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

B011908

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: FEBRUARY 2027

## OWNER OF OPERATOR (Co.#2349)

MP Mine Operations LLC
67750 Bailey Road
Mountain Pass, CA 92366

## EQUIPMENT LOCATION (Fac.#364)

Mountain Pass Mine
67750 Bailey Road
Mountain Pass, CA 92366

**Description:**
CHLOR ALKALI PROCESS, BRINE PURIFICATION / ELECTROLYSIS UNIT / CAUSTIC EVAPORATION consisting of:

### EQUIPMENT

| Capacity | Equipment Description |
|---|---|
| 75 | F80-P582 Decarbonation Acid Pump |
| 30 | F85-P357 Lean Brine Pump #2 |
| 75 | F85-P482 Brine Dechlorination Caustic Pump 1 |
| 0 | F80-TK276 Decarbonation Tank 23000 gallon |
| 75 | F85-P484 Brine Dechlorination Caustic Pump 2 |
| 75 | F85-P594 Acidification Pot Acid Pump |
| 0.5 | F85-P362 Hydrogen Peroxide Pump #1 |
| 75 | F80-P245 Saturator Feed Pump #1 |
| 0.5 | F85-P363 Hydrogen Peroxide Pump #2 |
| 0 | F85-TK338 Acidification Pot 210 gallon |
| 0 | F85-TK470 32% Caustic Feed Tank 18000 gallon |
| 75 | F80-P246 Saturator Feed Pump #2 |
| 15 | F85-P471 32% Caustic Feed Pump #1 |
| 0 | F85-TK345 Anolyte Drain Tank 1200 gallon |

Fee Schedule: 1 (d) Rating: 2912 bhp SIC: 1099 SCC: 30599999 Location/UTM(Km): 634E/3926N

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.

MP Mine Operations LLC
1700 S. Pavilion Center Drive, 8th Floor
Las Vegas, NV 89135

By: **COPY**
Eldon Heaston
Air Pollution Control Officer

| Capacity | Equipment Description |
|---|---|
| 15 | F85-P472 32% Caustic Feed Pump #2 |
| 0 | F80-CO123 TOC Removal Column A (Resin) 2600 gallon |
| 0 | F85-HX328 32% Caustic Cooler |
| 5 | F85-P346 Anolyte Drain Pump |
| 0 | F80-CO124 TOC Removal Column B (Carbon) 1000 gallon |
| 0 | