5C**
Condition Number:	**AQ-54**
Description:	**MDAQMD Rule 461 Gasoline Dispensing Tank Vapor Recovery Annual Test. Test results. 2023**
Submittal Number:	**AQ54-08-00**

May 19, 2022

Ashley Gutierrez, CPM
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814
Ashley.Gutierrez@energy.ca.gov

Ms. Gutierrez,

The attached documentation is submitted for your record. See the test results from the test performed on April 20, 2023. The test results have been submitted to the MDAQMD directly from the testing company following Rule 461.

For your convenience, we hereby, include the Compliance language below:

AQ-54: The project owner shall perform the following tests within 60 days of construction completion and annually thereafter in accord with the following test procedures:

a) Determination of Static Pressure Performance of Vapor Recovery Systems at Gasoline Dispensing Facilities with Aboveground Storage Tanks shall be conducted per current ARB Executive Orders and,

b) Phase I Adapters, Emergency Vents, Spill Container Drain Valve.
Dedicated gauging port with drop tube and tank components, all connections, and fittings shall NOT have any detectable leaks; test methods shall be per current ARB Executive Orders, and

Mojave Solar LLC

42134 Harper Lake Road Phone: 760 308 0400
Hinkley, California 92347

c) Liquid Removal Test (if applicable) per TP-201.6, and Summary of Test Data shall be documented on a Form similar to the form in current ARB Executive Orders.

The district shall be notified a minimum of 10 days prior to performing the required tests with the final results submitted to the District within 30 days of completion of the tests.

The District shall receive passing test reports no later than six (6) weeks prior to the expiration date of this permit.

Verification: The project owner shall notify the District at least 10 days prior to performing the required tests. The test results shall be submitted to the District within 30 days of completion of the tests and shall be made available to the CPM if requested.

Sincerely,

Mahnaz Ghamati

Quality, Environmental & Compliance Manager
ASI Operations LLC
42134 Harper Lake Rd
Hinkley, CA 92347
Cell: 760-498-0549
mahnaz.ghamati@atlantica.com

Attachments: AQ-54. Gasoline Dispensing Tank Vapor Recovery Annual Test report.

Mahnaz Ghamati

From: VaporRecoveryTesting@mdaqmd.ca.gov
Sent: Friday, April 7, 2023 10:08 AM
To: sordonez@ocpetroleum.com
Subject: Permit # N011039 - Mojave Solar - Hinkley - MDAQMD Testing Notification Form

Your email has been received. If we have any questions or concerns, you will be contacted. If unable to perform a test at the time and date proposed, please cancel with at least a 24 hour notice to avoid a violation. Thank you for contacting the Mojave Desert Air Quality Management District.

Gasoline Dispensing Facility (GDF) Vapor Recovery Test Policy
https://www.mdaqmd.ca.gov/home/showpublisheddocument/9004/637679884233757522

Rule 461 Testing Notification Form (New as of 2020)
https://www.mdaqmd.ca.gov/home/showdocument?id=6689

Modification/Backfill Notification
https://www.mdaqmd.ca.gov/home/showpublisheddocument/9214/637798425050870000

From: sordonez@ocpetroleum.com
Sent: 4/7/2023 10:07:59 AM -07:00
To: VaporRecoveryTesting@mdaqmd.ca.gov
Subject: Permit # N011039 - Mojave Solar - Hinkley - MDAQMD Testing Notification Form
Good morning,

Please see attached testing notification for permit # N011039.

Feel free to contact us with any questions. Thank you

Sandy Ordonez
Orange Coast Petroleum Equipment, Inc.
1015 N. Parker St.
Orange, CA 92867
Phone: (714) 744-4049
Fax: (714) 744-0638
www.ocpetroleum.com

MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT
BRAD POIRIEZ, *EXECUTIVE DIRECTOR*
14306 Park Avenue, Victorville, CA 92392-2310
760.245.1661 • Fax 760.245.2022
www.MDAQMD.ca.gov • @MDAQMD

Rule 461 Pass/Fail Test Results

REQUIRED 30 days after testing

Submit form to **VaporRecoveryTesting@mdaqmd.ca.gov**

PLEASE TYPE OR PRINT Test date: 4/20/2023

Section 1: MDAQMD information

Company No.: Mojave Solar LLC	Facility No.: 3130	Permit No.: N011039

Section 2: Test results

Aboveground Storage Tank Standing Loss EVR

Pass	Fail		
☑	☐	TP-201.1E	Leak rate & cracking pressure of P/V vent valves

Aboveground Storage Tank Phase I & II EVR

Pass	Fail		
☐	☐	TP-206.3	Static pressure performance
☐	☐	TP-201.4	Dynamic back pressure
☑	☐	TP-201.6C	Liquid removal test procedure
☑	☐	TP-201.1E	Leak rate & cracking pressure of P/V vent valves
☑	☐	TP-201.3B	AST static pressure performance
☐	☐	Ex. 7	Nozzle bag test

Aboveground Storage Tank Phase I & II Pre-EVR

Pass	Fail		
☐	☐	TP-201.6	Liquid removal test
☐	☐	TP-201.3	2-inch pressure decay
☐	☐	TP-201.4	Dynamic back pressure
☐	☐	Ex. 4	Vapor return integrity Healy G-70-187
☐	☐	Ex. 5	Fillneck vapor pressure Healy G-70-187

Underground Storage Tank Phase I EVR

Pass	Fail		
☐	☐	TP-201.3	2-inch WC static pressure
☐	☐	TP-201.1B	Static torque of rotable Phase I adaptors
☐	☐	TP-201.1C/D	Pressure integrity drop tube/drain valve
☐	☐	TP-201.1E	Leak rate & cracking pressure of P/V vent valves

Underground Storage Tank Phase II EVR - ASSIST

Pass	Fail		
☐	☐	Ex. 4	Determination of static pressure performance of the Healy Clean Air Separator
☐	☐	Ex. 5	Vapor to liquid volume ratio
☐	☐	Ex. 7	Nozzle bag test procedure (start up and after drive off)
☐	☐	Ex. 8	Required items in conducting TP-201.3
☐	☐	Ex. 9	Liquid condensate trap compliance test
☐	☐	Ex. 9	Veeder-Root ISD operability test
☐	☐	Ex. 10	FFS INCON ISD operability test
☐	☐	Ex. 11	Liquid condensate trap compliance procedure
☐	☐	Ex. 12	Veeder-Root maintenance tracker (optional)

Underground Storage Tank Phase II EVR - BALANCE

Pass	Fail		
☐	☐	TP-201.3	Determination of 2-inch WC static pressure performance of VR systems
☐	☐	TP-201.4	Dynamic back pressure
☐	☐	Ex. 4	Required items in conducting TP-201.3
☐	☐	Ex. 5	Liquid removal test procedure (TP-201.6C)
☐	☐	Ex. 6	Required items in conducting TP-201.4
☐	☐	Ex. 7	Nozzle bag test procedure (annually per IOM)
☐	☐	Ex. 8	VST ECS; hydrocarbon sensor verification test procedure
☐	☐	Ex. 9	VST ECS; determination of processor activation pressure
☐	☐	Ex. 10	Vapor pressure sensor verification test procedure
☐	☐	Ex. 11	Veeder-Root vapor polisher; operability test procedure
☐	☐	Ex. 12	Veeder-Root vapor polisher; hydrocarbon emissions verification test procedure
☐	☐	Ex. 13	Hirt VCS 100 processor; operability test procedure
☐	☐	Ex. 14	Franklin fueling systems CAS; static pressure performance test procedure
☐	☐	Ex. 15	VST Green Machine compliance test procedure
☐	☐	Ex. 16	Liquid condensate trap compliance test procedure
☐	☐	Ex. 17	Veeder-Root, ISD operability test (flow meter test)
☐	☐	Ex. 18	Veeder-Root maintenance tracker security feature
☐	☐	Ex. 19	INCON flow meter operability test procedure

Section 3: Additional information

Comments/notes:

Rule 461 Vapor Recovery System Test Results Summary

Your Gasoline Dispensing Facility (GDF) has **Passed** on or more of the following California Air Resources Board (CARB) Performance Tests on your Gasoline Vapor Recovery System:

☑ TP-201.3	Static Pressure Performance Test (Leak Decay)	☐ TP-201.1B	Static Torque of Rotatable Phase I Adaptors
☐ TP-201.3B	Static Pressure Performance Test - Dispensing Facilities with AST's	☐ TP-201.1C	Leak Rate of Drop Tube/Drain Valve Assembly
☐ TP-201.4	Dynamic Back Pressure Test	☑ TP-201.1E	Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves
☐ TP-201.5	Air to Liquid Ratio Test	☐ TP-206.3	Static Pressure Performance Test - Dispensing Facilities with AST's
☑ TP-201.6C	Liquid Removal Rate Test	☐ Other:	

Your Gasoline Dispensing Facility (GDF) has **Failed** on or more of the following California Air Resources Board (CARB) Performance Tests on your Gasoline Vapor Recovery System:

☐ TP-201.3	Static Pressure Performance Test (Leak Decay)	☐ TP-201.1B	Static Torque of Rotatable Phase I Adaptors
☐ TP-201.3B	Static Pressure Performance Test - Dispensing Facilities with AST's	☐ TP-201.1C	Leak Rate of Drop Tube/Drain Valve Assembly
☐ TP-201.4	Dynamic Back Pressure Test	☐ TP-201.1E	Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves
☐ TP-201.5	Air to Liquid Ratio Test	☐ TP-206.3	Static Pressure Performance Test - Dispensing Facilities with AST's
☐ TP-201.6C	Liquid Removal Rate Test	☐ Other:	

Rule 461 (e)(5) states that the Owner/Operator shall not operate or resume operation of a Gasoline Transfer and Dispensing Facility, unless the facility has successfully passed the applicable Performance and Reverification Tests.

Continued operation of your Gasoline Dispensing Facility (GDF) without passing tests is a violation of AQMD and APCD Regulations and California Health and Safety Code. You may be subject to substantial financial and other legal penalties.

Notwithstanding the above, when a dispenser associated with any equipment that fails a reverification test, it must be isolated and shut down. The Owner/Operator may continue operation of the remaining equipment if the test results demonstrate that the remaining equipment is functioning in good operating comdition. All test results and the method of isolating the defective equipment shall be documented in the test reports to be submitted to the Executive Officer pursuant to subparagraph (e)(7)(C), and also maintained/logged in the O & M Manual on site.

In South Coast AQMD; You may seek administrative relief from the regulations by filing a petition with the Hearing Board. **Be aware that filing a petition for relief does not authorize you to dispense gasoline**; you must wait until the Hearing Board reviews your case. Information concerning the Hearing Board can be obtained by calling the Clerk of the Board at 909 396-2500 from 7:30 AM to 5:30 PM, Tuesday through Friday.

GDF Contact: Mahnaz Ghamati / 760 498-0549 Signature: Ghamati

Testing Person: Marco Camargo Signature:

Testing Company: Orange Coast Petroleum Equipment Testing Person ID No.: 175734

Facility Name: Mojave Solar LLC AQMD Facility ID No.: 3130

Facility Address: 42124 Harper Lake Rd Hinkley, CA 92347 Date: 4/20/2023

2 Inch
Pressure Decay
TP201.3

Ref. No.: Notified
AQMD Id: 3130
Site Name: Mojave Solar LLC
Address: 42124 Harper Lake Rd
Hinkley, CA 92347
Phone: 760 498-0549

Phase I System? 402-D
Phase II System? G-70-52-AM

Total # of Nozzles 1
Products per Nozzle 1

Testing Company

Name: Orange Coast Petroleum Equipment
Address: 1015 N Parker St
Orange, CA 92867
Phone: 714 744-4049

Tanks Manifolded? No
Vapor Pot Present? No

Total # of Tanks 1

Tank Information	1	2	3	4	All
1. Product Grade	87/UNLD				87/UNLD
2. Actual Tank Capacity, gallons	2044				2044
3. Gasoline Volume, gallons	1522				1522
4. Ullage, **(V)** gallons (line #2 minus line#3)	522				522
Test Information	**1**	**2**	**3**	**4**	**5**
5. Start time	7:30am	8am			
6. Initial Test Pressure, inches H_2O	2.00	2.00			
7. Pressure after 1 minute, inches H_2O	0.00	1.97			
8. Pressure after 2 minutes, inches H_2O	0.00	1.92			
9. Pressure after 3 minutes, inches H_2O	0.00	1.89			
10. Pressure after 4 minutes, inches H_2O	0.00	1.87			
11. Pressure after 5 minutes, inches H_2O	0..00	1.85			
12. Allowable Final Pressure	1.28	1.28			
13. Pass / Fail (Enter "GF" for Gross failure)	GF	Pass			

4/20/2023	Requested Test Date.
7:30am	Requested Test Time.
Digital Manometer	What type of pressure device used?
1/23/2023	Calibration date for pressure device (90 days).
0	Enter initial tank ullage pressure (Vent if over 0.5 in. w.c., then start the 30 min no dispensing period)
1	Enter flowmeter rate, **F**(Must be 1 to 5 CFM).
0 min 18 sec	Calculate ullage fill time, t_2. $t_2 = \frac{V}{[1522]F}$
0 min 36 sec	Calculate gross failure time (Twice t_2).
0	Enter ending value of drift test (Must be 0.01 in. w.c. or less).
2.07"	Record Vapor Coupler Integrity Test Assembly pressure after 1 minute and location.
Phase I	Nitrogen introduction point. Phase I vapor coupler or Phase II vapor riser?

Tester: Marco Camargo
Tester Id: 175734

Signature:
Test Date: 4/20/2023

Liquid Removal
TP 201.6 C

Ref. No.: Notified
AQMD Id.: 3130
Site Name: Mojave Solar LLC
Address: 42124 Harper Lake Rd
Hinkley, CA 92347
Phone: 760 498-0549

Testing Company

Note: If using short version, disregard adhesion/evaporation column.

Name: Orange Coast Petroleum Equipment
Address: 1015 N Parker St
Orange, CA 92867
Phone: 714 744-4049

Dispenser Number	Product Grade	Gasoline Added (VI), ml.	Gasoline Dispensed (G), gal.	Dispense Time (T), sec.	Dispensing Rate (GPM) 60(G) / (T)	Gasoline Remaining (VF), ml.	Adhesion/ Evaporation (VW), ml.	Removal Rate ml/gal (VI-VW-VF)/G	Comments (Liquid Drained - No Test required if less than 25mL)
1	87/UNLD	0	0	--	--	--	--	--	0 Liquid Drained, No Test..

Tester Name: Marco Camargo
Signature:

Tester Id.: 175734
Test Date: 4/20/2023

Leak Rate and Cracking Pressure of P/V Vent Valves

Ref. No.: Notified
AQMD Id: 3130
Site Name: Mojave Solar LLC
Address: 42124 Harper Lake Rd
Hinkley, CA 92347
Phone: 760 498-0549

Testing Company

Name: Orange Coast Petroleum Equipment
Address: 1015 N Parker St
Orange, CA 92867
Phone: 714 744-4049

Calibration Date of Flow Meter: 10/26/2022

Calibration Date of Pressure Gauge: 1/23/2023

P/V Valve Manufacturer:	Husky	Model Number:	5885	Pass/Fail:	Pass
Manufacturer Specified Positive Leak Rate (CFH):	.05	Manufacturer Specified Negative Leak Rate (CFH):		.21	
Measured Positive Leak Rate(CFH)	.03	Measured Negative Leak Rate (CFH)		.04	
Positive Cracking Pressure (in. H2O)	3.03"	Negative Cracking Pressure (in. H2O)		-8.26"	
Serial No.: 0080647461	Remove After Date:	2-2027	Next Test Due:	4-2024	

P/V Valve Manufacturer:		Model Number:		Pass/Fail:	
Manufacturer Specified Positive Leak Rate (CFH):		Manufacturer Specified Negative Leak Rate (CFH):			
Measured Positive Leak Rate(CFH)		Measured Negative Leak Rate (CFH)			
Positive Cracking Pressure (in. H2O)		Negative Cracking Pressure (in. H2O)			
Serial No.:	Remove After Date:		Next Test Due:		

P/V Valve Manufacturer:		Model Number:		Pass/Fail:	
Manufacturer Specified Positive Leak Rate (CFH):		Manufacturer Specified Negative Leak Rate (CFH):			
Measured Positive Leak Rate(CFH)		Measured Negative Leak Rate (CFH)			
Positive Cracking Pressure (in. H2O)		Negative Cracking Pressure (in. H2O)			
Serial No.:	Remove After Date:		Next Test Due:		

P/V Valve Manufacturer:		Model Number:		Pass/Fail:	
Manufacturer Specified Positive Leak Rate (CFH):		Manufacturer Specified Negative Leak Rate (CFH):			
Measured Positive Leak Rate(CFH)		Measured Negative Leak Rate (CFH)			
Positive Cracking Pressure (in. H2O)		Negative Cracking Pressure (in. H2O)			
Serial No.:	Remove After Date:		Next Test Due:		

P/V Valve Manufacturer:		Model Number:		Pass/Fail:	
Manufacturer Specified Positive Leak Rate (CFH):		Manufacturer Specified Negative Leak Rate (CFH):			
Measured Positive Leak Rate(CFH)		Measured Negative Leak Rate (CFH)			
Positive Cracking Pressure (in. H2O)		Negative Cracking Pressure (in. H2O)			
Serial No.:	Remove After Date:		Next Test Due:		

Tester: Marco Camargo
Tester Id: 175734

Signature: [signature]
Test Date: 4/20/2023

Ref. Number: Notified

Repair Log:

Cracked / Leaky 4' Non-Venturi Coaxial Hose - Leaking Fuel Vapors

Installed 1ea. Goodyear 4' Non-Venturi Coaxial Hose - SN: 248712 & 248707

Damaged / Defective Mor Bros 4" Vapor Adaptor - Damaged Seal/Poppet

Installed 1ea. Mor Bros 323-0400-EVR 4" Vapor Adaptor

Comments:

TP-201.3: Initial Test Failed = Gross Fail

Replaced Defective / Leaky EVR Components

Re-test after Repair: Passed

Appendix J

Air Quality 58

Gasoline Tank Usage

Mojave Solar LLC

42134 Harper Lake Road Phone: 760 308 0400
Hinkley, California 92347

Submitted Electronically

Subject: **09-AFC-5C**
Condition Number: **AQ-58**
Description: **Annual Fuel Throughput 2023**
Submittal Number: **AQ58-07-00**

January 22, 2024

Ashley Gutierrez, CPM
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814
Ashley.Gutierrez@energy.ca.gov

May Mamari, Air Quality Engineer MDAQMD
Mojave Desert Air Quality Management District
14306 Park Avenue
Victorville, CA 92392
mmamari@mdaqmd.ca.gov

Ms. Gutierrez and Ms. Mamari,

The attached documentation is submitted for your records as stated on the Permit to Operate N011039 and as requested on a notification received on January 09, 2024. The form has been completed and is hereby attached.

The information contained in this submittal will also be part of the ACR as it calls for in the compliance.

For your convenience, included is the Compliance language below

AQ-58. The annual throughput of gasoline shall not exceed 600,000 gallons per year. Throughput Records shall be kept on site and available to District personnel upon request. Before this annual throughput can be increased the facility may be required to submit to the District a site-specific Health Risk Assessment in accord with a District approved plan. In addition, public notice and/or comment period may be required. [Regulation XIII; Rule 204]

Mojave Solar LLC

42134 Harper Lake Road Phone: 760 308 0400
Hinkley, California 92347

Verification: The project owner shall submit to the CPM gasoline throughput records demonstrating compliance with this condition as part of the Annual Compliance Report. The project owner shall maintain on site the annual gasoline throughput records and shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

Should you have any questions or comments, please do not t hesitate to contact me.

Sincerely,

Mahnaz Ghamati
Quality, Environmental & Compliance Manager
ASI Operations LLC
42134 Harper Lake Rd
Hinkley, CA 92347
Cell: (760) 498-0549
mahnaz.ghamati@atlantica.com

Attachments: MDAQMD Throughput Fuel Dispensing Equipment form 2023 annual report.

Mojave Desert Air Quality Management District
Brad Poiriez, *Executive Director*
14306 Park Avenue, Victorville, CA 92392-2310
760.245.1661 • www.MDAQMD.ca.gov • @MDAQMD

Throughput Fuel Dispensing Equipment

Failure to respond no later than **Feb. 28** will result in enforcement action.

Emission year: 2023

Fill out sections in gray and return to Mojave Desert Air Quality Management District at the address listed at the top of this document, *or* email completed form to VaporRecoveryTesting@mdaqmd.ca.gov.

STATION NAME:	COMPANY NUMBER:	FACILITY NUMBER:	DISTRICT PERMIT NUMBER:
Mojave Solar Project	1876	3130	N011039

STATION ADDRESS:	CITY:	STATE:	ZIP:
42134 Harper Lake Rd	Hinkley	CA	902347

TELEPHONE NUMBER:	EMAIL ADDRESS:
760-308-0418	mahnaz.ghamati@atlantica.com

TYPE OF FUEL DISPENSED:	TOTAL GALLONS DISPENSED IN EMISSION YEAR:
☑ Gasoline	17,090
☑ Diesel fuel	25,568
☐ Propane	
☐ Aviation gas	
☐ Ethanol	
☐ Racing fuel	

CERTIFICATION

I, Mahnaz Ghamati (NAME OF OFFICIAL), a responsible official of Mojave Solar Project (NAME OF FACILITY), hereby certify, based upon information and belief formed after reasonable inquiry, that the above information is true, accurate and complete. Executed this 22 (DAY) day of January (MONTH), 2024 (YEAR) at San Bernardino County, California (COUNTY AND STATE).

Mahnaz Ghamati (SIGNATURE) — Mahnaz Ghamati, Compliance (NAME AND TITLE)

For questions or assistance, call 760.245.1661.

Atlantica
Sustainable Infrastructure

GDF Throughput Record
Calendar Year 2023

Month	Gallons of Gasoline
January	2,228
February	1,014
March	2,261
April	812
May	1,845
June	1,834
July	1,199
August	1,382
September	1,390
October	844
November	1,100
December	1,180
Total for the Year	**17,090**

Atlantica
Sustainable Infrastructure

GDF Throughput Record
Calendar Year 2023

Month	Gallons of Diesel
January	12,551
February	4,400
March	1,100
April	1,101
May	686
June	800
July	703
August	801
September	1,503
October	824
November	1,100
December	0
Total for the Year	**25,568**

Mojave Solar LLC
42134 Harper Lake Road Phone: 760 308 0400
Hinkley, California 92347

Appendix K

Air Quality 63,65,66,72

Carbon Adsorption System – Annual Test, Control Efficiency

Mojave Solar LLC

42134 Harper Lake Road Phone: 760 308 0400
Hinkley, California 92347

Submitted Electronically

Subject:	**09-AFC-5C**
Condition Number:	**AQ-72**
Description:	**Annual Compliance Test for VOC & Benzene Emissions, Carbon System (09-AFC-5C) 2023**
Submittal Number:	**AQ72-15-01**

October 2, 2023

Ashley Gutierrez, CPM
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814
Ashley.Gutierrez@energy.ca.gov

Mrs. Gutierrez,

Pursuant to Condition of Certification AQ-72, we are submitting the Protocol for VOC & Benzene Emissions Testing on Carbon Adsorption systems of the Mojave Solar Project for your review and records.

Please accept this letter as a formal invitation to witness the test. The tentative schedule for the test is August 10th, 2023.

For your convenience, we are including the Compliance language below:

AQ-72: The project owner shall conduct all required compliance/certification tests in accordance with a District-approved test plan. Thirty (30) days prior to the compliance/certification tests the operator shall provide a written test plan for District review and approval. Written notice of the compliance/certification test shall be provided to the District ten (10) days prior to the tests so that an observer may be present. A written report with the results of such compliance/certification tests shall be submitted to the District within forty-five (45) days after testing is completed.

Verification:

The project owner shall provide a compliance test protocol to the District for approval and CPM for review at least thirty (30) days prior to the compliance tests. The project owner shall notify the District and the CPM within ten (10) working days before the execution of the compliance

tests required in AQ-73 and AQ-74, and the test results shall be submitted to the District and to the CPM within forty-five (45) days after the tests are conducted.

Should you have any questions or comments, please don't hesitate to contact me.

Sincerely,

Mahnaz Ghamati

Quality, Environmental & Compliance Manager
ASI Operations LLC
42134 Harper Lake Rd
Hinkley, CA 92347
Cell: (760) 498-0549
mahnaz.ghamati@atlantica.com

Attachments: Mojave Solar Project Annual VOC & Benzene Emissions, Carbon System Test report.

SOURCE TEST REPORT FOR
2023 CARBON ADSORPTION SYSTEMS COMPLIANCE
MOJAVE SOLAR, LLC
HINKLEY, CALIFORNIA

Prepared For:

Mojave Solar, LLC
42134 Harper Lake Road
Hinkley, California 92347

For Submittal to:

Mojave Desert Air Quality Management District
14306 Park Avenue
Victorville, California 92392

Prepared By:

Montrose Air Quality Services, LLC
1631 E. St. Andrew Pl.
Santa Ana, California 92705
(714) 279-6777

Joe Rubio

Test Date: **August 14, 2023**
Production Date: **October 2, 2023**
Report Number: **W002AS-028123-RT-5231**

CONFIDENTIALITY STATEMENT

Except as otherwise required by law or regulation, this information contained in this communication is intended exclusively for the individual or entity to which it is addressed. This communication may contain information that is proprietary, privileged or confidential or otherwise legally exempt from disclosure. If you are not the named addressee, you are not authorized to read, print, retain, copy, or disseminate this message or any part of it.

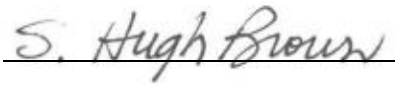
REVIEW AND CERTIFICATION

All work, calculations, and other activities and tasks performed and presented in this document were carried out by me or under my direction and supervision. I hereby certify that, to the best of my knowledge, Montrose operated in conformance with the requirements of the Montrose Quality Management System and ASTM D7036-04 during this test project.

Signature:  Date: 10/2/2023

Name: Joe Rubio Title: Client Project Manager

I have reviewed, technically and editorially, details, calculations, results, conclusions, and other appropriate written materials contained herein. I hereby certify that, to the best of my knowledge, the presented material is authentic, accurate, and conforms to the requirements of the Montrose Quality Management System and ASTM D7036-04.

Signature:  Date: 10/2/2023

Name: S. Hugh Brown Title: Client Project Manager

GENERAL INFORMATION

Source:	Carbon Adsorption System (CAS) – Alpha Carbon Adsorption System (CAS) – Beta
Source Location:	Mojave Solar, LLC 42134 Harper Lake Road Hinkley, California 92347
Contact:	Ms. Mahnaz Ghamati Telephone: (626) 233-1943 Email: mariaelena.lopez@atlantica.com
Permit Number:	C012015 – CAS Alpha C012016 – CAS Beta
Agency:	Mojave Desert Air Quality Management District 14306 Park Avenue Victorville, California 92392-4178
Contact:	Mr. Chris Anderson Telephone: (760) 245-1661 Email: canderson@mdaqmd.ca.gov
Source Test Contractor:	Montrose Air Quality Services, LLC 1631 E. St. Andrew Pl. Santa Ana, California 92705
Project Manager:	Joe Rubio Telephone: (714) 332-8486 Email: jrubio@montrose-env.com
Test Date:	August 14, 2023

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1.0 INTRODUCTION

Montrose Air Quality Services, LLC (MAQS) was hired by Mojave Solar, LLC to conduct source emissions tests on two (2) Carbon Adsorption Systems (CAS) located in Hinkley, California. The purpose of the test was to satisfy the compliance test requirements of the Mojave Desert Air Quality Management District (MDAQMD) Authority to Construct No. C012015 for the Alpha System and Authority to Construct No. C012016 for the Beta System.

A test plan (document W002AS-028123-PP-785 dated May 24, 2023) was submitted prior to the testing. Testing was performed by Joe Rubio, Project Manager, and Dominic Heredero, Field Technician. Dominic Heredero was the on-site Qualified Individual for MAQS. The test was coordinated by Mahnaz Ghamati of Mojave Solar. The District was notified but was not present during the test.

2.0 EQUIPMENT AND PROCESS DESCRIPTION

2.1 UNIT DESCRIPTION

Carbon adsorption system, HTF Ullage/Expansion System Alpha and Beta consisting of Authority to Construct Modification March 2020 to update carbon adsorption system having two (2) multi-bed carbon filter sets capturing ullage/expansion system emissions and having a high and low-pressure side. The expansion vessel vents on the high-pressure side and the overflow tank vents on the low-pressure side. The high pressure and low-pressure side each vent to three vertical carbon cylindrical vessels (carbon beds) described below. Flow through each vessel is vertical and each side (three vessels), will be interconnected using a pipe rack system that allows the vessels to operate in series (lead/lag), parallel, or single vessel. Sample ports are located at inlet and outlet of each carbon bed. Optimally the system will operate in lead/lag flow, with a third canister in standby, with other operating configurations for maintenance and high flow events. Both high pressure and low-pressure vent to atmosphere through one common stack.

<u>High Pressure Side</u>
Dimensions: 54" OD bed x 114" side shell
Bed Area: (53.25" ID) = 15.466 square feet
Nominal Flow Rate (cfm): 1,546.60 CFM
Carbon Capacity: 3,000 pounds
Fittings: 8"

<u>Low Pressure Side</u>
Dimensions: 36" OD bed x 108" side shell

2.2 PROCESS DESCRIPTION

The HTF expansion tank adsorbs any thermal dilation (both increase and reduction in volume) occurring in the HTF as a result of variations in temperature. The expansion tank must be free of atmospheric air to avoid degrading the HTF by oxygen and it must be pressurized to prevent the HTF from reaching its evaporation temperature. In order to achieve this, nitrogen is fed in when in the pressure in the tank drops, while nitrogen is expelled when the pressure in the tank increases as a result of an expansion in the HTF's volume. Nitrogen is expelled through the Ullage system to avoid releasing pollutant oil vapor into the atmosphere. This system is composed by an HTF Overflow Tank Vent Scrubber (MV-208), HTF Expansion Tank Vent Scrubber (MV-209); Carbon Filters (MF-206), and HTF Condensate Receiver Vessel (MV-207).

The Ullage system operates when the pressure in the HTF expansion header connected with the ullage system reach the remote set point in the vent control. This control (PIC-20626B) has a remote set point according with the pressure and the time, and the maximum value is 165 psia. Above this pressure, the vent valves will be full open in order to avoid overpressure in the system.

HTF vapors from the HTF Condensate Receiver Vessel (MV-207) or the HTF Overflow Tanks (MT-204A/B) are scrubbed in one of two scrubbers with cool HTF to condense as much HTF and low boilers (LB) as possible. The HTF used in these scrubbers comes from the HTF Tank Cooler (MX-205), normally at ±70°F. After the scrubbers, these remaining HTF vapor streams are combined and routed through a series of three carbon filters to remove as many organics (VOCDs/HAPS) as possible before the vapors are release into the atmosphere. There is a nitrogen blanket system set at 8 bara providing nitrogen to the HTF vapor system (all the way

back to the Expansion Vessels). The vent line to the carbon filters is designed to vent at 12 bara from the pressurized system but, the overflow system (that works at atmosphere pressure) start to vent at 14.40 psia, pressure set according with the pressure safety valve (PSV) in the overflow system.

There are two types of venting from the HTF system:

1. The venting of nitrogen due to HTF overflow tank breathing;
2. The daily venting of vapor space due to HTF expansion into the expansion vessels.

2.2.1 Overflow Tank Venting

As indicated above, during normal operation, there is no exchange of HTF or nitrogen between the expansion vessels and the overflow tanks. However, during the winter months when the HTF temperature drops below the normal daily range, some of the HTF in the overflow tanks may need to be transferred into the expansion vessels to maintain the minimum expansion tank's level. During these conditions, the overflow tank levels may fall and rise, thus requiring nitrogen space venting. The worst case would be if the HTF system became very cold (limited to 120°F) after a few days of sun, in which case all the HTF from the overflow tanks would be pumped back into the system. The next time the system is brought back to normal operation, all of the HTF that was pumped out of the overflow tanks would return to the overflow tanks. Under that condition, the total amount of nitrogen vented is calculated to be 24,731 ft^3 total for both plants. The overflow tanks have vent scrubbers on their stacks before feeding into the carbon filters. Nitrogen and HTF mixture to be released passes through these scrubbers where it is cooled to 117°F by the cooled liquid HTF stream flowing countercurrent. This overflow tank vent scrubber will condense most of the HTF vapor vented from the overflow tanks before reaching the carbon filters. The overflow tanks have a design temperature of 350°F, but the worst-case vapor space temperature has been calculated to be around 250°F. The overflow tanks are designed to be maintained at 150°F to minimize HTF venting but at the same time be sufficiently higher than the high heat tracing (electric heating) initiation temperature of 120°F. The overflow tank has a liquid HTF cooler to maintain this tank's temperature at 150°F.

2.2.2 Expansion Vessel Venting

As the HTF expands and contracts daily into and out of the expansion vessels, the low boilers LB's along with some vaporous HTF is released into the vapor space. To help this separation of LB's into the vapor space, a side stream of HTF is also be sprayed to the top of the expansion vessels continuously. As the expansion vessels fill up with HTF, the nitrogen space is compressed until the pressure reaches 12 bara, upon which the vent valve opens and allows any further expansion to force the vapor space through the ullage system. The nitrogen and vapors are pushed through the nitrogen ullage condenser, where most of the HTF and low boiler degradation products are condensed and collected in the low boiler condensate receiver vessel. The nitrogen and other non-condensable constituents will pass through the expansion vessel vent scrubber where the 117°F, countercurrent liquid HTF flow will bring even more HTF and low boilers into the liquid phase. The nitrogen, degradation products, and vaporous HTF remaining in the vapor phase at the exit of the scrubber will enter the carbon filters for further cleaning before venting into the atmosphere.

3.0 TEST DESCRIPTION

3.1 OPERATING CONDITIONS DURING THE TEST

Both CAS units were tested early in the morning during the peak venting time. The CAS was operated manually to simulate the normal operating condition since the low temperature did not allow the system to vent.

During the testing time, the scrubber's quench line (spray system) was closed to allow most of the gases to be detected at the inlet of the carbon beds, allowing the carbon beds to prove the minimum required 95% efficiency. Opening the quench line resulted on a high percentage reduction of VOC going through the ullage system downstream, which also resulted on a less amount of VOC detection at the carbon beds inlet. Since the calculations are based on the amount of VOCs reduction between the inlet and the outlet of the cannisters, this action allowed to better prove the beds' efficiency. Also, to be able to vent for the duration of the test, some HTF was transferred from the expansion vessel to the overflow tanks in order to build enough pressure to carry out the test.

3.2 DIMENSIONS OF DUCT, STACKS, AND SAMPLING PORT LOCATIONS

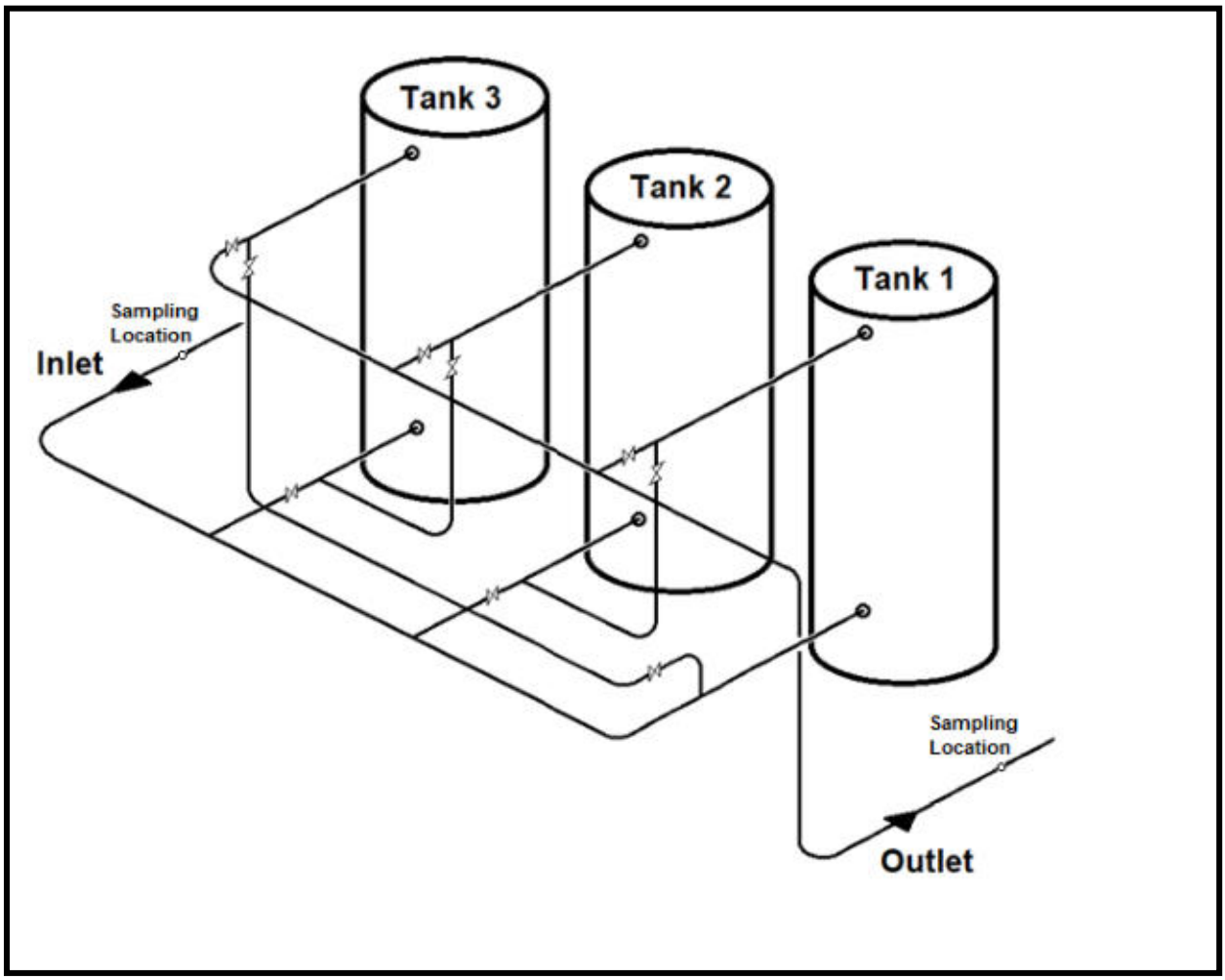
Table 3-1 presents the dimensions of the sampling port locations.

TABLE 3-1
SAMPLING PORT LOCATIONS
MOJAVE SOLAR, LLC

From Scrubber	High Pressure	Low Pressure
Inlet Sample Port Diameter	8 Inches	4 Inches
Outlet Sample Port Diameter	8 Inches	4 Inches
From Expansion Tank		
Inlet Sample Port Diameter	8 Inches	4 Inches
Outlet Sample Port Diameter	8 Inches	4 Inches

A line diagram of the CAS is presented as Figure 3-1.

FIGURE 3-1
CAS DIAGRAM
MOJAVE SOLAR, LLC
CARBON ADSORPTION SYSTEM



3.3 SAMPLING AND ANALYTICAL PROCEDURES

Procedures that were used to collect the data are summarized in Table 3-2.

TABLE 3-2
TEST PROCEDURES
MOJAVE SOLAR, LLC

Parameters	Location	Method	Number of Tests	Duration
Flow Rate	Inlet and Outlet	CARB Method 2	2	5 Minutes
Hexane	Inlet and Outlet	EPA Method 18	2	5 Minutes
Benzene	Inlet and Outlet	CARB Method 410A	2	5 Minutes
Moisture Content	Inlet and Outlet	Dry Wet Bulb	2	5 Minutes

3.3.1 Velocity and Volumetric Flow Rate

The exhaust gas velocity and volumetric flow rate were determined according to the guidelines specified in CARB Methods 1 and 2.

3.3.2 Moisture Content

The moisture content at the exhaust was determined by using dry and wet bulb temperature measurements.

3.3.3 Hexane and Benzene Emissions Testing

In order to minimize any chance of air intrusion into the sample, a 1” sample port was installed to collect all sampling. Prior to collecting each sample, MAQS measured the oxygen level in the inlet location using a Testo portable analyzer, Model 350XL. When no or little oxygen was measured with the Testo, MAQS proceeded with the sampling for benzene and hexane concentrations.

The concentrations of benzene and hexane was collected into SUMMA (specially-prepared stainless steel) canisters. The sampling system includes a stainless-steel probe and components that regulate the rate and duration of sampling into the pre-evacuated and passivated canisters. Each of the three samples were collected over a period of approximately five minutes. The samples were then delivered within 24 hours to a state certified lab, Quantum Laboratories in Carson, California. The samples were analyzed by packed column gas chromatography mass spectrophotometry (GC/MS).

4.0 TEST RESULTS

Test results indicate that both the Alpha and Beta CAS serving the HTF ullage/expansion system were found to be operating in compliance with the required 95% control efficiency of VOC emissions. Table 4-1 shows the analytical results of VOC as Hexane and Benzene sampling at the Alpha Plant along with the field measurements taken during the source test. Table 4-2 shows the results at the Beta Plant.

Additional information such as field data, calibrations and permits are located in the Appendices of this report.

TABLE 4-1
HEXANE AND BENZENE RESULTS
ALPHA PLANT
MOJAVE SOLAR, LLC
CARBON ADSORPTION SYSTEM
AUGUST 14, 2023

	Run No.	Location	Flow Rate DSCFM	Hexane ppm	Hexane lb/hr	Destruction Efficiency, %	Benzene ppm	Benzene lb/hr	Destruction Efficiency, %
Low Pressure (Lead = NB17) (Spare = NB15) (Spare = NB16)	1	Inlet	190	10,949	27.89	100.0	10,627	24.5	100.0
		Exhaust	190	0.10	0.0003		0.77	0.0018	
	2	Inlet	188	13,511	34.1	100.0	13,087	29.9	100.0
		Exhaust	188	1.01	0.0025		0.77	0.0018	
High Pressure (Lead = NB6) (Spare = NB5) (Spare = NB7)	1	Inlet	407	1,184	6.46	95.8	1,149	5.69	99.9
		Exhaust	407	50	0.27		1.67	0.0083	
	2	Inlet	531	1,146	8.17	95.3	1,057	6.83	99.7
		Exhaust	531	54.3	0.39		2.75	0.0178	
				Average		**97.8%**			**99.9%**

TABLE 4-2
HEXANE AND BENZENE RESULTS
BETA PLANT
MOJAVE SOLAR, LLC
CARBON ADSORPTION SYSTEM
AUGUST 14, 2023

	Run No.	Location	Flow Rate DSCFM	Hexane ppm	Hexane lb/hr	Destruction Efficiency, %	Benzene ppm	Benzene lb/hr	Destruction Efficiency, %
Low Pressure (Lead = NB20) (Spare = NB18) (Spare = NB19)	1	Inlet	55	6,807	5.02	99.8	16,509	11.05	100.0
		Exhaust	55	19.5	0.0144		0.73	0.00049	
	2	Inlet	61	17,217	14.19	99.8	16,974	12.69	100.0
		Exhaust	61	16.1	0.0133		0.49	0.00037	
High Pressure (Lead = NB8) (Spare = NB9) (Spare = NB10)	1	Inlet	578	643	4.98	99.2	679	4.77	99.2
		Exhaust	578	9.97	0.0772		1.55	0.01086	
	2	Inlet	586	1,637	12.86	99.7	1,396	9.95	99.7
		Exhaust	586	10.15	0.0798		1.47	0.01045	
				Average		**99.4%**			**99.9%**

APPENDIX A
TEST DATA

Appendix A.1
Field Data

FACILITY:	Mojave Solar	
SOURCE:	Alpha - Low Pressure	
DATE:	8/14/2023	
STANDARD TEMP (EPA = 68 DEG.)		68

Lead Canister:	No. 17
Standby Canister:	No. 15
Standby Canister:	No. 16

RUN NUMBER	**1**	**2**
FIELD DATA INPUTS:		
BAROMETRIC PRESSURE (Pb)	27.93	27.93
STACK DIAMETER (inches)	4.00	4.00
RELATIVE HUMIDITY (%)	44.0	44.0
STACK TEMP (DEG. F)	76	75
VAPOR PRESSURE of H2O (" Hg)	0.9046	0.875
STACK VELOCITY (FT/MIN)	2,400	2,370
FLOW RESULTS:		
MOISTURE (%)	1.43	1.38
ACTUAL CFM	209	207
STANDARD CFM	193	191
DRY STANDARD CFM	190	188

FACILITY:	Mojave Solar	
SOURCE:	Alpha - High Pressure	
DATE:	8/14/2023	
STANDARD TEMP (EPA = 68 DEG.)		68

Lead Canister:	No. 6
Standby Canister:	No. 5
Standby Canister:	No. 7

RUN NUMBER	**1**	**2**
FIELD DATA INPUTS:		
BAROMETRIC PRESSURE (Pb)	27.93	27.93
STACK DIAMETER (inches)	8.00	8.00
RELATIVE HUMIDITY (%)	49.0	49.0
STACK TEMP (DEG. F)	72	76
VAPOR PRESSURE of H2O (" Hg)	0.7648	0.9046
STACK VELOCITY (FT/MIN)	1,275	1,682
FLOW RESULTS:		
MOISTURE (%)	1.34	1.59
ACTUAL CFM	445	587
STANDARD CFM	412	540
DRY STANDARD CFM	407	531

FACILITY:	Mojave Solar	
SOURCE:	Beta - Low Pressure	
DATE:	8/14/2023	
STANDARD TEMP (EPA = 68 DEG.)		68

Lead Canister:	NB20
Standby Canister:	NB18
Standby Canister:	NB19

RUN NUMBER	**1**	**2**
FIELD DATA INPUTS:		
BAROMETRIC PRESSURE (Pb)	27.93	27.93
STACK DIAMETER (inches)	4.00	4.00
RELATIVE HUMIDITY (%)	42.0	42.0
STACK TEMP (DEG. F)	79	77
VAPOR PRESSURE of H2O (" Hg)	0.9989	0.9352
STACK VELOCITY (FT/MIN)	700	778
FLOW RESULTS:		
MOISTURE (%)	1.50	1.41
ACTUAL CFM	61	68
STANDARD CFM	56	62
DRY STANDARD CFM	55	61

FACILITY:	Mojave Solar	
SOURCE:	Beta - High Pressure	
DATE:	8/14/2023	
STANDARD TEMP (EPA = 68 DEG.)		68

Lead Canister:	NB8
Lag Canister:	NB9
Standby Canister:	NB10

RUN NUMBER	**1**	**2**
FIELD DATA INPUTS:		
BAROMETRIC PRESSURE (Pb)	27.93	27.93
STACK DIAMETER (inches)	8.00	8.00
RELATIVE HUMIDITY (%)	42.0	42.0
STACK TEMP (DEG. F)	76	76
VAPOR PRESSURE of H2O (" Hg)	0.9046	0.9046
STACK VELOCITY (FT/MIN)	1,824	1,850
FLOW RESULTS:		
MOISTURE (%)	1.36	1.36
ACTUAL CFM	637	646
STANDARD CFM	585	594
DRY STANDARD CFM	578	586

Facility: Mojave Solar
Date Tested: 8/14/2023

ALPHA PLANT

	Run No.	Location	Flow Rate DSCFM	VOC as Hexane ppm	Hexane lb/hr	Control Efficiency	Benzene ppm	Benzene lb/hr	Control Efficiency
Alpha Low Pressure	1	Inlet	190	10,949	27.89	100.0	10,627	24.5	100.0
		Exhaust	190	0.1	0.0003		0.77	0.0018	
Alpha Low Pressure	2	Inlet	188	13,511	34.1	100.0	13,087	29.9	100.0
		Exhaust	188	1.01	0.0025		0.77	0.0018	
Alpha High Pressure	1	Inlet	407	1,184	6.46	95.8	1,149	5.69	99.9
		Exhaust	407	50	0.27		1.67	0.0083	
Alpha High Pressure	2	Inlet	531	1,146	8.17	95.3	1,057	6.83	99.7
		Exhaust	531	54.3	0.39		2.75	0.0178	
						97.8			**99.9**

BETA PLANT

	Run No.	Location	Flow Rate DSCFM	VOC as Hexane ppm	Hexane lb/hr	Control Efficiency	Benzene ppm	Benzene lb/hr	Control Efficiency
Beta Low Pressure	1	Inlet	55	6,807	5.02	99.7	16,509	11.1	100.0
		Exhaust	55	19.5	0.014		0.73	0.00049	
Beta Low Pressure	2	Inlet	61	17,217	14.19	99.9	16,974	12.7	100.0
		Exhaust	61	16.1	0.013		0.49	0.00037	
Beta High Pressure	1	Inlet	578	643	4.98	98.4	679	4.77	99.8
		Exhaust	578	9.97	0.077		1.55	0.011	
Beta High Pressure	2	Inlet	586	1,637	12.86	99.4	1,396	9.95	99.9
		Exhaust	586	10.2	0.080		1.47	0.010	
						99.4			**99.9**

MOJAVE SOLAR

8/14/25
JR/DH
27.93" Hg

HIGH ALPHA	LOW ALPHA
LEAD - AMF 6	LEAD - AMF 17
~~SPARE~~ - AMF 7	SPARE ~~TAG~~ - AMF 16
~~TAG SPARE~~ - AMS 5	SPARE - AMF 15
(RC) SPARE	

ALPHA HIGH

RUN 1	@753 ~~@1,275~~	~~1,705~~ Fpm	O_2 = 0.11	RH = 49%
RUN 2	@758	1,682 Fpm	O_2 = 0.0%	RH = 49%

PORT 72°F
AMB = 64°F
PORT = 76°F

ALPHA LOW

RUN 1	@ 810	2,400 Fpm	O_2 = 1.96	RH = 44%
RUN 2	@ 815	2,370 Fpm	O_2 = 2.4%	RH = 44%

AMB = 78°F
PORT = 76°F
PORT = 75°F

BETA HIGH	BETA LOW
LEAD - BMF 08	LEAD - BMF 20
SPARE - BMF 09	SPARE - BMF-19
SPARE - BMF 16	SPARE - BMF 18

BETA HIGH

RUN 1	@ 837	1,824 Fpm	O_2 = 0.11	RH = 42%
RUN 2	@ 842	1,850 fpm	O_2 = 0.0	RH = 42%

75
AMB = 75°F
PORT = 76°F
PORT = 76°F

BETA

RUN 1	@ 849	700 fpm	O_2 = 0.70	RH = 42%
RUN 2	@ 853	778 fpm	O_2 = 0.79	RH = 42%

AMB = 76°F
PORT = 79°F
PORT = 77°F

Appendix A.2
Laboratory Data

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CLIENT MONTROSE
CLIENT PROJ NO: Mojave Solar
LABORATORY NO: 23-874
SAMPLING DATE: 08/14/23
RECEIVING DATE: 08/16/23
ANALYSIS DATE: 08/16/23
REPORT DATE: 08/24/23

Laboratory Analysis Report

Analysis Method	EPA 18				
Detection Limits	0.1 PPMV				
	Sample ID	ALPHA Low Inlet R1	ALPHA Low Exh. R1	ALPHA Low Inlet R2	ALPHA Low Exh. R2
	Sampling Date	8/14/2023	8/14/2023	8/14/2023	8/14/2023
	Sampling Time	-	-	-	-
	Lab ID	22823-13	22823-5	22823-14	22823-6
	Units	PPMV	PPMV	PPMV	PPMV
C1 - Methane		147.4	93.8	312.3	100.3
C2 - Ethane, Ethylene		157.7	<0.1	173.1	<0.1
C3 - Propane, Propylene		148.4	<0.1	160.0	<0.1
C4 - Butanes		39.36	<0.1	80.00	<0.1
C5 - Pentanes		28.16	<0.1	43.03	<0.1
C6 - Hexanes		23.0	<0.1	32.7	<0.1
C6+ (including Benzene)		10745	<0.1	13246	1.01
TOTAL VOC as Hexane including Ethane		10949	0.00	13511	1.01

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President

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CLIENT MONTROSE
CLIENT PROJ NO: Mojave Solar
LABORATORY NO: 23-874
SAMPLING DATE: 08/14/23
RECEIVING DATE: 08/16/23
ANALYSIS DATE: 08/16/23
REPORT DATE: 08/24/23

Laboratory Analysis Report

Analysis Method	EPA 18				
Detection Limits	0.1 PPMV				
	Sample ID	ALPHA High Inlet R1	ALPHA High Exh. R1	ALPHA High Inlet R2	ALPHA High Exh. R2
	Sampling Date	8/14/2023	8/14/2023	8/14/2023	8/14/2023
	Sampling Time	-	-	-	-
	Lab ID	22823-9	22823-1	22823-10	22823-2
	Units	PPMV	PPMV	PPMV	PPMV
C1 - Methane		106.6	90.7	112.9	91.6
C2 - Ethane, Ethylene		77.0	57.8	80.2	63.5
C3 - Propane, Propylene		45.4	50.4	45.8	54.6
C4 - Butanes		8.55	1.9	8.04	2.2
C5 - Pentanes		3.43	<0.1	2.41	<0.1
C6 - Hexanes		<0.1	<0.1	1.20	<0.1
C6+ (including Benzene)		1125	2.8	1086	2.8
TOTAL VOC as Hexane including Ethane		1184	50.0	1146	54.3

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CLIENT MONTROSE
CLIENT PROJ NO: Mojave Solar
LABORATORY NO: 23-874
SAMPLING DATE: 08/14/23
RECEIVING DATE: 08/16/23
ANALYSIS DATE: 08/16/23
REPORT DATE: 08/24/23

Laboratory Analysis Report

Analysis Method	EPA 18				
Detection Limits	0.1 PPMV				
	Sample ID	BETA Low Inlet R1	BETA Low Exh. R1	BETA Low Inlet R2	BETA Low Exh. R2
	Sampling Date	8/14/2023	8/14/2023	8/14/2023	8/14/2023
	Sampling Time	-	-	-	-
	Lab ID	22823-15	22823-7	22823-16	22823-8
	Units	PPMV	PPMV	PPMV	PPMV
C1 - Methane		95.7	54.0	99.1	49.6
C2 - Ethane, Ethylene		75	53.9	67.9	44.6
C3 - Propane, Propylene		48	<0.1	55.3	<0.1
C4 - Butanes		25	<0.1	<0.1	<0.1
C5 - Pentanes		33	<0.1	<0.1	<0.1
C6 - Hexanes		10	<0.1	0.00	<0.1
C6+ (including Benzene)		6701	0.7	17165	0.5
TOTAL VOC as Hexane including Ethane		6807	19.5	17217	16.1

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CLIENT MONTROSE
CLIENT PROJ NO: Mojave Solar
LABORATORY NO: 23-874
SAMPLING DATE: 08/14/23
RECEIVING DATE: 08/16/23
ANALYSIS DATE: 08/16/23
REPORT DATE: 08/24/23

Laboratory Analysis Report

Analysis Method	EPA 18				
Detection Limits	0.1 PPMV				
Analyyte	Sample ID	BETA High Inlet R1	BETA High Exh. R1	BETA High Inlet R2	BETA High Exh. R2
	Sampling Date	8/14/2023	8/14/2023	8/14/2023	8/14/2023
	Sampling Time	-	-	-	-
	Lab ID	22823-11	22823-3	22823-12	22823-4
	Units	PPMV	PPMV	PPMV	PPMV
C1 - Methane		57.5	38	54.7	38.5
C2 - Ethane, Ethylene		40.5	23	40.1	24.8
C3 - Propane, Propylene		15.12	<0.1	15.53	<0.1
C4 - Butanes		<0.1	<0.1	<0.1	<0.1
C5 - Pentanes		<0.1	<0.1	<0.1	<0.1
C6 - Hexanes		<0.1	<0.1	<0.1	<0.1
C6+ (including Benzene)		621	2.01	1615	1.48
TOTAL VOC as Hexane including Ethane		643	9.97	1637	10.15

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CLIENT	**MONTROSE**
CLIENT PROJ NO:	**Mojave Solar**
LABORATORY NO:	**23-874**
SAMPLING DATE:	08/14/23
RECEIVING DATE:	08/16/23
ANALYSIS DATE:	08/16/23
REPORT DATE:	08/24/23

Laboratory Analysis Report (QA_QC)

Sample ID: BETA Low Exh. R2 **LAB ID: 22823-8**

Analyte	Analysis #1 PPMV	Analysis #2 PPMV	Mean PPMV	% Difference from the Mean*
C1 - Methane	49.6	51.1	50.3	1.49
C2 - Ethane, Ethylene	44.6	44.3	44.4	0.36
C3 - Propane, Propylene	<0.1	<0.1	<0.1	N/A
C4 - Butanes	<0.1	<0.1	<0.1	N/A
C5 - Pentanes	<0.1	<0.1	<0.1	N/A
C6 - Hexanes	<0.1	<0.1	<0.1	N/A
C6+ (including Benzene)	0.50	0.49	0.50	0.27

N/A: Not Applicable *:Must be ≤10%

Sample ID: BETA Low Inlet R2 **LAB ID: 22823-16**

Analyte	Analysis #1 PPMV	Analysis #2 PPMV	Mean PPMV	% Difference from the Mean*
C1 - Methane	99.1	102.8	100.9	1.81
C2 - Ethane, Ethylene	67.9	66.9	67.4	0.80
C3 - Propane, Propylene	55.3	55.5	55.4	0.15
C4 - Butanes	<0.1	0.00	<2.0	N/A
C5 - Pentanes	<0.1	0.00	<2.0	N/A
C6 - Hexanes	0.00	0.00	0.00	N/A
C6+ (including Benzene)	17165	17722	17444	1.60

N/A: Not Applicable *:Must be ≤10%

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CLIENT	**MONTROSE**
CLIENT PROJ NO:	**Mojave Solar**
LAB PROJ NO:	**23-874**
SAMPLING DATE:	08/14/23
RECEIVING DATE:	08/16/23
ANALYSIS DATE:	08/16/23
REPORT DATE:	08/24/23

Quality Control/Quality Assurance Report

I- Blank

Lab ID	Results PPMV
C1 - Methane	<0.1
C2 - Ethane	<0.1
C3 - Propane	<0.1
C4 - Butane	<0.1
C5 - Pentane	<0.1
C6 - Hexane	<0.1

II- ICV Calibration Verification Standard - C1-C6

Lab ID	Theoretical Value PPMV	Tested Value PPMV	% Recovery*
C1 - Methane	100.00	104.14	104%
C2 - Ethane	100.00	108.93	109%
C3 - Propane	100.00	108.50	108%
C4 - Butane	100.00	107.50	107%
C5 - Pentane	100.00	108.48	108%
C6 - Hexane	100.00	109.73	110%

* Must be ±10%

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CLIENT	**MONTROSE**
CLIENT PROJ NO:	**Mojave Solar**
LAB PROJ NO:	**23-874**
SAMPLING DATE:	08/14/23
RECEIVING DATE:	08/16/23
ANALYSIS DATE:	08/16/23
REPORT DATE:	08/24/23

Laboratory Analysis Report

Analysis Method	**CARB 410A**	
Detection Limits	**5 PPBV**	
		Benzene
Sample ID	**Lab ID**	**PPBV**
ALPHA Low Inlet R1	22823-13	**10627480**
ALPHA Low Exh. R1	22823-5	774
ALPHA Low Inlet R2	22823-14	**13086680**
ALPHA Low Exh. R2	22823-6	**772**
ALPHA High Inlet R1	22823-9	**1149292**
ALPHA High Exh. R1	22823-1	**1673**
ALPHA High Inlet R2	22823-10	**1057242**
ALPHA High Exh. R2	22823-2	2748
BETA Low Inlet R1	22823-15	**16508930**
BETA Low Exh. R1	22823-7	728
BETA Low Inlet R2	22823-16	**16974060**
BETA Low Exh. R2	22823-8	493
BETA High Inlet R1	22823-11	**678566**
BETA High Exh. R1	22823-3	1545
BETA High Inlet R2	22823-12	**1395585**
BETA High Exh. R2	22823-4	1466

Samples were diluted for the analysis

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CLIENT	**MONTROSE**
CLIENT PROJ NO:	**Mojave Solar**
LAB PROJ NO:	**23-874**
SAMPLING DATE:	08/14/23
RECEIVING DATE:	08/16/23
ANALYSIS DATE:	08/16/23
REPORT DATE:	08/24/23

Laboratory Analysis Report

Analysis Method		**CARB 410A**	
Detection Limits		**0.05 PPMV**	
			Benzene
Sample ID	**Tank #**	**Lab ID**	**PPMV**
ALPHA Low Inlet R1	**37**	22823-13	**10627**
ALPHA Low Exh. R1	35	22823-5	0.774
ALPHA Low Inlet R2	**38**	22823-14	**13087**
ALPHA Low Exh. R2	36	22823-6	0.772
ALPHA High Inlet R1	**31**	22823-9	**1149**
ALPHA High Exh. R1	33	22823-1	1.673
ALPHA High Inlet R2	**32**	22823-10	**1057**
ALPHA High Exh. R2	34	22823-2	2.75
BETA Low Inlet R1	**27**	22823-15	**16509**
BETA Low Exh. R1	29	22823-7	0.728
BETA Low Inlet R2	**28**	22823-16	**16974**
BETA Low Exh. R2	30	22823-8	0.493
BETA High Inlet R1	**24**	22823-11	**678.6**
BETA High Exh. R1	26	22823-3	1.545
BETA High Inlet R2	**25**	22823-12	**1395.6**
BETA High Exh. R2	23	22823-4	1.466

Samples were diluted for the analysis

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CLIENT	**MONTROSE**
CLIENT PROJ NO:	**Mojave Solar**
LABORATORY NO:	**23-874**
SAMPLING DATE:	08/14/23
RECEIVING DATE:	08/16/23
ANALYSIS DATE:	08/16/23
REPORT DATE:	08/24/23

Laboratory Analysis Report (QA_QC)

Sample ID: BETA Low Exh. R2 **LAB ID: 22823-8**

Analyte	Analysis #1 PPBV	Analysis #2 PPBV	Mean PPMV	% Difference from the Mean*
Benzene	493.0	491.0	492	0.20

N/A: Not Applicable *:Must be ≤10%

Sample ID: BETA Low Inlet R2 **LAB ID: 22823-16**

Analyte	Analysis #1 PPMV	Analysis #2 PPMV	Mean PPMV	% Difference from the Mean*
Benzene	16974	17109	17042	0.40

N/A: Not Applicable *:Must be ≤10%

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CLIENT	**MONTROSE**
CLIENT PROJ NO:	**Mojave Solar**
LAB PROJ NO:	**23-874**
SAMPLING DATE:	08/14/23
RECEIVING DATE:	08/16/23
ANALYSIS DATE:	08/16/23
REPORT DATE:	08/24/23

Quality Control/Quality Assurance Report

I- Blank

Lab ID	Results PPMV
Benzene	<0.1

II- Calibration Verification Standard - Benzene (PPBV)

Lab ID	Theoretical Value PPMV	Tested Value PPMV	% Recovery*
CCV - Benzene	2.0	1.9	96%

III- Calibration Verification Standard - Benzene (PPMV)

Lab ID	Theoretical Value PPMV	Tested Value PPMV	% Recovery*
ICV - Benzene	10.0	9.8	98%
CCV - Benzene	200.0	198.3	99%

* Must be ±10%

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CLIENT **MONTROSE**
CLIENT PROJ NO: **Mojave Solar**
LABORATORY NO: **23-874**
SAMPLING DATE: 08/14/23
RECEIVING DATE: 08/16/23
ANALYSIS DATE: 08/16/23
REPORT DATE: 08/24/23

Laboratory Results

Analysis Method		**EPA 3C**			
Detection Limits		**0.01%**			
Sample ID		**CH4**	**CO2**	**O2**	**N2**
Description	**Lab ID No.**	**%**	**%**	**%**	**%**
ALPHA Low Inlet R1	22823-13	<0.01	<0.01	1.73	97.3
ALPHA Low Exh. R1	22823-5	<0.01	<0.01	1.81	97.2
ALPHA Low Inlet R2	22823-14	<0.01	<0.01	1.67	97.3
ALPHA Low Exh. R2	22823-6	<0.01	<0.01	1.83	97.2
ALPHA High Inlet R1	22823-9	<0.01	<0.01	<0.01	99.7
ALPHA High Exh. R1	22823-1	<0.01	<0.01	<0.01	99.7
ALPHA High Inlet R2	22823-10	<0.01	<0.01	<0.01	99.8
ALPHA High Exh. R2	22823-2	<0.01	<0.01	<0.01	99.8
BETA Low Inlet R1	22823-15	<0.01	<0.01	0.10	99.0
BETA Low Exh. R1	22823-7	<0.01	<0.01	1.27	99.8
BETA Low Inlet R2	22823-16	<0.01	<0.01	<0.01	99.6
BETA Low Exh. R2	22823-8	<0.01	<0.01	<0.01	99.3
BETA High Inlet R1	22823-11	<0.01	<0.01	<0.01	100
BETA High Exh. R1	22823-3	<0.01	<0.01	<0.01	99.8
BETA High Inlet R2	22823-12	<0.01	<0.01	<0.01	100
BETA High Exh. R2	22823-4	<0.01	<0.01	<0.01	99.8

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CLIENT **MONTROSE**
CLIENT PROJ NO: **Mojave Solar**
LABORATORY NO: **23-874**
SAMPLING DATE: 08/14/23
RECEIVING DATE: 08/16/23
ANALYSIS DATE: 08/16/23
REPORT DATE: 08/24/23

Standard Verification

EPA 3C - Fixed Gases

Lab ID	Analyte	Theoretical Value Mole %	Tested Value Mole %	% Recovery*
SCOTT STD	CO2	15.00	14.85	99%
SCOTT STD	O2	4.00	4.33	108%
SCOTT STD	N2	69.50	70.84	102%
SCOTT STD	CH4	4.50	4.76	106%
SCOTT STD	CO	7.00	7.04	101%

* Must be ±10%

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Summa Canister Pressure Log

Client:	MONTROSE
Laboratory Project No:	**23-874**
Sampling Date:	August 14, 2023
Receiving Date:	August 16, 2023

Item#	Sample ID	Lab ID	P_r (mmHg)	Pf (mmHg)	Dilution Factor
1	ALPHA Low Inlet R1 TK 37	22823-13	722.7	821.5	1.1367
2	ALPHA Low Exh. R1 TK 35	22823-5	697.6	820.9	1.1767
3	ALPHA Low Inlet R2 TK 38	22823-14	699.8	821.3	1.1736
4	ALPHA Low Exh. R2 TK 36	22823-6	687.5	821.4	1.1948
5	ALPHA High Inlet R1 TK 31	22823-9	725.9	827.3	1.1397
6	ALPHA High Exh. R1 TK 33	22823-1	713.0	821.5	1.1522
7	ALPHA High Inlet R2 TK 32	22823-10	717.7	823.6	1.1476
8	ALPHA High Exh. R2 TK 34	22823-2	687.9	821.8	1.1947
9	BETA Low Inlet R1 TK 27	22823-15	694.5	821.0	1.1821
10	BETA Low Exh. R1 TK 29	22823-7	697.8	820.8	1.1763
11	BETA Low Inlet R2 TK 28	22823-16	707.8	822.3	1.1618
12	BETA Low Exh. R2 TK 30	22823-8	683.7	820.1	1.1995
13	BETA High Inlet R1 TK 24	22823-11	727.5	821.6	1.1293
14	BETA High Exh. R1 TK 26	22823-3	703.6	822.9	1.1696
15	BETA High Inlet R2 TK 25	22823-12	721.0	822.8	1.1412
16	BETA High Exh. R2 TK 23	22823-4	702.1	822.8	1.1719

A. K.
Initial

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310/830-2226 • Fax 310/830-2227 • www.quantumairlab.com
1210 E. 223rd Street, Suite #314 • Carson, California 90745

№ 6428

CHAIN OF CUSTODY

23-874

Page: ____ of: ____

Client: Montrose

Contact Person: Joe Rubio

tel:

fax:

Project No.: NOJ-028123

Project Name: Mojave Solar

Project Manager: Joe Rubio

P.O. Number:

Turnaround Time:

- ☐ Same Day
- ☐ 24 Hours
- ☐ 48 Hours
- ☐ Normal

Client Sample ID	Tag #	Date	Time	Lab ID Number	C1-C6 Hydrocarbons EPA 18(wt)	EOA3C (O2/CO2/N2 CH4) (CO2/B H2O) Benzene					Remarks
Alpha High Inlet (31)	Run 1	8/14/23		22823-9	X	X	X				
" " (32)	Run 2			-10	X	X	X				
Alph High Exh (33)	Run 1			22823-1	X	X	X				
" " (34)	Run 2			-2	X	X	X				
Alpha Low Inlet (37)	Run 1			22823-13	X	X	X				
" "(38)	Run 2	↓		-14	X	X	X				
Alpha High Exh (35)	Run 1			-5	X	X	X				
" " (36)	Run 2			-6	X	X	X				

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/time
[signature]	8/16/23 11:08	[signature]	8/16/23
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/time

Quantum Analytical Services Inc.

Nº 6428

310/830-2226 • Fax 310/830-2227 • www.quantumairlab.com
1210 E. 223rd Street, Suite #514 • Carson, California 90745

CHAIN OF CUSTODY

Page: ____ of: ____

Client: Montrose

Contact Person:
tel:
fax:

Project No.: proj-023123
Project Name: Mojave Solar
Project Manager: Joe Rubio
P.O. Number:

Turnaround Time:
- ☐ Same Day
- ☐ 24 Hours
- ☐ 48 Hours
- ☐ Normal

Client Sample ID	Tag #	Date	Time	Lab ID Number	C1-C6 Hydrocarbons EPA 18(ver)	EPA 3C (O2,CO2,N2,CH4)	CARB 410A Benzene				Remarks
Beta High Inlet (24)	Run 1	8/14/23		22823-11	X	X	X				
" " (25)	Run 2			-12	X	X	X				
Beta High Exit (26)	Run 1			22823-3	X	X	X				
" " (27)	Run 2			-4	X	X	X				
Beta Low Inlet (27)	Run 1			-15	X	X	X				
" " (28)	Run 2			-16	X	X	X				
Beta Low Exit (29)	Run 1			-7	X	X	X				
" " (30)	Run 2	↓		-8	X	X	X				

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/time
[signature]	8/16/23 11:08	[signature]	8/16/23
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/time

APPENDIX B
GENERAL EMISSIONS CALCULATIONS

GENERAL EMISSIONS CALCULATIONS

I. Stack Gas Velocity

A. Stack gas molecular weight, lb/lb-mole

$MW_{dry} = 0.44 * \%\ CO_2 + 0.32 * \%\ O_2 + 0.28 * \%\ N_2$

$MW_{wet} = MW_{dry} * (1 - B_{wo}) + 18 * B_{wo}$

B. Absolute stack pressure, iwg

$$P_s = P_{bar} + \frac{P_{sg}}{13.6}$$

C. Stack gas velocity, ft/sec

$$V_s = 2.9 * C_p * \sqrt{\Delta P} * \sqrt{T_s} * \sqrt{\frac{29.92 * 28.95}{P_s * MW_{wet}}}$$

II. Moisture

A. Sample gas volume, dscf

$$V_{mstd} = 0.03342 * V_m * \left(P_{bar} + \frac{\Delta H}{13.6}\right) * \frac{T_{ref}}{T_m} * Y_d$$

B. Water vapor volume, scf

$$V_{wstd} = 0.0472 * V_{ic} * \frac{T_{ref}}{528°R}$$

C. Moisture content, dimensionless

$$B_{wo} = \frac{V_{wstd}}{(V_{mstd} + V_{wstd})}$$

III. Stack Gas Volumetric Flow Rate

A. Actual stack gas volumetric flow rate, wacfm

$Q = V_s * A_s * 60$

B. Standard stack gas flow rate, dscfm

$$Q_{sd} = Q * (1 - B_{wo}) * \frac{T_{ref}}{T_s} * \frac{P_s}{29.92}$$

IV. Gaseous Mass Emission Rates, lb/hr

$$M = \frac{ppm * MW_i * Q_{sd} * 60}{SV * 10^6}$$

V. Emission Rates, lb/MMBtu

$$\frac{lb}{MMBtu} = \frac{ppm * MW_i * F}{SV * 10^6} * \frac{20.9}{20.9 - \%\ O_2}$$

VI. Percent Isokinetic

$$I = \frac{17.32 * T_s\ (V_{mstd})}{(1 - B_{wo})\ 0 * V_s * P_s * Dn^2} * \frac{520°R}{T_{ref}}$$

VII. Particulate Emissions

(a) Grain loading, gr/dscf
$C = 0.01543\ (M_n/V_{m\ std})$

(b) Grain loading at 12% CO_2, gr/dscf
$C_{12\%}\ CO_2 = C\ (12/\%\ CO_2)$

(c) Mass emissions, lb/hr
$M = C * Q_{sd} * (60\ min/hr) / (7000\ gr/lb)$

(d) Particulate emission factor

$$lb/10^6\ Btu = Cx\ \frac{1\ lb}{7000\ gr} * F * \frac{20.9}{20.9 - \%\ O_2}$$

Nomenclature:

A_s	=	stack area, ft^2
B_{wo}	=	flue gas moisture content, dimensionless
$C_{12\%CO2}$	=	particulate grain loading, gr/dscf corrected to 12% CO_2
C	=	particulate grain loading, gr/dscf
C_p	=	pitot calibration factor, dimensionless
Dn	=	nozzle diameter, inches
F	=	fuel F-Factor, dscf/MMBtu @ 0% O_2
H	=	orifice differential pressure, iwg
I	=	% isokinetics
M_n	=	mass of collected particulate, mg
M_i	=	mass emission rate of specie i, lb/hr
MW	=	molecular weight of flue gas, lb/lb-mole
M_{wi}	=	molecular weight of specie i:
	SO_2:	64
	NO_x:	46
	CO:	28
	HC:	16
0	=	sample time, minutes
ΔP	=	average velocity head, iwg = $(\sqrt{\Delta P})^2$
P_{bar}	=	barometric pressure, inches Hg
P_s	=	stack absolute pressure, inches Hg
P_{sg}	=	stack static pressure, iwb
Q	=	wet stack flow rate at actual conditions, wacfm
Q_{sd}	=	dry standard stack flow rate, dscfm
SV	=	specific molar volume of an ideal gas at standard conditions, ft^3/lb-mole
T_m	=	meter temperature, °R
T_{ref}	=	reference temperature, °R
T_s	=	stack temperature, °R
V_s	=	stack gas velocity, ft/sec
V_{lc}	=	volume of liquid collected in impingers, ml
V_m	=	uncorrected dry meter volume, dcf
V_{mstd}	=	dry meter volume at standard conditions, dscf
V_{wstd}	=	volume of water vapor at standard conditions, scf
Y_d	=	meter calibration coefficient

APPENDIX C
QUALITY ASSURANCE

Appendix C.1
Quality Assurance Program Summary

QUALITY ASSURANCE PROGRAM SUMMARY

As part of Montrose Air Quality Services, LLC (Montrose) ASTM D7036-04 certification, Montrose is committed to providing emission related data which is complete, precise, accurate, representative, and comparable. Montrose quality assurance program and procedures are designed to ensure that the data meet or exceed the requirements of each test method for each of these items. The quality assurance program consists of the following items:

- Assignment of an Internal QA Officer
- Development and use of an internal QA Manual
- Personnel training
- Equipment maintenance and calibration
- Knowledge of current test methods
- Chain-of-custody
- QA reviews of test programs

Assignment of an Internal QA Officer: Montrose has assigned an internal QA Officer who is responsible for administering all aspects of the QA program.

Internal Quality Assurance Manual: Montrose has prepared a QA Manual according to the requirements of ASTM D7036-04 and guidelines issued by EPA. The manual documents and formalizes all of Montrose's QA efforts. The manual is revised upon periodic review and as Montrose adds capabilities. The QA manual provides details on the items provided in this summary.

Personnel Testing and Training: Personnel testing and training is essential to the production of high quality test results. Montrose training programs include:

- A requirement for all technical personnel to read and understand the test methods performed
- A requirement for all technical personnel to read and understand the Montrose QA manual
- In-house testing and training
- Quality Assurance meetings
- Third party testing where available
- Maintenance of training records.

Equipment Maintenance and Calibration: All laboratory and field equipment used as a part of Montrose's emission measurement programs is maintained according to manufacturer's recommendations. A summary of the major equipment maintenance schedules is summarized in Table 1. In addition to routine maintenance, calibrations are performed on all sampling equipment according to the procedures outlined in the applicable test method. The calibration intervals and techniques for major equipment components is summarized in Table 2. The calibration technique may vary to meet regulatory agency requirements.

Knowledge of Current Test Methods: Montrose maintains current copies of EPA, ARB, and SCAQMD Source Test Manuals and Rules and Regulations.

Chain-of-Custody: Montrose maintains chain-of-custody documentation on all data sheets and samples. Samples are stored in a locked area accessible only to Montrose source test personnel. Data sheets are kept in the custody of the originator, program manager, or in locked storage until return to Montrose office. Electronic field data is duplicated for backup on secure storage media. The original data sheets are used for report preparation and any additions are initialed and dated.

QA Reviews: Periodic field, laboratory, and report reviews are performed by the in-house QA coordinator. Periodically, test plans are reviewed to ensure proper test methods are selected and reports are reviewed to ensure that the methods were followed and any deviations from the methods are justified and documented.

ASTM D7036-04 Required Information

Uncertainty Statement

Montrose is qualified to conduct this test program and has established a quality management system that led to accreditation with ASTM Standard D7036-04 (Standard Practice for Competence of Air Emission Testing Bodies). Montrose participates in annual functional assessments for conformance with D7036-04 which are conducted by the American Association for Laboratory Accreditation (A2LA). All testing performed by Montrose is supervised on site by at least one Qualified Individual (QI) as defined in D7036-04 Section 8.3.2. Data quality objectives for estimating measurement uncertainty within the documented limits in the test methods are met by using approved test protocols for each project as defined in D7036-04 Sections 7.2.1 and 12.10. Additional quality assurance information is presented in the report appendices.

Performance Data

Performance data are available for review.

Qualified Personnel

A qualified individual (QI), defined by performance on a third party or internal test on the test methods, is present on each test event.

Plant Entry and Safety Requirements

Plant Entry

All test personnel are required to check in with the guard at the entrance gate or other designated area. Specific details are provided by the facility and project manager.

Safety Requirements

All personnel shall have the following personal protective equipment (PPE) and wear them where designated:

- Hard Hat
- Safety Glasses
- Steel Toe Boots
- Hearing Protection
- Gloves
- High Temperature Gloves (if required)
- Flame Resistant Clothing (if required)

The following safety measures are followed:

- Good housekeeping
- SDS for all on-site hazardous materials
- Confine selves to necessary areas (stack platform, mobile laboratory, CEMS data acquisition system, control room, administrative areas)
- Knowledge of evacuation procedures

Each facility will provide plant specific safety training.

TABLE 1
EQUIPMENT MAINTENANCE SCHEDULE

Equipment	Acceptance Limits	Frequency of Service	Methods of Service
Pumps	1. Absence of leaks 2. Ability to draw manufacturers required vacuum and flow	As recommended by manufacturer	1. Visual inspection 2. Clean 3. Replace parts 4. Leak check
Flow Meters	1. Free mechanical movement	As recommended by manufacturer	1. Visual inspection 2. Clean 3. Calibrate
Sampling Instruments	1. Absence of malfunction 2. Proper response to zero span gas	As recommended by manufacturer	As recommended by manufacturer
Integrated Sampling Tanks	1. Absence of leaks	Depends on nature of use	1. Steam clean 2. Leak check
Mobile Van Sampling System	1. Absence of leaks	Depends on nature of use	1. Change filters 2. Change gas dryer 3. Leak check 4. Check for system contamination
Sampling Lines	1. Sample degradation less than 2%	After each test series	1. Blow dry, inert gas through line until dry

TABLE 2
MAJOR SAMPLING EQUIPMENT CALIBRATION REQUIREMENTS

Sampling Equipment	Calibration Frequency	Calibration Procedure	Acceptable Calibration Criteria
Continuous Analyzers	Before and After Each Test Day	3-point calibration error test	< 2% of analyzer range
Continuous Analyzers	Before and After Each Test Run	2-point sample system bias check	< 5% of analyzer range
Continuous Analyzers	After Each Test Run	2-point analyzer drift determination	< 3% of analyzer range
CEMS System	Beginning of Each Day	leak check	< 1 in. Hg decrease in 5 min. at > 20 in. Hg
Continuous Analyzers	Semi-Annually	3-point linearity	< 1% of analyzer range
NO_x Analyzer	Daily	NO_2 -> NO converter efficiency	> 90%
Differential Pressure Gauges (except for manometers)	Semi-Annually	Correction factor based on 5-point comparison to standard	± 5%
Differential Pressure Gauges (except for manometers)	Bi-Monthly	3-point comparison to standard, no correction factor	± 5%
Barometer	Semi-Annually	Adjusted to mercury-in-glass or National Weather Service Station	± 0.1 inches Hg
Dry Gas Meter	Semi-Annually	Calibration check at 4 flow rates using a NIST traceable standard	± 2%
Dry Gas Meter	Bi-Monthly	Calibration check at 2 flow rates using a NIST traceable standard	± 2% of semi-annual factor
Dry Gas Meter Orifice	Annually	4-point calibration for ΔH@	--
Temperature Sensors	Semi-Annually	3-point calibration vs. NIST traceable standard	± 1.5%

Note: Calibration requirements that meet applicable regulatory agency requirements are used.

Appendix C.2
SCAQMD, CARB, and STAC Certificates

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

May 18, 2023

Mr. John Peterson
Montrose Air Quality Services, LLC
1631 E. Saint Andrew Place
Santa Ana, CA 92705

Subject: LAP Approval Notice
Reference # 96LA1220

Dear Mr. Peterson:

We have completed our review of Montrose Air Quality Services' revised renewal application, which was submitted as notification of Montrose's recent acquisition of AirKinetics, Inc. under the South Coast AQMD Laboratory Approval Program (LAP). We are pleased to inform you that your firm is approved for the period beginning May 18, 2023, and ending September 30, 2023, for the following methods, subject to the requirements in the LAP Conditions For Approval Agreement and conditions listed in the attachment to this letter:

South Coast AQMD Methods 1-4	South Coast AQMD Methods 5.1, 5.2, 5.3, 6.1
South Coast AQMD Methods 10.1 and 100.1	South Coast AQMD Methods 25.1 and 25.3 (Sampling)
USEPA CTM-030 and ASTM D6522-00	Rule 1121/ 1146.2 Protocol
Rule 1420/1420.1/1420.2 – (Lead) Source and Ambient Sampling	

Your LAP approval to perform nitrogen oxide emissions compliance testing for Rule 1121/ 1146.2 Protocols includes satellite facilities located at:

McKenna Boiler 1510 North Spring Street Los Angeles, CA 90012	Noritz America Corp. 11160 Grace Avenue Fountain Valley, CA 92708	Ajax Boiler, Inc. 2701 S. Harbor Blvd. Santa Ana, CA 92704
VA Laundry Bldg., Greater LA Healthcare Sys. 508 Constitution Avenue Los Angeles, CA 90049	So Cal Gas – Engr Analysis Ctr, Bldg H 8101 Rosemead Blvd Pico Rivera, CA 90660	

Thank you for participating in the LAP. Your cooperation helps us to achieve the goal of the LAP: to maintain high standards of quality in the sampling and analysis of source emissions. You may direct any questions or information to LAP Coordinator, Colin Eckerle. He may be reached by telephone at (909) 396-2476, or via e-mail at ceckerle@aqmd.gov.

Sincerely,

D. Sarkar

Dipankar Sarkar
Program Supervisor
Source Test Engineering

DS:CE
Attachment

230518 LapRenewal.doc

CALIFORNIA AIR RESOURCES BOARD

June 30, 2022

Mr. Matt McCune
Montrose Air Quality Services , LLC
1631 East Saint Andrew Place
Santa Ana, California 92705
mmccune@montrose-env.com

Dear Mr. McCune:

I am pleased to inform you that the California Air Resources Board (CARB) has renewed Montrose Air Quality Services , LLC as an Independent Contractor, by means of the enclosed Executive Order I-22-003. This approval will allow Montrose Air Quality Services , LLC to perform CARB Test Methods 1, 2, 3, 4, 5, 6, 8, 17, 20, and 100 (CO, CO_2, NO_x, O_2, SO_2, THC), Visible Emission Evaluation (VEE), and U.S. Environmental Protection Agency (U.S. EPA) Test Methods 201A, 202, and 205. The approval is valid through June 30, 2024, during which time additional audits of Montrose Air Quality Services , LLC's testing ability may be performed.

If you have questions or need further assistance, please contact Kathryn Gugeler at kathryn.gugeler@arb.ca.gov or Daniel Moore at Daniel.Moore@arb.ca.gov.

Sincerely,

Catherine Dunwoody

Digitally signed by Catherine Dunwoody
Date: 2022.06.30 14:05:25 -07'00'

Catherine Dunwoody, Chief, Monitoring and Laboratory Division

Enclosure

cc: (via email)

Kathryn M. Gugeler, Monitoring and Laboratory Division

Daniel Moore, Monitoring and Laboratory Division

MONTROSE AIR QUALITY SERVICES

STAC STACK TESTING ACCREDITATION COUNCIL

A2LA American Association for Laboratory Accreditation

Accredited Air Emission Testing Body

A2LA has accredited

MONTROSE AIR QUALITY SERVICES

In recognition of the successful completion of the joint A2LA and Stack Testing Accreditation Council (STAC) evaluation process, this laboratory is accredited to perform testing activities in compliance with ASTM D7036:2004 - Standard Practice for Competence of Air Emission Testing Bodies.

Presented this 4th day of February 2022.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3925.01
Valid to February 29, 2024

This accreditation program is not included under the A2LA ILAC Mutual Recognition Arrangement.

MONTROSE AIR QUALITY SERVICES

Appendix C.3
Individual QI Certificates

CERTIFICATE OF COMPLETION

Dominic J Heredero

This document certifies that this individual has passed a comprehensive examination and is now a Qualified Individual (QI) as defined in Section 8.3 of ASTM D7036-04 for the following method(s):

EPA Method 18

Certificate Number: 002-2022-44

Tate Strickler, VP – Quality Systems

DATE OF ISSUE: 02/17/2022

DATE OF EXPIRATION: 02/16/2027

MONTROSE ENVIRONMENTAL

CERTIFICATE OF COMPLETION

Dominic Heredero

This document certifies that this individual has passed a comprehensive examination and is now a Qualified Individual (QI) as defined in Section 8.3 of ASTM D7036-04 for the following method(s):

CARB Methods 410A, 428, 429 & 430

Certificate Number: 002-2017-126

C:\Users\Tate\AppData\Local\Microsoft\Windows\INetCacheContent.Word\Signature 2016.jpg

DATE OF ISSUE: 5/8/17

DATE OF EXPIRATION: 5/8/22

Tate Strickler, Accreditation Director

MONTROSE ENVIRONMENTAL

CERTIFICATE OF COMPLETION

Dominic Heredero

This document certifies that this individual has passed a comprehensive examination and is now a Qualified Individual (QI) as defined in Section 8.3 of ASTM D7036-04 for the following method(s):

CARB Methods 1, 2, 3 & 4

Certificate Number: 002-2022-56

Tate Strickler, VP – Quality Systems

DATE OF ISSUE: 03/07/2022

DATE OF EXPIRATION: 03/06/2027

MONTROSE ENVIRONMENTAL

Appendix C.4
Statement of No Conflict of Interest

STATEMENT OF NO CONFLICT OF INTEREST AS AN INDEPENDENT TESTING LABORATORY

(To be completed by authorized source testing firm representative and included in source test report)

The following facility and equipment were tested by my source testing firm and are the subjects of this statement:

Date(s) Tested:	**August 14, 2023**
Facility Name:	**Mojave Solar, LLC**
Equipment Address:	**42134 Harper Lake Road**
	Hinkley, California 92347
Equipment Tested:	**Alpha and Beta Carbon Adsorption Unit**
Device ID, A/N, P/N:	**C012015, C012016**

I state, as its legally authorized representative, that the source testing firm of:

Source Test Firm:	Montrose Air Quality Services, LLC
Business Address:	1631 E. St. Andrew Pl.
	Santa Ana, California 92705

is an "Independent Testing Laboratory" as defined in ***District Rule 304(k):***

For the purposes of this Rule, when an independent testing laboratory is used for the purposes of establishing compliance with District rules or to obtain a District permit to operate, it must meet all of the following criteria:

(1) The testing laboratory shall have no financial interest in the company or facility being tested, or in the parent company, or any subsidiary thereof -

(2) The company or facility being tested, or parent company or any subsidiary thereof, shall have no financial interest in the testing laboratory;

(3) Any company or facility responsible for the emission of significant quantities of pollutants to the atmosphere, or parent company or any subsidiary thereof shall have no financial interest in the testing laboratory; and

(4) The testing laboratory shall not be in partnership with, own or be owned by, in part or in full, the contractor who has provided or installed equipment (basic or control), or monitoring systems, or is providing maintenance for installed equipment or monitoring systems, for the company being tested.

Furthermore, I state that any contracts or agreements entered into by my source testing firm and the facility referenced above, or its designated contractor(s), either verbal or written, are not contingent upon the outcome of the source testing, or the source testing information provided to the SCAQMD.

Signature: Joe Rubio **Date:** **10/2/2023**

Joe Rubio	**Client Project Manager**	**(714) 279-6777**	**10/2/2023**
(Name)	(Title)	(Phone)	(Date)

FORM ST-110 :stevforl.doc (Revised 11/18/98

MONTROSE AIR QUALITY SERVICES

APPENDIX D
FACILITY PERMITS

MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT
14306 Park Avenue, Victorville, CA 92392-2310
760.245.1661 -- 800.635.4617 -- FAX 760.245.2022

AUTHORITY TO CONSTRUCT

C012015

If construction is not completed by the expiration date of this permit, it may be renewed for one additional year upon payment of applicable fees. Any additional extension will require the written approval of the Air Pollution Control Officer. This Authority to Construct may serve as a temporary Permit to Operate provided the APCO is given prior notice of intent to operate and the Permit to Operate is not specifically denied.

EXPIRES LAST DAY OF: SEPTEMBER 2021

OWNER OR OPERATOR (Co.#1876)

Mojave Solar LLC
42134 Harper Lake Road
Hinkley, CA 92347

EQUIPMENT LOCATION (Fac.#3130)

Mojave Solar - Harper Lake
Harper Lake Road, adjacent to SEGS VIII & IX
Hinkley, CA 92347

Description:
CARBON ADSORPTION SYSTEM, HTF ULLAGE/EXPANSION SYSTEM (ALPHA) consisting of: ATC modification March 2020 to update carbon adsorption system as follows:

Carbon adsorption system having two (2) multi-bed carbon filter sets capturing ullage/expansion system emissions and having a high and low pressure side. The expansion vessel vents on the high pressure side and the overflow tank vents on the low pressure side. The high pressure and low pressure side each vent to three vertical carbon cylindrical vessels (carbon beds) described below. Flow through each vessel is vertical and each side (three vessels), will be interconnected using a pipe rack system that allows the vessels to operate in series (lead/lag), parallel, or single vessel. Sample ports are located at inlet and outlet of each carbon bed. Optimally the system will operate in lead/lag flow, with a third canister in standby, with other operating configurations for maintenance and high flow events. Both high pressure and low pressure vent to atmosphere through one common stack.

High Pressure Side
Dimensions: 54" OD bed x 114" side shell
Bed Area: (53.25" ID) = 15.466 square feet
Nominal Flow Rate (cfm): 1,546.60 CFM
Carbon Capacity: 3,000 pounds
Fittings: 8"

Low Pressure Side
Dimensions: 36" OD bed x 108" side shell

Fee Schedule: 7 (h)	Rating: 1 device	SIC: 4911	SCC: 30688801	Location/Coordinates: +35.00390, -117.30370

This permit does not authorize the emission of air contaminants in excess of those allowed by law, including Division 26 of the Health and Safety Code of the State of California and the Rules and Regulations of the District. This permit cannot be construed as permission to violate existing laws, ordinances, statutes or regulations of this or other governmental agencies. This permit must be renewed by the expiration date above. If billing for renewal fee required by Rule 301(c) is not received by expiration date above, please contact the District.

Mojave Solar LLC
42134 Harper Lake Road
Hinkley, CA 92347

By:
Brad Poiriez
Air Pollution Control Officer

Bed Area: (35.25" ID) = 6.73 square feet
Nominal Flow Rate (cfm): 673 CFM
Carbon Capacity: 1,500 pounds
Fittings: 4"

CONDITIONS:

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.

2. This equipment must be in use and operating properly at all times the HTF ullage/expansion system with valid District Permit B011046 is venting.

3. This carbon adsorption system shall provide at a minimum 95% control efficiency of VOC emissions vented from the HTF ullage/expansion system under valid District Permit B011046. Control efficiency shall be demonstrated by sampling VOC emissions per US EPA Method 25 at the inlet and outlet of the carbon beds during initial and annual compliance tests.

4. The owner/operator shall prepare and submit a monitoring and change-out plan for the carbon adsorption system which ensures that the system is operating at optimal control efficiency at all times for District approval 60 days prior to commercial operation date (COD). Once approved, any subsequent changes to the monitoring and change-out plan must be submitted in writing to the District for approval prior to implementation.

5. Total emissions of VOC to the atmosphere shall not exceed 792.1 lbs/year, calculated based on the most recent test results.

6. Total emissions of benzene to the atmosphere shall not exceed 507.4 lbs/year, calculated based on the most recent test results.

7. During operation, o/o shall monitor VOC (as hexane) measured at outlet from the carbon beds. Sampling is to be performed at a minimum on a weekly basis. Samples shall be analyzed using a District approved photo ionization detector (PID).

8. PID shall be considered invalid if not calibrated in accordance with the manufactures recommended calibration procedures.

9. The o/o shall maintain an operations log (in electronic or hardcopy format) current and on-site for a period of five (5) years. The log shall contain at a minimum the following information and shall be provided to District personnel upon request.
a. Date and time of VOC monitoring;
b. Results of VOC monitoring; and
c. Date and description of all maintenance, malfunctions, repairs, and carbon change out(s).

10. The o/o shall provide stack sampling ports and platforms necessary to perform source tests required to verify compliance with District rules, regulations and permit conditions. The location of these ports and platforms shall be subject to District approval.

11. Prior to January 31 of each new year, the o/o of this unit shall submit to the District a summary report of all VOC emissions (based on annual source test results).

12. The o/o shall conduct all required compliance/certification tests in accordance with a District-approved test plan. Thirty (30) days prior to the compliance/certification tests the operator shall provide a written test plan for District review and approval. Written notice of the compliance/certification test shall be provided to the District ten (10) days prior to the tests so that an observer may be present. A written report with the results of such compliance/certification tests shall be submitted to the District

within forty-five (45) days after testing is completed.All compliance/certification test notifications, protocols, and results may be submitted electronically to reporting@mdaqmd.ca.gov

13. The o/o shall perform the following initial compliance tests on this equipment in accordance with the MDAQMD Compliance Test Procedural Manual. The test report shall be submitted to the District within 180 days of COD. The following compliance tests are required:
a. VOC as hexane in ppmvd and lb/hr (measured per USEPA Reference Methods 25 and 18 or equivalent).
b. Benzene in ppmvd and lb/hr (measured per CARB method 410 or equivalent).

14. The o/o shall perform the following compliance tests on this equipment at least once every twelve (12) months in accordance with the MDAQMD Compliance Test Procedural Manual. The following compliance tests are required:
a. VOC as hexane in ppmvd and lb/hr (measured per USEPA Reference Methods 25A and 18 or equivalent).
b. Benzene in ppmvd and lb/hr (measured per CARB method 410 or equivalent).

Additionally, records of all compliance tests shall be maintained on site for a period of five (5) years and presented to District personnel upon request.

MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT
14306 Park Avenue, Victorville, CA 92392-2310
760.245.1661 -- 800.635.4617 -- FAX 760.245.2022

AUTHORITY TO CONSTRUCT

C012016

If construction is not completed by the expiration date of this permit, it may be renewed for one additional year upon payment of applicable fees. Any additional extension will require the written approval of the Air Pollution Control Officer. This Authority to Construct may serve as a temporary Permit to Operate provided the APCO is given prior notice of intent to operate and the Permit to Operate is not specifically denied.

EXPIRES LAST DAY OF: SEPTEMBER 2021

OWNER OR OPERATOR (Co.#1876)

Mojave Solar LLC
42134 Harper Lake Road
Hinkley, CA 92347

EQUIPMENT LOCATION (Fac.#3130)

Mojave Solar - Harper Lake
Harper Lake Road, adjacent to SEGS VIII & IX
Hinkley, CA 92347

Description:
CARBON ADSORPTION SYSTEM, HTF ULLAGE/EXPANSION SYSTEM (BETA) consisting of: ATC modification March 2020 to update carbon adsorption system as follows:

Carbon adsorption system having two (2) multi-bed carbon filter sets capturing ullage/expansion system emissions and having a high and low pressure side. The expansion vessel vents on the high pressure side and the overflow tank vents on the low pressure side. The high pressure and low pressure side each vent to three vertical carbon cylindrical vessels (carbon beds) described below. Flow through each vessel is vertical and each side (three vessels), will be interconnected using a pipe rack system that allows the vessels to operate in series (lead/lag), parallel, or single vessel. Sample ports are located at inlet and outlet of each carbon bed. Optimally the system will operate in lead/lag flow, with a third canister in standby, with other operating configurations for maintenance and high flow events. Both high pressure and low pressure vent to atmosphere through one common stack.

High Pressure Side
Dimensions: 54" OD bed x 114" side shell
Bed Area: (53.25" ID) = 15.466 square feet
Nominal Flow Rate (cfm): 1,546.60 CFM
Carbon Capacity: 3,000 pounds
Fittings: 8"

Low Pressure Side
Dimensions: 36" OD bed x 108" side shell

Fee Schedule: 7 (h)	Rating: 1 device	SIC: 4911	SCC: 30688801	Location/Coordinates: +35.01460, -117.32880

This permit does not authorize the emission of air contaminants in excess of those allowed by law, including Division 26 of the Health and Safety Code of the State of California and the Rules and Regulations of the District. This permit cannot be construed as permission to violate existing laws, ordinances, statutes or regulations of this or other governmental agencies. This permit must be renewed by the expiration date above. If billing for renewal fee required by Rule 301(c) is not received by expiration date above, please contact the District.

Mojave Solar LLC
42134 Harper Lake Road
Hinkley, CA 92347

By:
Brad Poiriez
Air Pollution Control Officer

Bed Area: (35.25" ID) = 6.73 square feet
Nominal Flow Rate (cfm): 673 CFM
Carbon Capacity: 1,500 pounds
Fittings: 4"

CONDITIONS:

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.

2. This equipment must be in use and operating properly at all times the HTF ullage/expansion system with valid District Permit B011047 is venting.

3. This carbon adsorption system shall provide at a minimum 95% control efficiency of VOC emissions vented from the HTF ullage/expansion system under valid District Permit B011047. Control efficiency shall be demonstrated by sampling VOC emissions per US EPA Method 25 at the inlet and outlet of the carbon beds during initial and annual compliance tests.

4. The owner/operator shall prepare and submit a monitoring and change-out plan for the carbon adsorption system which ensures that the system is operating at optimal control efficiency at all times for District approval 60 days prior to commercial operation date (COD). Once approved, any subsequent changes to the monitoring and change-out plan must be submitted in writing to the District for approval prior to implementation.

5. Total emissions of VOC to the atmosphere shall not exceed 792.1 lbs/year, calculated based on the most recent test results.

6. Total emissions of benzene to the atmosphere shall not exceed 507.4 lbs/year, calculated based on the most recent test results.

7. During operation, o/o shall monitor VOC (as hexane) measured at outlet from the carbon beds. Sampling is to be performed at a minimum on a weekly basis. Samples shall be analyzed using a District approved photo ionization detector (PID).

8. PID shall be considered invalid if not calibrated in accordance with the manufactures recommended calibration procedures.

9. The o/o shall maintain an operations log (in electronic or hardcopy format) current and on-site for a period of five (5) years. The log shall contain at a minimum the following information and shall be provided to District personnel upon request.
a. Date and time of VOC monitoring;
b. Results of VOC monitoring; and
c. Date and description of all maintenance, malfunctions, repairs, and carbon change out(s).

10. The o/o shall provide stack sampling ports and platforms necessary to perform source tests required to verify compliance with District rules, regulations and permit conditions. The location of these ports and platforms shall be subject to District approval.

11. Prior to January 31 of each new year, the o/o of this unit shall submit to the District a summary report of all VOC emissions (based on annual source test results).

12. The o/o shall conduct all required compliance/certification tests in accordance with a District-approved test plan. Thirty (30) days prior to the compliance/certification tests the operator shall provide a written test plan for District review and approval. Written notice of the compliance/certification test shall be provided to the District ten (10) days prior to the tests so that an observer may be present. A written report with the results of such compliance/certification tests shall be submitted to the District

within forty-five (45) days after testing is completed.

13. The o/o shall perform the following initial compliance tests on this equipment in accordance with the MDAQMD Compliance Test Procedural Manual. The test report shall be submitted to the District within 180 days of COD. The following compliance tests are required:
a. VOC as hexane in ppmvd and lb/hr (measured per USEPA Reference Methods 25 and 18 or equivalent).
b. Benzene in ppmvd and lb/hr (measured per CARB method 410 or equivalent).

All compliance/certification test notifications, protocols, and results may be submitted electronically to reporting@mdaqmd.ca.gov

14. The o/o shall perform the following compliance tests on this equipment at least once every twelve (12) months in accordance with the MDAQMD Compliance Test Procedural Manual. The following compliance tests are required:
a. VOC as hexane in ppmvd and lb/hr (measured per USEPA Reference Methods 25A and 18 or equivalent).
b. Benzene in ppmvd and lb/hr (measured per CARB method 410 or equivalent).

Additionally, records of all compliance tests shall be maintained on site for a period of five (5) years and presented to District personnel upon request.

THIS IS THE LAST PAGE OF THIS DOCUMENT

If you have any questions, please contact one of the following individuals by email or phone.

Name:	Mr. Joe Rubio
Title:	Client Project Manager
Region:	West
Email:	JRubio@montrose-env.com
Phone:	(714) 279-6777

Name:	Mr. Matt McCune
Title:	Regional Vice President
Region:	West
Email:	MMccune@montrose-env.com
Phone:	(714) 279-6777

Mojave Solar LLC
42134 Harper Lake Road
Hinkley, California 92347
Phone: 760 308 0400

Appendix L

AQ-66, 70

Benzene Emission Limit
Carbon Adsorption System – Annual VOC Emissions Summary

Mojave Solar LLC

42134 Harper Lake Road Phone: 760 308 0400
Hinkley, California 92347

Submitted Electronically

Subject:	**09-AFC-5C**
Condition Number:	**AQ-70**
Description:	**Summary Report – VOC emissions - CEIDARS updated Survey - Year 2023**
Submittal Number:	**AQ70-09-00**

January 19, 2024

Ashley Gutierrez, CPM
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814
Ashley.Gutierrez@energy.ca.gov

May Mamari, Air Quality Engineer MDAQMD
14306 Park Avenue
Victorville, California 92392
mmamari@mdaqmd.ca.gov

Mr. Winstead/ Ms. Mamari

Pursuant to Condition of Certification AQ-70, following Condition 11 of the Permits to operate #s C012015 and C012016 attached is new CEIDARS updated survey related to the annual VOC emissions for Mojave Solar LLC.

Sincerely,

Mahnaz Ghamati

Quality, Environmental & Compliance Manager
ASI Operations LLC
42134 Harper Lake Rd
Hinkley, CA 92347
Cell: (760) 498 0549

Mahnaz.ghamati@atlantica.com

EMISSION YEAR 2023	CEIDARS II CEIP & CEIR UPDATE SURVEY COMPANY 1876 FACILITY 3130	FORM UDS SIDE 1

A. FACILITY DATA

Facility Name

Mojave Solar LLC

Address of Location

42134 Harper Lake Road

City

Hinkley

Zip Code

92347-9305

Facility SIC:

4911

Number of Employees

92

Web Site Address

WWW.atlantica.com

B. CONTACT PERSON

Name of Contact Person

Mahnaz Ghamati (Mrs.)

Title

Quality Environmental & Compliance Manager

Telephone Number

760-498-0549

FAX Number

- -

E-Mail Address

mahnaz.ghamati@atlantica.com

C. MAILING ADDRESS DATA

Company Name

Mojave Solar LLC

Mailing Address

42134 Harper Lake Road

City

Hinkley

State

CA

ZIP Code

92347-9305

Attention

Mahnaz Ghamati

EMISSION YEAR	CEIDARS II CEIP & CEIR UPDATE SURVEY	FORM
2023	**COMPANY** 1 8 7 6 **FACILITY** 3 1 3 0	**UDS** SIDE 2

D. *The following section must be answered if this facility does not want to complete and submit a new Comprehensive Emission Inventory Plan and Report (CEIP & CEIR):*

	QUESTIONS	ANSWERS	
1	What is the last emission year this facility submitted a CEIP?	2017	
2	What is the last emission year this facility submitted a CEIR?	2022	
		YES	NO
3	Did this facility operate during the past emission (calendar) year?	X	
4	Based upon the SIC for this facility, is this facility required to updates its CEIP & CEIR?	X	
5	Did the facility add or modify any processe(s) or equipment in the past emission (calendar) year?		X
6	If yes to 5, above, did the new or modified processe(s)/equipment begin operating during the past emission (calendar) year?		X
7	Have the facility's total emissions increased and/or decreased so as to cause a 10 percent or greater change (increase and/or decrease) in any emissions? (This may result due to change in process feed rates, equipment shutdowns, addition of equipment/processe(s)/control devices, changes in material or fuel, temperature, pressure, rentention time, etc.)	X	
8	Has the distance to any receptor decreased since the previous update/submittal or are there any new receptors since the previous update/submittal?		X

If the facility answered "NO" to questions 5, 6, 7, and 8 AND would like to rollover previously submitted CEIP and CEIR, please check the box below and indicate which emission year data should be used.

YES, rollover data* ☐ Emission year of data to rollover: ☐

E. *This section must be completed to claim small business status for the purpose of the Air Toxics "Hot Spots" Fees:*

A small business is defined as:
1) a facility who has 10 or fewer full-time equivalent employees;
2) a facility whose total annual gross receipts are less than $1,000,000; and
3) a company whose total annual California gross receipts are less than $5,000,000

	This Facility	State of California
Number of employees		
Annual Gross Receipts **		
Less than $ 1,000,000		
$ 1,000,000 to $ 5,000,000		
More than $ 5,000,000		

** Check the appropriate box for total annual gross receipts.

F. CERTIFICATION
(Please print or type)

I, Mahnaz Ghamati (Name of Official), a responsible official of

Mojave Solar LLC (Name of Facility), hereby certify that, based upon information and belief formed after reasonable inquiry, the above and attached information is true, accurate and complete. Executed tl 19 (Day) day of January (Month) of 2024 (Year)

at San Bernardino County, California (County and State).

Mahnaz Ghamati
(Signature)

Mahnaz Ghamati/ Environmental & Compliance Manager
(Name and Title)

Atlantica
Sustainable Infrastructure

Mojave Solar LLC

2023 Ullage Emission

Venting Hours				
2023	Alpha		Beta	
	Expansion	Overflow	Expansion	Overflow
Jan	6.7	13.2	3.9	36.9
Feb	5.8	12.7	3.5	33.8
Mar	7.2	20.3	8.5	47.9
Apr	9.2	42.6	6.7	45.6
May	13.8	30.6	5.8	44.5
Jun	6.0	21.1	4.5	37.3
Jul	3.6	17.1	5.2	37.2
Aug	5.1	17.1	4.8	49.6
Sep	2.5	17.5	5.1	47.5
Oct	3.1	15.8	2.4	44.6
Nov	5.7	2.3	2.3	29.3
Dec	5.9	1.2	5.0	25.7
Total	74.5	211.4	57.8	479.9

VOCs as C6, lb				
2023	Alpha		Beta	
	Expansion	Overflow	Expansion	Overflow
Jan	0.00938	4.356	0.06942	2.89665
Feb	0.00812	4.191	0.0623	2.6533
Mar	0.01008	6.699	0.1513	3.76015
Apr	0.01288	14.058	0.11926	3.5796
May	0.01932	10.098	0.10324	3.49325
Jun	0.0084	6.963	0.0801	2.92805
Jul	0.00497	5.6265	0.092916	2.91706
Aug	0.007154	5.6529	0.085974	3.893286
Sep	0.0034678	5.77863	0.0908868	3.72762745
Oct	0.0043183	5.212515	0.04280544	3.5008645
Nov	0.007938	0.7458	0.0403348	2.3037395
Dec	0.0082754	0.39171	0.08964792	2.0209825
Total	0.1043035	69.773055	1.02818496	37.67455995

benzene, lb				
2023	Alpha		Beta	
	Expansion	Overflow	Expansion	Overflow
Jan	0.01206	0.17226	0.001677	0.3931695
Feb	0.001798	0.0006985	0.001505	0.360139
Mar	0.002232	0.0011165	0.003655	0.5103745
Apr	0.002852	0.002343	0.002881	0.485868
May	0.004278	0.001683	0.002494	0.4741475
Jun	0.00186	0.0011605	0.001935	0.3974315
Jul	0.0011005	0.00093775	0.0022446	0.3959398
Aug	0.0015841	0.00094215	0.0020769	0.52844538
Sep	0.00076787	0.000963105	0.00219558	0.505960134
Oct	0.000956195	0.000868753	0.001034064	0.475181035
Nov	0.0017577	0.0001243	0.00097438	0.312692285
Dec	0.00183241	0.000065285	0.002165652	0.274312975
Total	0.033078775	0.183162843	0.024838176	5.113661609

Calculation Notes:
2023 Ullage emission - based on 08/14/2023 test data
Vent valves are considered close if it is <2% open.
15 min average valve positions are used to determine whether each vent valve is open or close.
In case of bad PI data, the valve position In the previous period is automatically used.

Alpha expansion vessel vent VOCs emission rate is deteremined by performance test as	0.0014	lb/yr
Alpha overflow vent VOCs emission rate is deteremined by performance test as	0.33	lb/yr
Beta expansion vessel vent VOCs emission rate is deteremined by performance test as	0.0178	lb/yr
Beta overflow vessel vent VOCs emission rate is deteremined by performance test as	0.0785	lb/yr
Alpha expansion vessel vent benzene emission rate is deteremined by performance test as	0.0018	lb/yr
Alpha overflow vent benzene emission rate is deteremined by performance test as	0.01305	lb/yr
Beta expansion vessel vent benzene emission rate is deteremined by performance test as	0.00043	lb/yr
Beta overflow vessel vent benzene emission rate is deteremined by performance test as	0.010655	lb/yr

Annual Totals		
Last compliance test	8/14/2023	
Alpha projected annual VOC	69.88	lb/yr
Beta projected annual VOC	38.70	lb/yr
Alpha projected annual Benzene	0.22	lb/yr
Beta projected annual Benzene	5.14	lb/yr
Annual VOC limit per plant	792.1	lb/yr
Annual benzene limit per plant	507.4	lb/yr

2023Source Test results W002AS-028123-RT-5231.pdf

		Run 1	Run 2	Average		Run 1	Run 2	Average
Alpha	Exp Ves VOC as C6, lb/hr	0.0003	0.0025	0.0014	Exp Ves Benzene, lb/hr	0.0018	0.0018	0.0018
Alpha	Overflow VOC as C6, lb/hr	0.27	0.39	0.33	Overflow Benzene, lb/hr	0.0083	0.0178	0.01305
Beta	Exp Ves VOC as C6, lb/hr	0.0144	0.0133	0.0178	Exp Ves Benzene, lb/hr	0.00049	0.00037	0.00043
Beta	Overflow VOC as C6, lb/hr	0.0772	0.0798	0.0785	Overflow Benzene, lb/hr	0.01086	0.01045	0.010655

Mojave Solar LLC
42134 Harper Lake Road
Hinkley, California 92347
Phone: 760 308 0400

Appendix M

BIO-1 to BIO-21

Designated Biologist Summaries

Mojave Solar Project
California Energy Commission (09-AFC-5C)
Biological Resources Conditions of Certification
Biological Resources Section of the Annual Compliance Report

January 1 – December 31, 2023
Reporting Period

Submitted
February 2024

Prepared for:
Mojave Solar LLC
42134 Harper Lake Road
Hinkley, California 92347

Prepared by:
Abengoa Solar Industrial Operations LLC
42134 Harper Lake Road
Hinkley, California 92347

Rowe Ecological Consulting, LLC
P.O. Box 1018
Weldon, CA 93283
roweecological@gmail.com

Table of Contents

1. Introduction

This Biological Resources Section of the Annual Compliance Report (ACR) is provided to the California Energy Commission (CEC) pursuant to the Biological Resources Conditions of Certification (COCs) and Compliance-7 as required by the Mojave Solar Project (MSP) Commission Decision (09-AFC-5; CEC, 2010).

On December 23, 2014, the facility commenced commercial operations. Also on this date, Abeinsa (AEPC) turned the site over to the owner, Mojave Solar LLC, to manage facility operations. From January 2015 through May 29, 2016, monthly compliance reports were submitted to comply with the CEC COCs, while the Chief Building Official's punch list activities were completed. The CEC issued the Final Certificate of Occupancy on May 29, 2016, when installation of all permanent equipment and structures was completed. MSP has been in the Operations and Maintenance (O&M) phase of the project as of May 30, 2016. This report covers O&M from January 1 to December 31, 2023.

2. Annual Report Requirements

Annual reporting requirements during O&M are only referenced in BIO-2, BIO-6, BIO-16, and BIO-17; however, this ACR addresses all Biological Resource COCs (BIO-1 to BIO-21) because BIO-6, the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP), covers all Biological Resource COCs.

3. Mitigation Measures

Table 1 provides a list of the Biological Resource COCs covered in the BRMIMP.

Table 1: BRMIMP Mitigation Measures

COC	Brief Description of Condition
BIO-1	Designated Biologist Selection
BIO-2	Designated Biologist Duties
BIO-3	Biological Monitor Selection, Qualifications, and Duties
BIO-4	Designated Biologist and Biological Monitor Authority
BIO-5	Worker Environmental Awareness Program

Table 1: BRMIMP Mitigation Measures	
COC	Brief Description of Condition
BIO-6	Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) Development and Compliance
BIO-7	Impact Avoidance and Minimization Measures
BIO-8	Pre-Construction Nest Surveys and Impact Avoidance and Minimization Measures for Migratory Birds
BIO-9	Golden Eagle Territory-Specific Management Plan
BIO-10	Documentation of Bald and Golden Eagle Act Compliance
BIO-11	Desert Tortoise Exclusion Fencing, Clearance Surveys, and Translocation Plan
BIO-12	Mohave Ground Squirrel Clearance Surveys
BIO-13	Burrowing Owl Impact Avoidance, Minimization and Mitigation Measures
BIO-14	American Badger and Desert Kit Fox Impact Avoidance and Minimization Measures
BIO-15	Compensatory Mitigation
BIO-16	Tamarisk Eradication, Monitoring, and Reporting Program
BIO-17	Monitoring Impacts of Solar Collection Technology on Birds
BIO-18	Common Raven Monitoring, Management, and Control
BIO-19	Evaporation Pond Monitoring and Adaptive Management Plan
BIO-20	Harper Dry Lake Marsh Water Delivery
BIO-21	USFWS Biological Opinion

3.1. BIO-1: Designated Biologist Selection

BIO-1 requires the project to select a Designated Biologist (DB) to effectively implement the duties in BIO-2 and other relevant COCs. Approved DB, Sean Rowe performed the duties of DB on the project site during the reporting period. The qualifications for Sean Rowe and request for DB approval was submitted (under BIO1-19-00 submittal) (CEC, USFWS and CDFW) to the permitting agencies on March 14, 2018, and Mr. Rowe was subsequently approved March 21 (USFWS and CDFW) and March 27 (CEC), 2018 as a BM, Authorized Avian Specialist, and desert tortoise Authorized Biologist under the project specific Biological Opinion 8-8-11-F-3 (USFWS, 2011B). Mr. Rowe was subsequently approved as DB on October 12, 2018.

3.2. BIO-2: Designated Biologist Duties

An approved DB was onsite or otherwise available during all O&M activities. The DB advised on compliance with Biological Resource COCs, supervised and conducted biological resource compliance inspections, surveyed sensitive biological resource areas, notified the project owner and the CPM of noncompliance events, responded to CPM inquiries, and maintained compliance records.

3.3. BIO-3: Biological Monitor Selection, Qualifications, and Duties

BIO-3 allows the project to utilize approved Biological Monitors to assist the DB. No biological monitors were employed during the reporting period.

3.4. BIO-4: Designated Biologist and Biological Monitor Authority

BIO-4 provides the DB and BM authority to halt construction activity in areas specified by the DB if that activity were to potentially harm biological resources or is in violation of any state or federal laws, conditions, permits, or other such agreements made to applicable agencies.

No construction activities took place during the reporting period.

3.5. BIO-5: Worker Environmental Awareness Program

BIO-5 requires that the project owner develop and implement a Worker Environmental Awareness Program (WEAP). On October 22, 2015, the project owner submitted a revised BIO-5 WEAP training for use during operations (MSP, 2015a). The CPM approved the training program for operations on November 17, 2015. On December 9, 2015, the CPM approved immediate use of the operations WEAP for annual refresher training for operations personnel, while still in the construction period. On June 15, 2018, MSP submitted a new version of the BIO5 WEAP training for review and approval. The CEC CPM approved it on June 15, 2018. In 2021, additional slides were added to the training to address roadkill handling and disposal, and the spills. The plan (BIO5-04-03) was approved by CPM on August 18, 2022.

The WEAP was provided to all new employees, contractors, and subcontractors within a week of hiring new workers and annually for ongoing workers.

3.6. BIO-6: Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) Development and Compliance

BIO-6 requires the project owner to develop and implement a BRMIMP, which covers all Biological Resource COCs as reported herein. BIO-17 (Bird Monitoring Study) was subsequently approved by the CPM on January 27, 2017. BIO-19 (Evaporation Pond Monitoring and Adaptive Management Plan) was resubmitted to the CPM and USFWS in December 2016. 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, in consultation with the USFWS, CDFW, and Regional Water Quality Control Board (RWQCB), it will be incorporated into the BRMIMP as Appendix I. See Sections 3.17 and 3.19 for more details.

3.7. BIO-7: Impact Avoidance and Minimization Measures

BIO-7 requires the project owner to implement seventeen measures to avoid or minimize impacts to local biological resources, several of which overlap with other COCs and are thus addressed separately. Most measures addressed in BIO-7 are construction related and were largely not relevant during this reporting period. No construction activities took place during the reporting period.

Item 11 of BIO-7 requires the project owner to report all inadvertent deaths of sensitive species. There were no deaths of sensitive species during 2023.

3.8. BIO-8: Nest Surveys and Impact Avoidance and Minimization Measures for Migratory Birds

BIO-8 requires impact avoidance and minimization measures for birds protected under the Migratory Bird Treaty Act (MBTA). Nest surveys were conducted by the DB onsite for any activities with the potential to effect MBTA-protected bird nests. Nesting surveys were performed in accordance with the procedures set forth in BIO-8. Eight active nests were discovered and monitored during 2023. No entry buffers were established around active nests and nests were monitored until nestlings fledged or nests were otherwise determined inactive. Four nests (3 Black-necked Stilt and 1 American Avocet) were associated with the evaporation ponds. All three stilt nests failed due to abandonment or predation. The avocet nest successfully fledged two young (Table 2).

Four Common Raven nests were located and monitored during this reporting period. Of the four raven nests three failed due to abandonment or predation and one outcome was

unknown. One nest, in the Alpha power block and one in the Beta SCA were treated with oiling techniques designed to prevent hatching. Both nests failed to hatch and were presumed abandoned as a result of the oiling. A nest in the Alpha west solar field failed due to abandonment or predation. A nest with small young was located in the Beta power block. The outcome of this nest is unknown as it was inaccessible for observation and no sign of fledglings was observed. See the BIO-18 Annual Report for 2023, attached as Appendix J2, for details of raven nesting.

Table 2 summarizes the outcomes of all nesting attempts monitored during 2023.

Table 2. Avian Nesting Summary 2023

Species	Nest ID	Discovery Date	Location	Outcome
Common Raven	01-A-CORA	3/2/23	Alpha Power Block	Failed - Abandoned
Common Raven	02-B-CORA	3/2/23	Beta Power Block	Unknown
Common Raven	03-B-CORA	4/27/22	Beta SCA	Failed - Abandoned
Common Raven	04-A-CORA	5/20/23	Alpha West SCA	Failed - Unknown
Black-necked Stilt	05-B-BNST	6/15/23	Beta East Pond	Failed – Unknown
Black-necked Stilt	06-B-BNST	6/15/23	Beta East Pond	Failed – Unknown
Black-necked Stilt	07-B-BNST	6/22/23	Beta East Pond	Failed – Unknown
American Avocet	08-A-AMAV	6/22/23	Alpha West Pond	Fledged Young

3.9. **BIO-9: Golden Eagle Territory-Specific Management Plan**

BIO-9 requires that the project owner conduct Golden Eagle surveys and prepare a plan if an occupied territory is found within 10 miles of the project site.

On January 28, 2011, USFWS approved the project owner's findings that no Golden Eagles were located within 10 miles of the project site, and therefore, the project owner did not need to prepare a BIO-9 Golden Eagle Plan. On March 14, 2011, the project owner submitted USFWS's findings to CEC (MSP, 2011a). On March 17, 2011, CEC approved USFWS' letter satisfying the BIO-9 requirement.

3.10. BIO-10: Documentation of Bald and Golden Eagle Act Compliance

BIO-10 requires the project owner document compliance with the Bald and Golden Eagle Protection Act, if required by the BIO-9 survey results.

On March 17, 2011, the CEC via email stated that since a BIO-9 Golden Eagle Plan was not required that the project owner had also met BIO-10 compliance requirements.

3.11. BIO-11: Desert Tortoise Exclusion Fencing, Clearance Surveys, and Translocation Plan

All permanent desert tortoise exclusion fencing was inspected monthly and immediately after major rainfall events.

No desert tortoises were located onsite, and no tortoises were translocated or transmittered during this reporting period.

3.12. BIO-12: Mohave ground Squirrel Clearance Surveys

BIO-12 requires the project to avoid or minimize impacts to Mojave ground squirrel by conducting a clearance survey once the desert tortoise exclusion fence is completed (BIO12-02-0, November 18, 2011).

No Mohave ground squirrels were observed on the site, therefore no handling, capturing, or relocation was necessary for the duration of this reporting period.

3.13. BIO-13: Burrowing Owl Impact Avoidance, Minimization and Mitigation Measures

BIO-13 requires preparation of Burrowing Owl (*Athene cunicularia*) Monitoring and Mitigation Plan to avoid and minimize impacts to burrowing owls in and near construction areas (if identified during the surveys). Last survey performed and approved on January 26, 2011, BIO13-02-01. No Burrowing Owl specific surveys were conducted during the reporting period.

In July 2021, the DB discovered a family of Burrowing Owls using a burrow near the southwest corner of Beta west along the perimeter fence. Mojave Solar staff were notified of the owls and instructed to avoid the area and notify the DB if it was necessary to conduct work in the vicinity. In October 2021, the DB observed a single Burrowing Owl flush from a Kit Fox burrow

in the kit fox den site #9 east of the Alpha east solar collector field. This area is within an existing no-entry buffer established for kit fox. At least one owl and evidence of active burrow use was seen in both locations periodically throughout the remainder of the 2021 and 2022. The DB monitored the sites during routine compliance visits. No owls were observed using the beta site during 2023. A pair of owls were observed using the alpha east site throughout 2023 and show no signs of disturbance.

3.14. BIO-14: American Badger and Desert Kit Fox Impact Avoidance and Minimization Measures

BIO-14 requires pre-construction surveys and provides guidance on pre-construction encounters with American badgers and desert kit fox. The MSP site is currently monitored for the presence of desert kit fox and American badger by the DB via observation of tracks, scat, and examination of burrows on or around the site. No signs of American badger were observed during the reporting period. Kit foxes are ubiquitous in the area and often traverse or reside on site in undisturbed areas.

Desert kit fox den site #9, located in east of the solar collector field in Alpha East, was inactive during this reporting period. A game camera documented only occasional kit fox in the vicinity of the den site throughout the reporting period and none of the previously active dens showed signs of active use. An exclusion buffer was established and continues to be maintained around the den site to prevent disturbance. This den site will continue to be monitored by the DB. No other den sites have been observed on the premises.

3.15. BIO-15 Compensatory Mitigation

To fully mitigate for habitat loss and incidental take of desert tortoise and Mohave ground squirrel as well as burrowing owl, BIO-15 requires the project owner, in fee or in easement, to acquire 118.2 acres of land suitable for desert tortoise, Mohave ground squirrel, and burrowing owl and fund the enhancement and long-term management of these compensation lands.

Compensatory mitigation was satisfied and approved by CEC between 2011 and 2014. On July 19, 2016, to address the final requirement of COC BIO-15, the project owner submitted BIO15-06-00, confirming that project construction was limited to the area described in the Commission Decision, therefore, disturbance to desert tortoise and MGS habitat did not exceed 430 acres, and construction activities did not impact desert tortoise, MGS, and burrowing owl habitat adjacent to work areas. The CPM approved the submittal for Verification of Habitat Disturbance Area on September 15, 2016, which was the final requirement related to this COC.

The Transition Habitat Conservancy (THC) acquired 234 acres of land near MSP in 2014 to satisfy the compensatory mitigation requirements of BIO-15. THC manages and monitors

these lands in perpetuity to ensure habitat for desert tortoise, burrowing owl and Mojave ground squirrel is not degraded. THC also works in partnership with the Bureau of Land Management to manage BLM lands that impact THC mitigation properties.

Refer to the Transition Habitat Conservancy's annual reports for further status of the mitigation properties.

3.16. BIO-16: Tamarisk Eradication, Monitoring, and Reporting Program

Condition of Certification (COC) BIO-16, Tamarisk Eradication, Monitoring, and Reporting Program, issued by the California Energy Commission (CEC) as a condition of licensing of the Abengoa Mojave Solar Project (MSP) requires the project owner to prepare and implement a Tamarisk Eradication, Monitoring, and Reporting Plan with the objective of preventing the re-invasion of undesirable weeds and/or invasive wildlife for a minimum of five years. The revised Mojave Solar Project Tamarisk Eradication, Monitoring, and Reporting Plan (Tamarisk Plan) was submitted on August 03, 2016.

The BIO-16 Tamarisk Plan Annual Report for 2020 was submitted to the CEC on February 2, 2021. The revised report was submitted on May 27, 2021, with revisions that addressed CEC comments. The CEC via email (dated 7/14/21), stated: "CEC staff and CDFW have determined that MSP has met the success criteria for BIO-16 and satisfied the requirement for annual reporting as part of BIO-16…MSP will continue to control weeds on site but will not prepare the full stand-alone report. Please continue to report on the status of weed control in the ACR."

MSP has contracted with a California-licensed herbicide applicator and has been applying herbicide to exotic and invasive species within the project. Herbicide application has shown to be effective in controlling weeds onsite.

The DB surveyed for weed species throughout the year as conditions warranted and seasonal germination developed and coordinated with MSP for treatment. No weed species meeting the definition of invasive were observed onsite in 2023. Three species of exotic weeds, Mediterranean grass (*Schismus arabicus*), Russian thistle (*Salsola tragus*), and redstem filaree (*Erodium cicutarium*) were documented onsite during the reporting period. Exotic weed coverage was minimal, and no herbicide was applied in 2023. Russian Thistle was removed sitewide periodically as it germinated. MSP has contracted with a licensed herbicide applicator to treat provide sitewide treatment with a pre-emergent herbicide in January 2024.

3.17. BIO-17: Monitoring Impacts of Solar Collection Technology on Birds

BIO-17 requires the project owner to develop and implement a Bird Monitoring Study. Revision 2 of the Bird Monitoring Study was submitted to the CPM on April 15, 2016, to

address comments on Revision 1 provided by the CEC staff during a January 27, 2016, meeting. A meeting was held on December 14, 2016, between MSP and CEC to discuss, in part, consistency between the BIO-17 Bird Monitoring Study and BIO-19 Evaporation Pond Monitoring and Adaptive Management Plan. The Bird Monitoring Study was subsequently approved by the CEC on January 27, 2017.

The issuance of the permanent Special Purpose Utility Permit by the USFWS was received on March 3, 2017, and the Scientific Collection Permit from the CDFW was received on August 10, 2017.

The BIO-17 Bird Monitoring Study was initiated on September 1, 2017, and fieldwork was completed on August 30, 2019. The combined second annual and final project summary report was submitted on December 06, 2019. In response to comments received from the agencies, revisions were submitted on December 14, 2020 (2nd revision) and September 13, 2021 (3rd revision). The final BIO17-11-04 Bird Monitoring Study Annual Report Second Year 2018-2109 (09-AFC-5C) – Final Revision was submitted for review and approval on October 29, 2021. The CEC stated via email (dated 10/13/21) "once the report is finalized the requirements of BIO-17 will be satisfied." The CEC granted final approval via email dated November 1, 2021.

3.18. BIO-18: Common Raven Monitoring, Management, and Control Plan

BIO-18 requires the project owner to implement measures to manage its construction site in a manner to control Common Raven (Corvus corax) populations. In addition, the project owner must develop and implement a Common Raven Monitoring, Management, and Control Plan. BIO18-01-03 reviewed and approved by the CEC on March 26, 2012.

The Common Raven Monitoring, Management, and Control Plan specifies that the project owner will report annually to the California Energy Commission (CEC), United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) during the operation phase of the project. The raven plan requires the Designated Biologist (DB) and/or Biological Monitor (BM) to perform monthly reconnaissance-level surveys for the first five years of the project, unless it is determined that fewer surveys are necessary. In addition, annual breeding season monitoring will be conducted for the life of the project.

In an email dated July 14, 2021, CEC stated "…CEC staff, CDFW and USFWS have determined that the project owner has satisfied the requirement for monthly surveys as part of the BIO-18 Raven Plan." Hence, no point counts were conducted in 2022.

The DB conducted breeding season nesting surveys during 2023. Details of the nest monitoring results are found in the Sec. 3.9 as well as the BIO-18 Annual Report for 2023.

3.19. BIO-19: Evaporation Pond Monitoring and Adaptive Management Plan

BIO-19 requires the project owner to develop and implement an Evaporation Pond Monitoring and Adaptive Management Plan to define the monitoring and reporting procedures as well as triggers for adaptive management strategies that will be implemented to prevent wildlife fatalities at the evaporation ponds. The final BIO-19 Evaporation Pond Plan Monitoring and Adaptive Management Plan was approved in March 2017. The Evaporation Pond Plan defines the monitoring and reporting procedures as well as triggers for adaptive management strategies that shall be implemented to prevent wildlife mortality at the evaporation ponds.

Prior to and after the approval of the Evaporation Pond Plan, various hazing techniques were employed to try to deter birds from using the evaporation ponds, however, avian fatalities in September 2017 resulted in adaptive management triggers being met. Additional avian fatalities on October 16 and 17 2017 resulted in the final adaptive management trigger being met. On, January 23, 2018, the CEC issued a formal letter notifying the MSP that the ponds must be netted. USFWS concluded that the installation of the netting should be delayed for a period of one year to do a comparative study with the netting system at the Genesis solar site. In an email dated January 24, 2020, the CEC directed MSP to begin netting installation, stating "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." CEC also advised that avian monitoring at the ponds may be reduced from bi-weekly to monthly until netting is installed.

In March 2020, MSP requested, and CEC granted permission to postpone netting installation due to the COVID-19 pandemic. The postponement was again approved on December 17, 2020. On May 21, 2021, CEC notified MSP that the San Bernardino "Stay at Home" order had been lifted and requested that MSP initiate installation of the pond netting as well as provide additional information on the scope of work, schedule, and status of nesting birds.

The CEC, via email dated August 5, 2021, requested that MSP modify the BIO-19 Evaporation Pond Plan to address monitoring of netted ponds and rescue of live and injured birds from the netting. MSP submitted BIO19-98-00 Evaporation Pond and Adaptive Management Plan Rev. 8 on October 19, which was subsequently approved by the CEC on October 27, 2021.

Installation of netting at the Beta west pond on began on September 30 and was completed at the end of October 2021. Due to issues with the initial netting contractor, MSP contracted with a new contractor in 2023 and installation of the remaining ponds began in October 2023. Netting over the Beta East Pond was completed in December. Installation at the remaining ponds began in November and is scheduled to be completed in March 2024.

Refer to BIO-19 monthly Evaporation Pond Plan reports for additional details.

3.20. BIO-20: Harper Dry Lake Marsh Water Delivery

BIO-20 requires the project owner to provide a well with the ability to convey a minimum of 75 acre-feet of water to Harper Dry Lake marsh, prior to decommissioning the on-site well that was serving the marsh.

On August 16, 2012, the project owner completed construction of a new well that meets BIO-20 criteria of providing 75 acre-feet of water to the Harper Dry Lake marsh. In letter to the project owner, the Bureau of Land Management took responsibility for well ownership, including maintenance and electricity. In compliance with the BIO-20 Verification, the project owner submitted all applicable information regarding decommissioning the original well and specifications of the new well to the CPM on September 24, 2012 (MSLLC, 2012).

As noted in the BIO-6 Construction Closure Report, this item was completed in 2012 and no further compliance activities are required related to this COC.

3.21. BIO-21: USFWS Biological Opinion

BIO-21 requires the project owner to incorporate the USFWS's Biological Opinion terms and conditions into the BRMIMP. The USFWS issued the Biological Opinion (8-8-11-F-3) on March 17, 2011 (USFWS, 2011b).

No desert tortoises were encountered onsite in 2022. BIO21-10-00 Biological Opinion Annual Compliance Report 2022 (09-AFC-5C) submitted on December 15, 2023.

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Abengoa Mojave Solar Project
California Energy Commission (09-AFC-5C)
Condition of Certification BIO-18

Common Raven Monitoring, Management, and Control Plan for Mojave Solar Project San Bernardino County, California

Annual Compliance Report
2023

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January 2024

Table of Contents

1. Introduction

The California Energy Commission (CEC), in Condition of Certification BIO-18, requires the project owner to implement measures to manage its construction site in a manner to control Common Raven (Corvus corax) populations. In addition, the project owner must develop and implement a Common Raven Monitoring, Management, and Control Plan. The CEC approved the Common Raven Monitoring, Management, and Control Plan (Raven Plan) on March 26, 2012. The raven plan specifies that the project owner will report annually to the CEC, United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) during the operations phase of the project.

The final BIO-18 raven plan specifies that the Designated Biologist (DB) and/or Biological Monitor (BM) will perform monthly reconnaissance-level surveys for the first five years of the project, unless it is determined that fewer surveys are necessary. In addition, annual breeding season monitoring will be conducted for the life of the project.

This report summarizes BIO-18 raven monitoring and control efforts conducted during 2023

2. Monitoring Activities

The raven plan specifies that MSP will incorporate project design features (PDFs), project-specific control measures and management practices to ensure that project activities do not create new subsidies that increase the presence or attraction of ravens to the project area. The raven plan specifically calls out the following PDFs and management practices that will be monitored to assess impacts on raven use of the site.

- Evaporation Ponds
- Raven Perching, Roosting, and Nesting Sites
- Ponding Water
- Raven Food Sources from Soil Disturbance and Roadkill
- Human Food and Waste Management

Mojave Solar Project personnel, the DB, and the BM are responsible for monitoring. The DB/BM routinely monitor MSP site conditions to ensure that the PDFs and management practices specified in the raven plan are implemented and carried out and to determine their effectiveness. In addition, MSP personnel are educated on raven control efforts

and are requested to notify the DB/BM if they encounter raven nesting activity, roadkill, and human food or waste management issues.

3. Methods

3.1 Point Counts

The raven plan specifies that up to 12 permanent sampling points will be surveyed monthly. Point count locations (7) for the operation phase were submitted to the CEC, USFWS, and CDFW on June 17, 2016, and approved on June 24, 2016. Point counts were conducted monthly by the DB. Data collected include date, time, and weather conditions of survey, as well as time, location, number, age, sex, behavior, distance from the point location and any other pertinent details for each observation.

In an email dated July 14, 2021, CEC indicated that MSP had satisfied the monthly survey conditions of BIO-18.

"*As part of the approval of the 2020 ACR, CEC staff, CDFW and USFWS have determined that the project owner has satisfied the requirement for monthly surveys as part of the BIO-18 Raven Plan. Annual breeding season monitoring will be conducted at the MSP for the life of the project and a stand-alone report should still be provided in the ACR. In addition, control measures including any adaptive management measures determined to be necessary by the agencies shall be implemented per the approved plan, as needed.*"

Point count surveys were discontinued after July 2021 per CEC's communication.

3.2 Breeding Season Monitoring

The raven plan specifies that nest search surveys will be conducted twice a month during the raven breeding season (March through June) for the life of the project. The plan also specifies that if nest building is observed, the DB/BM will actively remove inactive nests. Any existing inactive raven nests will be removed prior to the breeding season.

During March through June the DB systematically surveyed all project structures suitable for raven nesting at least twice monthly. Incidental observations of raven nesting behavior by the DB and BM were also used to focus nest search efforts. MSP personnel were requested to notify the DB if they observed any evidence of raven nesting.

4. Results

4.1 Point Counts

Point counts were discontinued in 2021.

4.2 Nest Monitoring

Nest surveys were conducted by the DB during the breeding season (February-June). In 2019, MSP and the DB began coordinating with Mr. Tim Shields of Hardshell Labs, the CEC and USFWS to obtain permission to apply an oiling technique to raven nests on MSP. Mr. Shields has been working throughout the region using oiling techniques to prevent raven eggs from hatching in an effort to reduce raven predation on desert tortoises in tortoise critical habitat units. This technique involves applying a thin layer of vegetable or silicone-based oil to the surfaces of the eggs to prevent gas exchange across the eggshell and starving the embryo of oxygen. MSP has requested and been granted permission from the CEC annually to conduct oiling on nests located at MSP under Mr. Shields Scientific Collecting Permit.

Four Common Raven nests were located on the project site during the 2023nesting season: one in the Alpha power block, one in the alpha west solar field, one in the beta power block and one between the beta east and west solar fields (Table 1). The alpha & beta power block nests were in the same locations as active nests in 2020, 2021 & 2022. The alpha west solar field nest was in a new location on the ground under a solar array. The DB set up a non-disturbance buffer, flagged off access to the locations, and advised MSP staff to notify the DB if any work needed be done in the area. The DB monitored the nests periodically through July. Scanned nest monitoring datasheets are included as Appendix A.

On 3/2/23, a nest was discovered in Beta power block located near the top of an expansion vessel in the same location as prior years. Due to the inaccessibility of the nest site it is not possible to determine the contents from the ground until nestlings are large enough to be seen however adult behavior can be used to surmise the nesting stage. On 3/30 a drone was used to observe the nest and found it contained three very small young. An adult was observed at the nest periodically until 5/20 when the nest appeared inactive. No evidence of fledged young was ever observed. The outcome of this nest is unknown.

On 3/2/23, an nest was discovered in the construction phase in Alpha power block. This nest was on a cable tray on the third level in the same location as prior years. On 4/5 the nest contained a single egg and on 4/15 a full clutch of six eggs was oiled. On 5/20 an adult was observed incubating six eggs. The nest was not checked again until 6/22

when it was found empty. The nest contained no sign of ever having contained nestlings and no fledglings were observed. This nest was determined to have failed due to abandonment as a result of oiling.

On 4/27 the DB discovered an active nest containing three eggs on the rack between the beta east and west solar fields in the same location as a nest in 2019. On 5/3 the nest contained a complete clutch of five eggs. The clutch was oiled on 5/12. On 5/20 the nest contained four eggs and on 6/14 and 6/22 only two eggs remained, still being incubated by an adult. The nest was found empty on 7/12 with no sign of having contained nestlings. This nest was determined to have failed ultimately due to abandonment as a result of oiling.

On 5/20 a late nest was discovered containing four eggs on the ground below a solar array in the alpha west solar field. On 6/14 the nest was empty with no sign of nestlings or fledglings and no adults in attendance. The nest was determined to have failed due to predation or abandonment.

The DB continued to observe the nest areas and nesting pairs during routine site visits and both prior to and after the expected fledging dates. No evidence of successful nesting by Common Ravens was observed in 2023.

Table 1. Summary of Common Raven Nesting 2023

Nest ID	Date Discovered	Location	Outcome
01-A-CORA	3/2/23	Alpha Power Block	Failed - Abandoned
02-B-CORA	3/2/23	Beta Power Block	Unknown
03-B-CORA	4/27/23	Beta Wash	Failed - Abandoned
04-A-CORA	5/20/23	Alpha West SCA	Failed - Unknown

5. Conclusions & Recommendations

BIO-19 point counts, BIO-18 raven point counts and anecdotal observations suggest that the evaporation ponds are not an attractant for ravens. Ravens are rarely noted at the ponds during point counts and when they are observed, they are typically flying through the area or offsite. Additionally, the ponds are scheduled to be completely netted in early 2024 which will remove them as a water source for ravens. The Harper

Lake wetlands to the east of MSP offer a nearly permanent fresh water source for ravens and ravens are often seen flying in the direction of or away from the wetlands. On-site application of water is minimal as is ponding of water, which is typically associated with winter rain events.

Project associated food sources for ravens include roadkill, primarily along Lockhart Road. MSP personnel routinely contact the DB when roadkill is observed in the vicinity of the project. Roadkill is either disposed of or buried so that it is not available to ravens. BIO-17 avian mortality study carcasses previously provided ample food supply for ravens. Placement of study carcasses ceased in August 2019 and is no longer a food source.

The power block structures offer a nearly unlimited number of perching and nesting sites for ravens and ravens routinely use these structures for perching and nesting. Efforts to dissuade ravens from nesting in previously used nest sites by covering the nest substructure with wire mesh have proven ineffective as the ravens simply nest elsewhere on the structure. Ravens are persistent in their nesting efforts and can rebuild a nest and lay eggs within a few days if necessary. Continued diligent efforts to ensure prior season's nest are removed and to locate nesting attempts and remove nesting material before commencement of egg laying each season are recommended. Additionally, MSP is coordinating with researchers to apply egg-oiling techniques on nests that are accessible. In 2020, this technique resulted in only one raven pair successfully fledging young however, in 2021, nesting timing and inaccessibility precluded using this technique. In 2022 and 2023 the oiling technique resulted in no successful nesting on Mojave Solar Project. The technique is being used on MSP as part of a larger regional effort to reduce raven nesting success and predation on desert tortoise.

Appendix A
Raven Nest Monitoring Data Sheets

NEST MONITORING DATA SHEET - MOJAVE SOLAR PROJECT

Species: Common Raven Nest ID*: 01-A-CORA

Project Location*: Alpha PB Coordinates (UTM): 35.013849
-117.329683

Discovery Date (mo/day/yr): _____

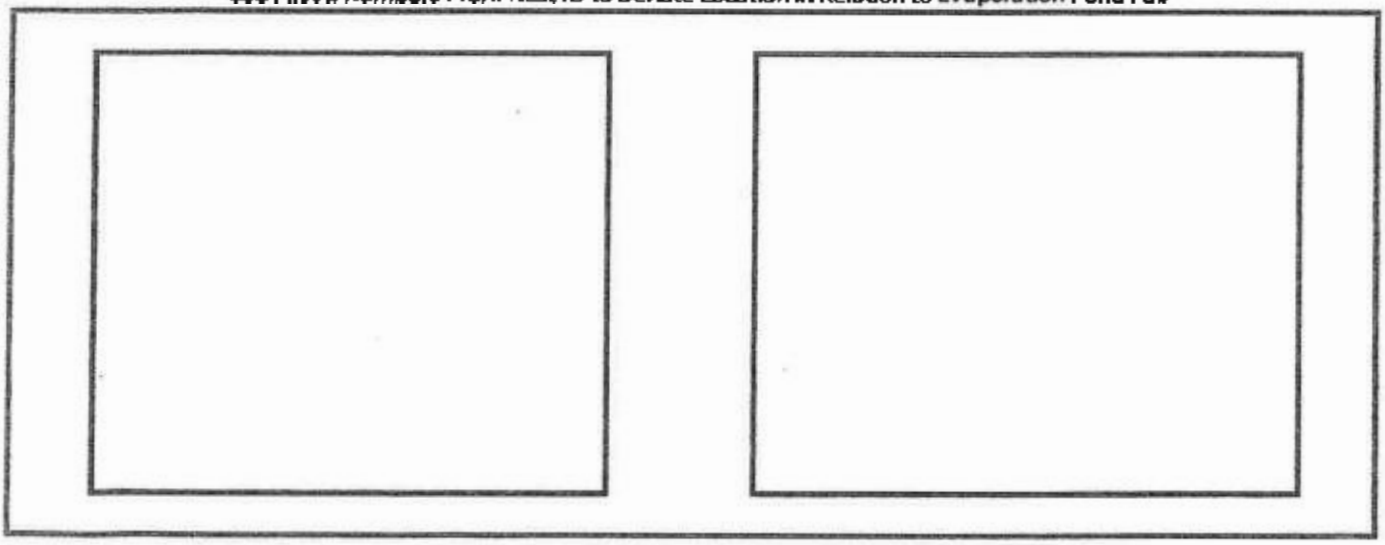
Date	Observer	Nest Location			Active					Inactive/Outcome			
		Ground	Structure	Vegetation	# Eggs	# Nestlings	# Fledglings	# Adults	Adult Incubating	Abandoned	Depredated	Fledged	Unknown
3.2.23	S. Rowe		X		—	—	—	—	—				
3.30.23	S. Rowe + T. Shields				Ø	—	—	—	—				
4.5.23	S. Rowe				1	Ø	Ø	2	✓				
4.26.23	S. Rowe				6	Ø	Ø	1	✓				
5.20.23	SR				6	Ø	Ø	1	✓				
6.22.23	SR				Ø	Ø	Ø	Ø		?	?		✓

*Nest ID: "Unique Sequential Number - A or B - Species Code" eg. 01-A-AMAV

*Project Location: Alpha Ponds, Beta Ponds, Alpha Power Block, Beta Power Block, Alpha West SCA, Alpha East SCA, Beta West SCA, Beta East SCA

Comments LINED COMPLETE, ADULTS PRESENT 3/30.

Use First 2 Numbers From Nest ID to Denote Location in Relation to Evaporation Pond Pair



NEST MONITORING DATA SHEET - MOJAVE SOLAR PROJECT

Species: COMMON RAVEN Nest ID*: 02-B-CORA

Project Location*: BETA EXPANSION VESSEL Coordinates (UTM): 35.003702
-117.303643

Discovery Date (mo/day/yr): _____

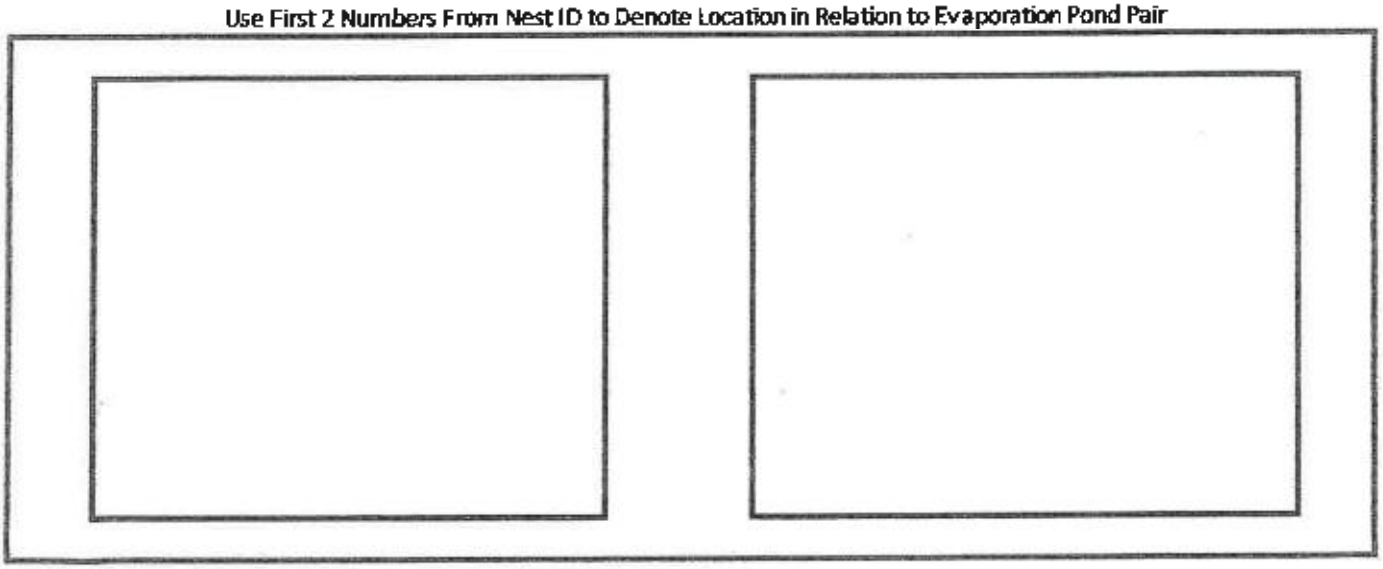
Date	Observer	Nest Location			Active					Inactive/Outcome			
		Ground	Structure	Vegetation	# Eggs	# Nestlings	# Fledglings	# Adults	Adult Incubating	Abandoned	Depredated	Fledged	Unknown
3-2-23	S. ROWE		X		?	NOT SURE IF ACTIVE							
3-30-23	S.R + T. SHIELDS				2	3	CHECKED W/DRONE						
4-5	S. ROWE				?	?		1		ADULT AT NEST			
5-20	S. ROWE					?				NO ACTIVITY			

*Nest ID: "Unique Sequential Number - A or B - Species Code" eg. 01-A-AMAV

*Project Location: Alpha Ponds, Beta Ponds, Alpha Power Block, Beta Power Block, Alpha West SCA, Alpha East SCA, Beta West SCA, Beta East SCA

Comments _____

Use First 2 Numbers From Nest ID to Denote Location in Relation to Evaporation Pond Pair



NEST MONITORING DATA SHEET - MOJAVE SOLAR PROJECT

Species: COMMON RAVEN Nest ID*: 03-B-CORA

Project Location*: BETA WASH Coordinates (UTM): 35.006221
-117.312235

Discovery Date (mo/day/yr): 4·27·23

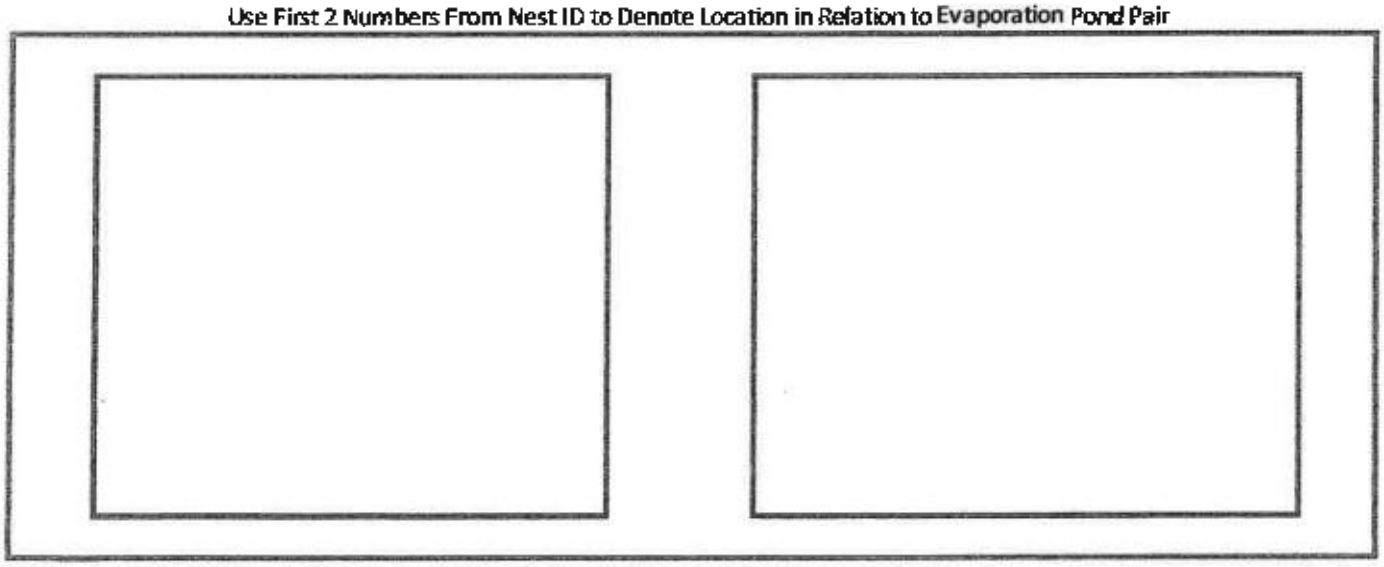
Date	Observer	Nest Location			Active					Inactive/Outcome			
		Ground	Structure	Vegetation	# Eggs	# Nestlings	# Fledglings	# Adults	Adult Incubating	Abandoned	Depredated	Fledged	Unknown
4·27·23	S. ROWE		X		3	—	—	1	✓				
5·3·23	S. ROWE		X		5	—	—	1	✓				
5·20·23	S. ROWE		L		4	—	—	1	✓				
5·12	T. SHIELDS		L		5	—	—	1	✓	TREATED EGGS.			
6·14	SR				2	—	—	2	✓				
6·22	SR				2	—	—	1	✓				
7·12	SR				Ø	Ø	P	Ø		X			

*Nest ID: "Unique Sequential Number - A or B - Species Code" eg. 01-A-AMAV

*Project Location: Alpha Ponds, Beta Ponds, Alpha Power Block, Beta Power Block, Alpha West SCA, Alpha East SCA, Beta West SCA, Beta East SCA

Comments ON HTF CATWALK BTWN BETA 6 & 7

Use First 2 Numbers From Nest ID to Denote Location in Relation to Evaporation Pond Pair



NEST MONITORING DATA SHEET - MOJAVE SOLAR PROJECT

Species: Common Raven Nest ID*: 04-A-CORA

Project Location*: Alpha West Coordinates (UTM): 35.013138
-117.347425

Discovery Date (mo/day/yr): 5.20.23

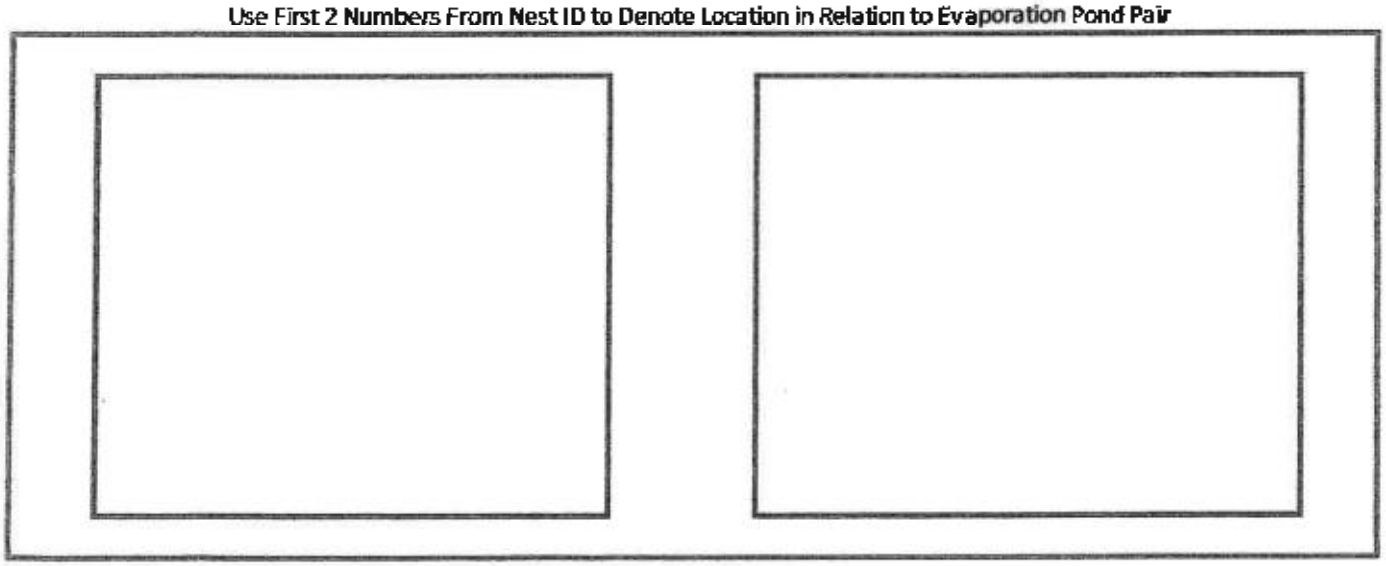
Date	Observer	Nest Location			Active					Inactive/Outcome			
		Ground	Structure	Vegetation	# Eggs	# Nestlings	# Fledglings	# Adults	Adult Incubating	Abandoned	Depredated	Fledged	Unknown
5.20.23	S. Rowe	X			4	✓	✓	2	✓				
6.14.23	SR				Ø	Ø	Ø	Ø	Ø	?	?		X

*Nest ID: "Unique Sequential Number - A or B - Species Code" eg. 01-A-AMAV

*Project Location: Alpha Ponds, Beta Ponds, Alpha Power Block, Beta Power Block, Alpha West SCA, Alpha East SCA, Beta West SCA, Beta East SCA

Comments ON GROUND AT BASE OF SUPPORT AW 4G

Use First 2 Numbers From Nest ID to Denote Location in Relation to Evaporation Pond Pair



CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code ROW23F0002
Quad code 3511713
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Athene cunicularia*

Common name: burrowing owl

Date of field work (mm-dd-yyyy): 01-13-2023

Comment about field work date(s): First observed on 1/13/23 then periodically throughout the year during routine site visits.

OBSERVER INFORMATION

Observer: Sean Rowe

Affiliation: Rowe Ecological Consulting, LLC

Address: PO Box 1018 , Weldon, CA 93283

Email: roweecological@gmail.com

Phone: (321) 863-5709

Other observers:

DETERMINATION

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other: Expert opinion

Identification explanation: Pair of owls using former kit fox burrow complex.

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort: Checked for presence of owls at site roughly monthly.

Total number of individuals: 2

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	unknown
2	0			

Age class comment:

Bird site use:

☐ Nesting ☐ Rookery ☐ Nesting colony ☑ Burrow site ☐ Lek

☐ Non-breeding (over-wintering) ☐ Communal roost ☐ Other

Site use description: Pair seen at active burrows throughout the year.

What was the observed behavior? Pair using burrows.

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description: Habitat immediately adjacent to project site is disturbed saltbush scrub.

Slope: Flat

Land owner/manager: Private - Mojave Solar Project.

Aspect:

Site condition + population viability: Fair

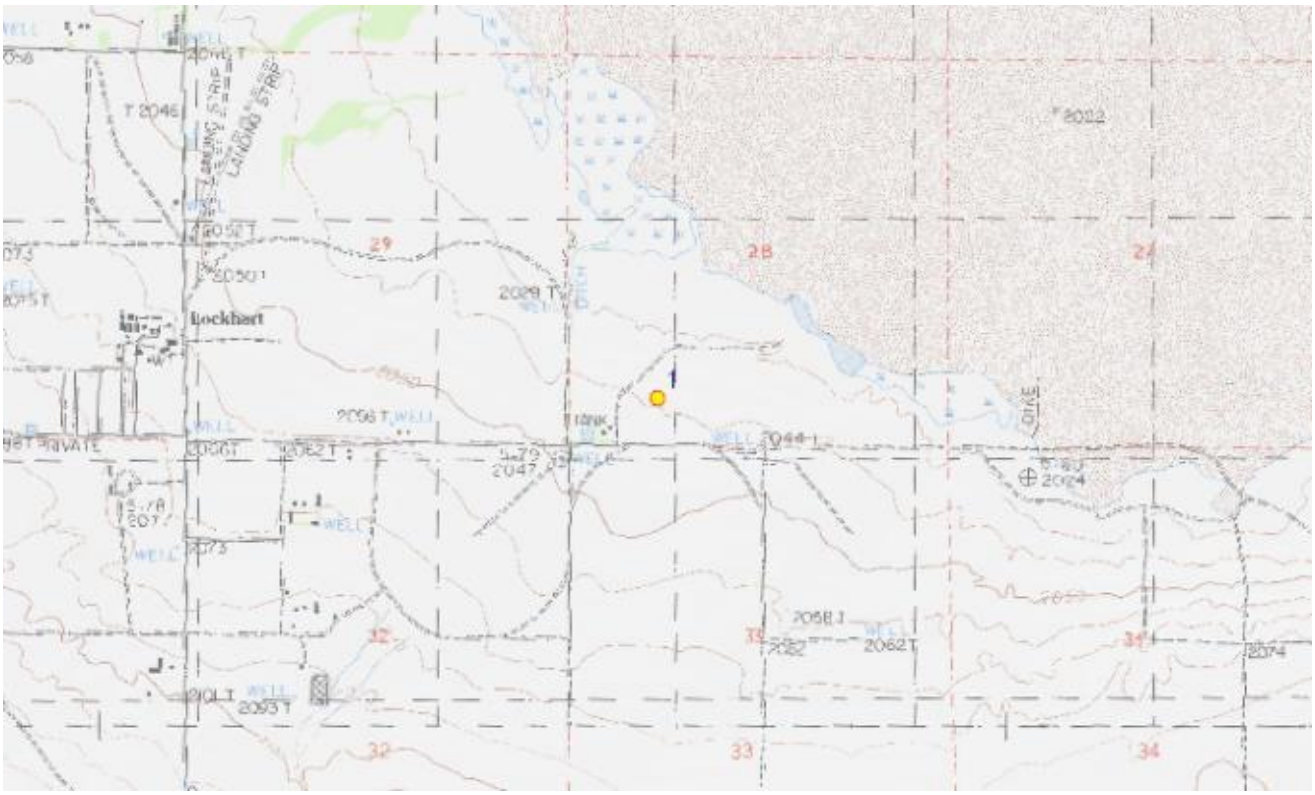
Immediate & surrounding land use: Mix of BLM & private undeveloped with a few residential parcels.

Visible disturbances: Dirt roads, trash, dogs.

Threats: Site is currently protected within the fenced boundaries of the Mojave Solar Project. No immediate threats.

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Lockhart	2038	35.01233	-117.30862	471842	3874455	11
1	**Public Land Survey**	**Feature Comment**						
	S T11N R04W 28	Pair using former kit fox burrows.						

The mapped feature is accurate within: 20 m

Source of mapped feature: Internet map application

Mapping notes:

Location/directions comments: Located inside Mojave Solar Project east of the Alpha East solar field. North of Lockhart Road near the SE corner of the project.

Attachment(s):

Appendix N

HAZ-1

Hazardous Materials List

Mojave Solar LLC

42134 Harper Lake Road Phone: 760 308 0400
Hinkley, California 92347

Submitted Electronically

Subject: **09-AFC-5C**
Condition Number: **HAZ 2**
Description: **Hazardous Materials Business Plan, Emergency Response Plan and Process Safety Management Plan,**
Number: **HAZ2-11-00**

February 16,2024

Ashley Gutierrez, CPM
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814
Ashley.Gutierrez@energy.ca.gov

Ms. Gutierrez,

As required by the California Energy Commission and more specifically by Condition of Certification HAZ-2, attached please find the revised Hazardous Materials Business Plan (HMBP), Spill Prevention, Control, and Countermeasures (SPCC) Plan and Process Safety Management Plan (PSMP) for your review and approval. The approval from San Bernardino County Fire Departments included in the transmittal.

MSP is planning to introduce 11 new chemicals to the site for Boiler/Cooling Water Chemical Treatment and the RO membrane cleaning process due to switching chemical providers. These chemicals have similar properties to the current ones used for their respective applications but are marketed under different names and brand. These chemicals have been added to the chemical inventory through the CERS Website and have been approved.

Additionally, we plan to replace the AFFF 3% with Chemgurd NFF-331 3x3 after repairing the Foam system. Although this change hasn't been reflected in the CERS chemical inventory yet, it will be added after your approval. None of these 12 chemicals are currently on-site.

Mojave Solar LLC

42134 Harper Lake Road Phone: 760 308 0400
Hinkley, California 92347

Here's the list of the 12 new chemicals:

Boiler: BL1260 (O2 Scavenger), BL1794 (Phosphate), BL8411 (Amine), PBL126 (O2 Scavenger)

Cooling Tower: CL5428 (To replace the GenGard GN8004 for cooling Tower), CT790 (To replace Flogard MS6009 for cooling Tower),

Water Treatment: RL 9009 (Antifouling), BL1260 (Sodium Bisulfate), RL2000 (Citric Acid), RL100 (Versene), RL3400 (CIP Basic), RL20232 (CIP Acid), P813E (Polymer or Floculant).

Fire Protection System: Chemgurd NFF-331 3x3

For your convenience, referenced below is the HAZ-2 CEC Compliance Condition:

HAZ-2: The project owner shall provide a Hazardous Materials Business Plan (HMBP), a Spill Prevention, Control, and Countermeasure Plan (SPCC), and a Process Safety Management Plan (PSMP) to the San Bernardino County Fire Department and the CPM for review. After receiving comments from the San Bernardino County Fire Department and the CPM, the project owner shall reflect all final recommendations in the final documents. Copies of the final HMBP, SPCC, and PSMP shall then be provided to the San Bernardino County Fire Department for information and to the CPM for approval. Verification: At least 60 days prior to receiving any hazardous material on the site for commissioning or operations, the project owner shall provide a copy of a final Hazardous Materials Business Plan, Spill Prevention, Control, and Countermeasure Plan, and a Process Safety Management Plan to the CPM for approval.

Should you have any questions or need any additional information, please do not hesitate to contact me.

Sincerely,

Mahnaz Ghamati

Mojave Solar LLC

42134 Harper Lake Road Phone: 760 308 0400
Hinkley, California 92347

Quality, Environmental & Compliance Manager
ASI Operations LLC
42134 Harper Lake Rd
Hinkley, CA 92347
Cell: (760)498-0549
mahnaz.ghamati@atlantica.com

Attachments:

- PP-O&M-MJV-030 Hazardous Material Business Plan, Rev 07
- PP-O&M-MJV-006 Spill Prevention, Control, and Countermeasures (SPCC) Plan, Rev 6
- SP-OM-MJV-087 Process Safety Management (PSM) Plan, Rev 7
- New chemicals SDSs
- San Bernardino County approval included.

Mojave

Mojave Solar LLC

Atlantica
Sustainable Infrastructure

Emergency Plan. Hazardous Material Business Plan (HMBP) HAZ-2, Rev7

Operation and Maintenance Plan
PP-O&M-MJV-030

Revision	Date	Reason for Revision
01	06/17/2016	Initial Release (from AEPC document) Update Contact Information for Operations, Update SDS information and material list, other updates applicable to operations
02	06/16/2017	Contact information updated. New facility phone numbers. Plan name changed on the header. (JMBR)
03	11/06/2018	Chemical list updated. Contact information updated. New facility phone numbers (JMBR). Document's internal code changed.
04	02/03/2020	Update to ASI Corporate fonts and Logos. MEL
04	02/19/2020	General review. Spill section (5.4 and 5.5) updated.
05	08/19/2021	Contact information and template update.
06	01/23/2023	Chemical inventory updated
07	01/17/2024	Chemical inventory updated

Produced by:	Department	Date
Jose Manuel Bravo Romero	Q&E Compliance	06/17/2016
Mahnaz Ghamati	Q&E Compliance	01/17/2024

Approved by:	Department	Date
David Rosas	Plant Manager	01/17/2024

Contents

1 Objective

The primary purpose of this plan is to provide readily available information regarding the location, type, and health risks associated with hazardous materials at the Mojave Solar Project. Each business in San Bernardino County that handles, uses, generates or stores hazardous materials is required to comply with State and Federal community right to know laws, and to submit a Hazardous Materials Business Plan (HMBP). The requirement for a HMBP is also contained in Condition of Certification HAZ-2 of the California Energy Commission Permit issued to the Mojave Solar Project (09-AFC-5C):

- **HAZ2** the project owner shall provide a Hazardous Materials Business Plan (HMBP), a Spill Prevention, Control, and Countermeasure Plan (SPCC), and a Process Safety Management Plan (PSMP) to the San Bernardino County Fire Department and the CPM for review. After receiving comments from the San Bernardino County Fire Department and the CPM, the project owner shall reflect all final recommendations in the final documents. Copies of the final HMBP, SPCC, and PSMP shall then be provided to the San Bernardino County Fire Department for information and to the CPM for approval.
- **Verification:** At least 60 days prior to receiving any hazardous material on site for commissioning or operations, the project owner shall provide a copy of a final Hazardous Materials Business Plan, Spill Prevention, Control, Counter measure Plan and a Process Safety Management Plan to the CPM for approval

The Hazardous Materials Division of the San Bernardino County Fire Department is the Administering Agency and the Certified Unified Program Agency (CUPA) for San Bernardino County with responsibility for regulating hazardous materials handlers, hazardous waste generators, underground storage tank facilities, above ground storage tanks, and stationary sources handling regulated substances

1.1 Project Location

Project Name:	Mojave Solar Project
Project Address:	42134 Harper Lake Road
City, State:	Hinkley, CA
County:	San Bernardino

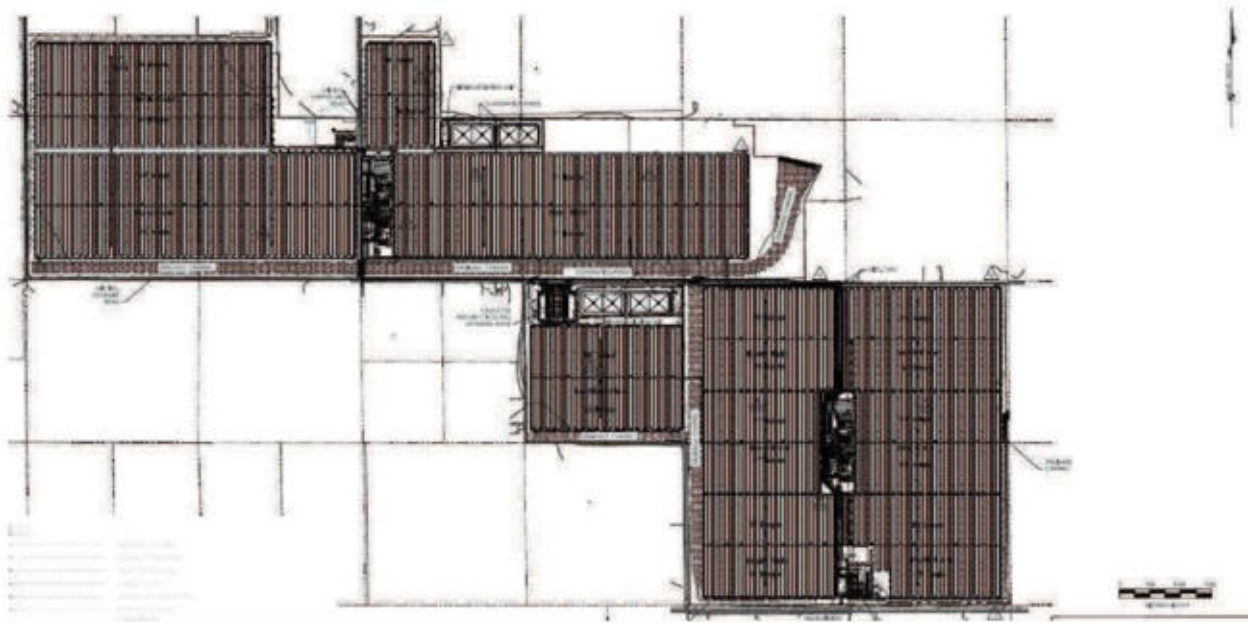


Figure 1: Site Layout Map

1.2 Key Contacts

Primary Site Contact: David Rosas, Plant Manager, (480) 286-6070

Project Owner's Representative: Eduardo Martinez, Asset Manager, (442) 285-8999

EHS Responsible Parties:

Mahnaz Ghamati, Quality and Environmental Compliance Manager**,** (760) 498-0549

Brandon Barnes, H&S Site Manager, (442) 285-5581

Alpha Control Room, 760-308-0400

2 Definitions

Hazardous Materials - means any chemical, substance or material regulated or governed by any Applicable Permit or Applicable Law, or any substance, emission or material now or hereafter deemed by any Governmental Authority to be a "regulated substance," "hazardous material," "hazardous waste," "hazardous constituent," "hazardous substance," "toxic substance," "radioactive substance" or "pesticide."

MSP – Mojave Solar Project

MSLLC – Mojave Solar LLC

ASIO – ASI Operations, the operations and maintenance organization for MSP

SDS Safety Data Sheet

CEC – California Energy Commission

3 Development

3.1 General Facility Information

Mojave Solar LLC is a wholly owned subsidiary of Atlantica Sustainable Infrastructure, formerly Atlantica Yield. The project uses established parabolic trough solar thermal technology to produce electrical power using a steam turbine generator fed from a solar steam generator. The solar steam generator receives heated heat transfer fluid (HTF) from solar thermal equipment comprised of arrays of parabolic mirrors that collect energy from the sun. The California Energy Commission (CEC) has exclusive jurisdiction to license this project. The Mojave Solar site occupies a 1,765-acre site in an unincorporated area of San Bernardino County near the community of Hinkley, California. The project site is accessed by Harper Lake Road, which is located approximately 20 miles west of Barstow along the Highway 58 corridor. The project site is approximately six miles north of where Harper Lake Road intersects with Highway 58.

The project has a combined gross electric output of 280 MW from twin, independently operable solar fields. Each field feeds a 140 MW power island. One site, known as the Alpha site, is in the northwest portion of the project site and occupies approximately 884 acres. The Beta site is in the southwest portion of the project site and occupies approximately 800 acres. The Alpha and Beta sites will share the remaining area of the project site for activities that include drainage improvements. The collector fields are comprised of single-axis-tracking parabolic trough solar collectors. These collectors are arranged to form many parallel rows aligned on a north-south axis. Each solar collector has a linear, parabolic-shaped reflector that focuses the sun's radiation on a specially designed linear receiver known as a heat collection element (HCE). The collectors track the sun from east to west to ensure that the maximum amount of the sun's radiation is continuously focused on the HCE. The HTF is heated to approximately 740°F as it circulates through the HCEs and returns to a series of heat exchangers where the fluid is used to generate steam in the solar steam generator system at the power island, thereby providing steam to the steam turbine generator.

The project will use a wet cooling tower for power plant cooling. Water for cooling and other plant purposes will come from groundwater obtained from onsite wells, using adjudicated water rights owned by MSLLC. A single treatment facility for each pair of wells treats the groundwater to meet potable standards for employee use. A septic system and onsite leach field is used to dispose of sanitary wastewater. The sun will provide 100 percent. of the power supplied to the project through solar thermal collectors. No supplementary fossil-based energy source such as natural gas is proposed for electrical power production.

Electric freeze-protection heaters supply steam to HTF heat exchangers as needed during offline hours to keep the HTF in a liquid state when ambient temperatures fall below its freezing point of 54° F. Each power island has a diesel engine-driven firewater pump for fire protection and a diesel engine-driven backup generator for power plant essentials. The Mojave Solar electrical transmission lines interconnect with the Southern California Edison (SCE) 220-kV Kramer-Coolwater #1 transmission line, which is located adjacent to the southern border of the site. SCE constructed the new Sandlot Substation and associated facilities (including fiber optic cable routes located outside the site), to interconnect the project to the Kramer–Coolwater 220-kV line.

3.2 General Requirements

- Operations and maintenance personnel must report any spill immediately as stated in the spill report form number P-IMS-003 Incident Report Form and follow Q&E department directions. All operations and maintenance staff are responsible for identifying all hazardous material and waste that can possibly be used or produced during operations and maintenance activities. Operations and maintenance personnel have the appropriate training and are aware of project procedures and requirements in order to perform their work.
- Any subcontractor is responsible for identifying all hazardous material and waste that can possibly be used or produced during service provided at the project site.
- Subcontractors that may be expected to create or could accidentally create a material that could be classified to be hazardous waste shall provide ASIO/MSLLC a copy of their EPA Disposal number (or equivalent).
- Safety Data Sheets (SDS) supplied by the manufacturers, suppliers, contractors, subcontractors, and/or property owner will be the principal source of health hazard information.
- SDS information must be provided by all contractors and suppliers.

- All containers must be appropriately labeled, identifying the material(s), their potential hazard(s), and any personal protective equipment requirements.
- When personnel are working with chemicals, they shall know the following:

    1. Methods and observations that may be used to detect and identify chemicals, such as odor, visual appearance, etc.
    2. The potential health and environmental hazards associated with the chemicals they use.
    3. The location of the applicable SDS information and the format by which they are maintained.
    4. Methods for protection against chemical exposure

- Workers should always review the SDS before working with a new or unknown product.
- Workers should never handle harmful or work near harmful, toxic materials, flammable liquids, or gases until they have been instructed in the safe handling and use of said materials.
- Each Subcontractor is responsible for preparing a plan to control such hazards including compliance and observance to the state and/or federal OSHA Hazard Communication standards. The plan shall be prepared by a competent employee and periodically reviewed for change implementation. For more information refer to the Operations Waste Management Plan and Emergency Response Plan.
- Hazardous materials (or any other materials) **must not** be discharged into sewer systems. For additional information regarding this matter, contact the ASIO safety representative for the proper storage and drainage procedures. Water discharge guidelines will be enclosed within the local permit for the project. In the event of a spill, the subcontractor shall follow appropriate procedures and protocol for spill response and notify the project HS and Environmental representatives. After incident, MSP's site EHS representatives shall follow up with the details regarding level of spill response and appropriate reporting procedures to governmental agencies (reference Emergency Plan, Emergency Response Plan, Incident Investigation, and Reporting Accidents and Injuries and the SPCC plan). ASIO/MSLLC will ensure that subcontractors have the appropriate training and are aware of project procedures and requirements in order to perform their work.

- Outside Storage Lockers built as a separate building set apart from the main facility are acceptable. These lockers must be constructed of material that will be separated from any ignition source and include signage with conspicuous lettering, "FLAMMABLE – Keep Fire Away".
- All hazardous waste or waste which could be considered hazardous waste, as determined by the methodology and definitions from applicable environmental regulators shall be stored and collected in special areas and properly disposed of by contractor and subcontractors. ASIO/MSLLC will supervise all hazardous waste storage and disposal (if any).
- ASIO/MSLLC will perform inspections to ensure materials are being stored according to Applicable Laws.
- ASIO/MSLLC will perform inspections and require from subcontractors that produce and dispose of hazardous waste all information pertinent regarding storing, transportation and the facility where waste will be send to.
- No waste haulers, disposers, recyclers or scavengers shall be allowed on the site without the permission of ASIO/MSLLC.
- No waste may be removed from the site by any person without the authorization of ASIO/MSLLC. No waste may be brought onto the site and disposed of.

3.3 Transportation, Storage and Handling

All materials contained on-site will be stored in appropriate containers protected from environmental conditions, including rain, wind, and direct heat and physical hazards such as vehicle traffic and sources of heat and impact. Additionally, hazardous material storage and management will be in accordance with requirements set forth by the San Bernardino County Fire department (SBCFD), California Energy Commission, DTSC, and CUPA for storage and handling of hazardous materials. Further, site activities would occur according to Cal-OSHA regulatory requirements; therefore, it is not anticipated that the operation of this project will release hazardous emissions generally, it was not foreseen that operation of the project would result in the handling of hazardous or acutely hazardous materials, substances or waste in large quantities. However, if in Large Quantity Generator status, as defined by the U.S. EPA, the requirements that apply to this status will be followed.

The Community Right-to-Know (EPCRA) concerns the environmental and safety hazards posed by the storage and handling of toxic chemicals. Its provisions help increase the public's knowledge and access to information on chemicals at the facilities, their uses, and releases into the environment.

ASIO/MSLLC will not permit any of its subcontractors to directly or indirectly, manufacture, storage, transmission or presence of any hazardous materials on the site, and the release, discharge or other disposal of any hazardous materials on the site, in each case except in accordance with Applicable Law and as required for the performance of the work.

Any hazardous material transportation will be done according to Hazardous Materials Transportation Act (HMTA) that has the objectives to provide adequate protection against the risk to life property inherent in the transportation of hazardous material by improving regulatory and enforcement authority of the Secretary of Transportation. The Safety Management Plan, submitted and approved in accordance with CEC Permit COC HAZ-3, also addresses delivery and handling of liquid hazardous materials. Additionally, TRANS-5 requires that the project owner shall not allow hazardous materials deliveries during non-daylight periods to enhance safety at the rail crossing.

3.4 Actions in response to spills

3.4.1 Spills of HTF

I. In Containment areas (retention basins and secondary containments):

If it is possible, the HTF spill will be collected using a pump or other system and put into adequate containers for liquid substances (metal drums, FIBCs, etc.).

If it is not possible to collect the HTF spill will be cleaned up using absorbents (absorbent blankets, granular mineral absorbent or other absorption system).

If the collected HTF is reusable (it can be returned to the system), the containers used will be adequately labelled. It will be identified as HTF to be reused and, if it is not put into the storage tank immediately, it will be stored at the place designated for this type of reused substances (loading bay, for example) in closed containers.

Once the fluid has been removed, any remaining spilt HTF, which it is impossible to recover will be removed by means of the use of absorbents (absorbent blankets, granular mineral absorbent or other absorption system), eliminating all the remains of HTF.

The waste generated (contaminated absorbents, contaminated HTF or others) will be stored in adequate containers for appropriate management (metal drums, bulk bags), correctly identified by means of labels, and, if necessary, placed on pallets with absorbent blankets in order to ensure safe transfer which avoids contamination during the transfer or storage. The container will be transferred to the plant's waste store.

The affected area will be clear up and cleaned with concentrated cleaning liquid if necessary.

II. In Impermeable areas which are not contained

In the case of spills in impermeable areas which are not contained, the greatest priority is to contain and cut off the spill of HTF by means of retention dykes, tanks and/or barriers formed by absorbents, in order to prevent, insofar as possible, the spill from spreading to areas which are permeable to HTF or contaminating rain or process water systems.

Once the spill has been contained, absorbent will be spread over the affected area. It will be left to act and then removed and put into adequate containers for contaminated absorbents, identified with the corresponding label, which will then be transported to the plant's waste store.

The affected area will be clear up and cleaned with concentrated cleaning liquid if necessary.

III. Permeable areas

In the case of a spill in an area which is not contained, and which is permeable to HTF, the spill must be addressed as quickly as possible by means of barriers of soil/absorbents, so it cannot affect rainwater retention pond/evaporation ponds or gutter and does not contaminate a larger area.

- For spills which have affected a small area:

  The spill can be treated using appropriate manual means and spades. The containers used (bulk bags, drums) will be adequate to contain the waste, they will be perfectly identified by means of the corresponding waste label, and they will be removed to the corresponding waste store.

- For spills which have affected a large area:

  The main priority is to prevent the spill from affecting rainwater systems, for which all the necessary physical barriers will be used, such as absorbent barriers (soil, sepiolite, etc.), dykes, the placement of pipe shut-off devices or by closing compartments of the solar field. Depending on the size of the affected surface area, mechanical or manual means will be used to clean up the spill. If there are accumulations of HTF or contaminated water, they will be sucked up using bilge pumps (if possible) and/or absorbents until all liquid remains have been removed from the affected soil, before putting the soil into containers.

In the case of plants which have authorized facilities for the bio-remediation of soil or water contaminated with HTF, these substances will be transferred to those facilities for treatment and decontamination

3.4.2 Spills of hazardous substances. Scenario with acids or alkalis.

Whenever there is a spillage of acid (Sulfuric, hydrochloric or others) or alkalis (soda or other alkali substances), it must be dealt with rapidly, effectively and appropriately in order to neutralize it and adequately manage the waste generated. Spills of strong acids and alkalis must be treated as rapidly as possible because both direct contact and the vapors they may generate can cause harm to people, installations and equipment.

The neutralization and cleaning work must be carried out using adequate protective equipment (face mask with breathing protection for organic vapors, coverall, chemical protection boots and gloves).

To coordinate the management of a spill of acid, the following sequence of actions will be carried out:

1. All existing sources of ignition will be eliminated and the personnel will get ready to intervene in the case of a fire. Sulfuric acid reacts violently with alcohol and water, releasing heat, and it also reacts violently or explosively with organic matter, fuels, strong alkalis (sodium hydroxide, potassium hydroxide, etc.), aluminum, peroxides, permanganates, nitrates, chlorine, bromine and fluoride. It also reacts with the majority of metals, producing gaseous hydrogen which is flammable and explosive.
2. The spill will be neutralized with sodium bicarbonate, Soda Ash or another neutralizing agent approved by the authorities, adding it slowly. Never use water or any wet product.
3. Add bicarbonate, if this is the agent used, until the fizzing stops.
4. The spill must never be allowed to reach the drain system. If necessary, the spill must be contained with sand or any other inert material.
5. Once the acid has been neutralized, if possible, the spill will be channeled to the effluent treatment plant or wastewater treatment system of the plant, having first received the go-ahead from the plant's chemical expert, by means of bilge pumps or by opening valves. The parameters of the spill will be monitored (pH, conductivity or another established in the corresponding legal permit) to verify that there is no deviation from any of them.

If it is not possible to channel the spill or treat it in the effluent treatment plant or wastewater management system of the plant, it will be stored in order to be managed as established by the most updated regulation

3.4.3 Spills of hazardous substances. Scenario with other chemical products.

In the case of a spill of a chemical product other than an acid or an alkali, the sequence of actions will be as follows:

1. The designated personnel will do everything possible to detain or contain the leak, using the available environmental protection means. Before going into the area of the accident, you must put on adequate protective equipment (gas-tight safety goggles, mask with breathing protection for organic vapors, safety boots, coverall and chemical protection gloves).

2. If necessary, the safety data sheet of the spilt product must be consulted; that data sheet must be in a place which is accessible for all the personnel.

3. Once the spill has been halted and contained, the affected area must be cordoned off and access by unauthorized personnel restricted.

4. The spill must be contained as quickly as possible, to avoid its dispersion and so it affects the smallest possible surface area. The spill will be treated by means of the application of absorbents (chemical absorbent blankets, sepiolite or similar). In the case of a risk of the spill getting into the rainwater system, it must be contained with absorbent material, and the necessary maneuvers must be carried out (closing sinks, construction of dykes, placement of pipe shut-off devices) to avoid contamination of those waters.

5. Having first received the go-ahead from the plant's chemical officer, and if it is possible, the spill will be diluted with water and directed to the water treatment plant or wastewater treatment system of the plant, where the applicable chemical parameters of the spill will be monitored prior to the final disposal of it. If the volume of the spill is very large, the spill will be removed by means of aspiration and the area will then be cleaned with sepiolite, chemical absorbents or water. Pertinent authority’s communication will follow.

6. If waste is generated, it will be put into adequate containers, correctly identified, and subsequently transferred to the plant's waste staging area for transportation and disposal.

3.4.4 Spills of hazardous substances. Scenario with diesel or mineral

In the case of a spill of diesel or mineral oil, the procedure will be as follows:

1. The designated personnel will do everything possible to halt or contain the leak, using the available environmental protection means. Before going into the area of the

accident, you must assess the potential risk and put on adequate protective equipment (gas-tight safety goggles, safety boots, coverall and protective gloves).

2. Remove any source of ignition from the area.

3. The spill must be contained as quickly as possible, to avoid its dispersion and so it affects the smallest possible surface area. In the case of a risk of the spill getting into the drainage system, it must be contained with absorbent material, and the necessary maneuvers must be carried out (closing sink valves) to avoid contamination of those systems.

4. If possible, the spill will be removed through aspiration and the area will be cleaned with chemical absorbents (absorbents for oils will be used only in the case of a spill of oils or hydrocarbons). If this is not possible, the spill will be treated by means of the application of absorbents and mechanically. The waste generated will be put into adequate containers, correctly identified, and transferred to the hazardous waste staging area.

3.4.5 Action in response to emission into the atmosphere

If there is a fire and/or explosion with any gas or HTF, the emergency plan or equivalent will be activated, and its directions will be followed.

3.5 Prevention and Containment Measures

3.5.1 Preventing measures

Environmental training: All personnel, both in-house and subcontracted, will receive environmental training and awareness-program. This training will be given by the personnel of the solar plant's Environmental Department whenever this is considered necessary, in order to ensure the implementation and monitoring of the Environmental Management System.

Drills: An annual program of drills including health, safety and the environment will be drawn up. In the carrying-out of these drills, the response capacity to an environmental accident will be evaluated and the strengths and weaknesses in decision-making and the execution of actions carried out during the emergency situation will be identified.

3.5.2 Containment measures

If there are portable spill-kits at the plant, these will be used to contain chemical products, oils or HTF in the case of spills

Likewise, there are environmental emergency points distributed around the different plants for use in the case of any accident.

3.5.2.1 Spill Kit Location

The Spill Kits are distributed around the plant, accessible to plant personnel for first spills responders.

These environmental emergency kits are at places near the areas with risk of spillage or leak. Therefore, at least, they must be located near the HTF area, the chemical products store, the hazardous waste store, chemical dosing and the turbine system.

The containers must be identified and the materials they must contain, at the very least, will be:

- Absorbent blankets.
- Granular industrial absorbent.
- Bicarbonate or other pH neutralization system at those points close to chemical dosing or stores where there are acids or alkalis.

In addition, there will be available a specific emergency kit at the plant for any serious or very serious emergency situations which could occur in the solar field or the power block. At least, blankets, granular absorbent material, portable tanks or buckets and metal drums must be available.

3.6 Disposal of Hazardous Waste

An "EPA disposal Identification (ID) number" must be provided by any producer and disposer of any kind of hazardous materials classified according to California laws.

The disposal of hazardous waste (e.g. used oil, gasoline spill, motor oil spill, etc.) will be done according to DTSC regulations which establish rules governing the use of hazardous materials and the management of hazardous waste. Applicable state and local laws include the following:

- Public Safety/Fire Regulations/Building Codes
- Hazardous Waste Control Law
- Hazardous Substances Information and Training Act

3.7 Notice of Hazardous Materials

If discovered, encountered or is notified of any spill or release of any Hazardous Materials at the Site:

- Quality and Environmental Compliance Manager and H&S Manager shall be notified immediately.
- Notification to CA Emergency Management Agency, CEC shall be provided.
- Site Owner (Mojave Solar LLC) shall be notified upon receiving knowledge of release.

- Quality and Environmental Compliance Manager / H&S Manager shall restrict access to the area containing such hazardous materials as required by Applicable Law or Applicable Permits.
- If applicable, the Subcontractor responsible from bringing such hazardous materials onto the Site or generated such material is responsible for remediating such hazardous materials under this document and immediately notifying the Quality and Environmental Compliance Manager/designee and H&S Manager/designee. The responsible party shall promptly contain and remediate the material in accordance with all Applicable Laws and Applicable Permits (to the extent the Applicable Permits relate to the Work).

3.7.1 Local Emergency Contacts

In the event of a release or threatened release of a hazardous material the following site personnel and agencies shall be notified:

Name / Emergency Response	**Phone Numbers**
Project Q&E Manager	760-498-0549
Project HS Manager	442- 285-5581
Plant Manager	480- 286-6070
Alpha Control Room	760-308-0400
Local Emergency Response Agencies	9-1-1
Hazardous Materials Division	1-800-33-TOXIC or (909) 386- 8425
California State Warning Center (CSWC)/CAL OES.	(800) 852-7550 or (916) 262-1621
National Response Center	(800) 424-8802
Poison Control Center	(800) 222-1222

Local Unified Program Agency (UPA)	(909) 386-8425

4 Applicable Documentation

- California Energy Commission (CEC) Commission Decision for the Abengoa Mojave Solar Project (09-AFC-5)
- Spill Prevention, Countermeasure and Control Plan (SPCC) for MSP (part of CEC Condition of Certification HAZ-2).
- Operations Waste Management Plan for MSP (CEC Conditions of Certification WASTE-9, WASTE-11, Soil&Water-8)
- CEC Condition of Certification Worker Safety-2, including the Hazardous Materials Management Program and Emergency Response Plan for MSP
- Safety Management Plan for MSP (COC HAZ-3)
- Spill Report Form Number G78-16-1600-EN-FOR-000006
- OSHA 29 CFR 1926 and 1910
- California Department of Toxic Substances Control Regulations, DTSC: California Health and Safety Code (HSC), Division 20, Chapter 6.5, Hazardous Waste Control Law
- California Code of Regulations List of Hazardous Wastes and Materials Division 4.5 Title 22 CCR
- EPA 40 CFR 260-299 Managing Hazardous Waste
- EPA CERCLA
- OSHA 29 CFR Part 110.119
- Emergency Planning Community Right-to-Know Act of 1986 (42 USC 11001 et seq.)
- EPA 40 CFR 355 List of Extremely Hazardous Substances
- SARA Title III California Accidental Release Prevention (CalARP)
- Hazardous Materials Transportation Act (HMTA)
- SWRCB – State Water Resources Control Board
- Cal-EPA
- Cal-OSHA

- California Department of Toxic Substances Control (DTSC)
- Resource Conservation and Recovery Act passed by Congress in 1976
- ISO 9001:2008, Quality Management Systems-requirements
- ISO 14001: 2004, Environmental Management System-requirements
- OHSAS 18001:2007, Occupational Health and Safety and Assessment System
- California Health & Safety Code (CHSC), Division 20, Chapter 6.95
- California Code of Regulations (CCR), Title 19, Division 2
- Title 40, Code of Federal Regulations (CFR)
- California Energy Commission Decision – Hazardous Materials (HAZ 2)
- EPA (SARA, Title III)
- San Bernardino County CUPA

5 Scope of Application

This plan applies to the entire Mojave Solar Project site for plant operations

This plan will apply to all direct hire personnel of ASI Operations LLC, Owner, Contractors and Subcontractors performing work at the construction site or while working inside any subsidiary facilities or suppliers when delivering to the site. Describing the responsibilities of the different players involved in the activity or activities forming the object of the document.

6 Health, Safety and Environmental

All tasks described in this procedure must be implemented according with the specific safety directives and procedures existing in Atlantica Yield and following safety standards established on site where it performs works.

Likewise, hazards and preventive measures established in actual Workplace Hazard Assessment for the staff involved will be considered.

7 Tools and Records

Employee training records. These records are required to be retained for the life of the project and as specified by Cal-OSHA:

- SDS
- EPA Identification (ID) Number

8 Appendix

8.1 Annex 1

Hazardous material list (Excel file submitted through the local authority's website)

8.2 Annex 2

General Layout Map for the site and for the Power Blocks, Extinguisher location Map. Safety Shower Location Map. Evacuation Routes and Assembly Areas Map.

8.3 Annex 3

SDS Forms

8.1 Annex 1

Hazardous material list

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org: **Mojave Solar LLC**
Facility Name: **Mojave Solar LLC**
42134 Harper Lake Rd, Hinkley 92347

Chemical Location: **Alpha and Beta**

CERS ID: **10453255**
Facility ID: **FA0014607**
Status: **Draft**

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 3 - Flammable and Combustible Liquids Combustible Liquid, Class II	**Diesel Fuel** CAS No: 68476-34-6 Map: L003 and L004 Grid: Item 2 and 23	**Gallons** State: Liquid Type: Mixture	**12000** Storage Container: Aboveground Tank, Steel Drum Days on Site: 365	**4000**	7000 Pressure: Ambient Temperature: Ambient	Waste Code:	- Physical Flammable	Petroleum Hydrocarbons	100%		

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org: **Mojave Solar LLC**
Facility Name: **Mojave Solar LLC**
42134 Harper Lake Rd, Hinkley 92347

Chemical Location: **Alpha and Beta**

CERS ID: **10453255**
Facility ID: **FA0014607**
Status: **Draft**

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	Liquid hazardous waste CAS No: - Map: L010 Grid: Item 27-28E	**Gallons** State: Liquid Type: Waste	**110** Storage Container: Steel Drum, Can, Fiber Drum, Plastic Bottle or Jug, Tote Bin, Tank Wagon Days on Site: 365	**55**	Pressure: Ambient Temperature: Ambient	2000 Waste Code: 223		Spent chemicals, used hydraulic fluid, oil, and grease, effluent from oil water separator, used glycerin, oily water from the cooling tower	1%		

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org: **Mojave Solar LLC**
Facility Name: **Mojave Solar LLC**
42134 Harper Lake Rd, Hinkley 92347

Chemical Location: **Alpha and Beta Cooling tower Chemical dosing**

CERS ID: **10453255**
Facility ID: **FA0014607**
Status: **Draft**

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	BD 1500 CAS No: - Map: L003 and L004 Grid: Item 37A	**Gallons** State: Liquid Type: Mixture	500 Storage Container: Tank Inside Building Days on Site: 365	200	180 Pressure: Temperature:	Waste Code:					
DOT: 9 - Misc. Hazardous Materials	**DCL 30** CAS No: 7631-90-5 Map: L003 and L004 Grid: Item 37A	**Gallons** State: Liquid Type: Mixture	500 Storage Container: Tank Inside Building Days on Site: 365	50	50 Pressure: Temperature:	Waste Code:		Sodium bisulfite	40%		
	GN8004 CAS No: - Map: L003 and L004 Grid: Item 37A	**Gallons** State: Liquid Type: Mixture	500 Storage Container: Tank Inside Building Days on Site: 365	200	180 Pressure: Temperature:	Waste Code:					
	MS6209 CAS No: 13598-37-3 Map: L003 and L004 Grid: Item 37A	**Gallons** State: Liquid Type: Mixture	500 Storage Container: Tank Inside Building Days on Site: 365	200	180 Pressure: Temperature:	Waste Code:		Zinc bis (dihydrogen phosphate) and Phosphoric acid	60%		
DOT: 9 - Misc. Hazardous Materials	**Sodium Hypochlorite** CAS No: 7681-52-9 Map: L003 and L004 Grid: F5, H9	**Gallons** State: Liquid Type: Mixture	2200 Storage Container: Tank Inside Building Days on Site: 365	1100	600 Pressure: Ambient Temperature: Ambient	Waste Code:		Sodium Hypochlorite	13%		

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org: **Mojave Solar LLC**
Facility Name: **Mojave Solar LLC**
42134 Harper Lake Rd, Hinkley 92347

Chemical Location: **Alpha and Beta liquid waste**

CERS ID: **10453255**
Facility ID: **FA0014607**
Status: **Draft**

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	Liquid hazardous waste CAS No: - Map: L003 and L004 Grid: North of item#6	**Pounds** State: Liquid Type: Waste	1200 Storage Container: Steel Drum, Can, Fiber Drum, Plastic Bottle or Jug, Tote Bin, Tank Wagon Days on Site: 365	528	Pressure: Ambient Temperature: Ambient	8000 Waste Code: 221		Spent chemicals, used hydraulic fluid, oil, and grease, effluent from oil water separator, used glycerin, oily water from the cooling tower	1%		
	Liquid hazardous waste CAS No: - Map: L003 and L004 Grid: Item#19	**Gallons** State: Liquid Type: Waste	600 Storage Container: Steel Drum, Can, Fiber Drum, Plastic Bottle or Jug, Tote Bin, Tank Wagon Days on Site: 365	275	Pressure: Ambient Temperature: Ambient	3600 Waste Code: 223		Spent chemicals, used hydraulic fluid, oil, and grease, effluent from oil water separator, used glycerin, oily water from the cooling tower	1%		
	Used Oil CAS No: - Map: L003 and L004 Grid: North of item#6	**Gallons** State: Liquid Type: Waste	1200 Storage Container: Steel Drum, Can, Fiber Drum, Plastic Bottle or Jug, Tote Bin, Tank Wagon Days on Site: 365	275	Pressure: Ambient Temperature: Ambient	8000 Waste Code: 221		Spent chemicals, used hydraulic fluid, oil, and grease, effluent from oil water separator, used glycerin, oily water from the cooling tower	1%		

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org: **Mojave Solar LLC**
Facility Name: **Mojave Solar LLC**
42134 Harper Lake Rd, Hinkley 92347

Chemical Location: **Alpha and Beta Plant**

CERS ID: **10453255**
Facility ID: **FA0014607**
Status: **Draft**

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
Combustible Liquid, Class III-B	**AFFF 3%** CAS No:	**Gallons** State: Liquid Type: Mixture	**1500** Storage Container: Tank Inside Building, Plastic/Non-metalic Drum Days on Site: 365	**350**	1000 Pressure: Temperature:	0 Waste Code: 341	- Physical Flammable - Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation	Water Propylene Glycol t-butyl ether magnesium sulfate proprietary hydrocarbon surfactant proprietary fluorosurfactant	90% 4% 2%		7732-18-5 57018-52-7 7487-88-9 proprietary proprietary
DOT: 2.2 - Nonflammable Gases	**Argon Gas** CAS No: 7440-37-1	**Cu. Feet** State: Gas Type: Pure	**10000** Storage Container: Cylinder	**336**	8000 Pressure: Temperature:	Waste Code:	- Health Hazard Not Otherwise Classified				
	Coolant, Antifreeze CAS No: 107-21-1	**Gallons** State: Liquid Type: Mixture	**15000** Storage Container: Plastic/Non-metalic Drum	**55**	8000 Pressure: Ambient Temperature: Ambient	Waste Code:	- Health Acute Toxicity - Health Respiratory Skin Sensitization	Ethanediol Diethylene Glycol	60% 3%		107-21-1 111-46-6
DOT: 6.1 - Toxic Substances Toxic	**Duraclear** CAS No:	**Gallons** State: Liquid Type: Mixture	**550** Storage Container: Steel Drum Days on Site: 365	**55**	165 Pressure: Ambient Temperature: Ambient	Waste Code:	- Physical Flammable	Hydrocarbon polymer Alkanes	50%		151006-58-5
DOT: 2.2 - Nonflammable Gases	**Sulfur Hexafluoride** CAS No: 2551-62-4	**Pounds** State: Gas Type: Pure	**500** Storage Container: Cylinder Days on Site: 365	**129**	260 Pressure: Ambient Temperature: Ambient	Waste Code:	- Health Hazard Not Otherwise Classified				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org: **Mojave Solar LLC**
Facility Name: **Mojave Solar LLC**
42134 Harper Lake Rd, Hinkley 92347

Chemical Location: **Alpha and Beta plants**

CERS ID: **10453255**
Facility ID: **FA0014607**
Status: **Draft**

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.1 - Flammable Gases Combustible Liquid, Class II	**Acetylene welding gas** CAS No: 74-86-2 Map: L003 and L004	**Cu. Feet** State: Gas Type: Mixture	**350** Storage Container: Cylinder Days on Site: 365	**70**	300 Pressure: > Ambient Temperature: Ambient	Waste Code:		Acetylene Gas	100%		
DOT: 2.2 - Nonflammable Gases Cryogen	**Argon, Liquid** CAS No: 7440-37-1 Map: L003 and L004	**Cu. Feet** State: Gas Type: Pure	**336** Storage Container: Cylinder Days on Site: 365		336 Pressure: Temperature:	Waste Code:					
	Carbohydrazide CAS No: 497-18-7 Map: L003 and L004	**Gallons** State: Liquid Type: Pure	**1200** Storage Container: Tote Bin Days on Site: 365		300 Pressure: Ambient Temperature: Ambient	Waste Code:					
DOT: 2.2 - Nonflammable Gases Cryogen	**Carbon Dioxide** CAS No: 124-38-9 Map: L003 and L004 Grid: SW of item#7	**Cu. Feet** State: Gas Type: Pure	**52000** Storage Container: Cylinder Days on Site: 365	**50**	480 Pressure: Ambient Temperature: Ambient	Waste Code:					
DOT: 3 - Flammable and Combustible Liquids	**Galvanizing Compound** CAS No: Map: L003 and L004	**Pounds** State: Solid Type: Mixture	**15** Storage Container: Steel Drum Days on Site: 365		5 Pressure: Ambient Temperature: Ambient	Waste Code:		Zinc hydrotreated light distillate Zinc Oxide Stoddaard Solvent Zeolite	100% 10% 10% 3% 1%		7440-66-6 64742-47-8 1314-13-2 8052-41-3 1318-02-1
DOT: 2.2 - Nonflammable Gases Oxidizing Gas, Gaseous	**Oxygen gas** CAS No: 7782-44-7 Map: L003 and L004	**Cu. Feet** State: Gas Type: Pure	**560** Storage Container: Cylinder Days on Site: 365	**140**	300 Pressure: Ambient Temperature: Ambient	Waste Code:		Oxygen Gas	100%		
	Propylene Glycol CAS No: 57-55-6 Map: L003 and L004	**Cu. Feet** State: Liquid Type: Mixture	**440** Storage Container: Plastic/Non-metalic Drum Days on Site: 365	**55**	440 Pressure: Ambient Temperature: Ambient	Waste Code:		Propylene Glycol	100%		57-55-6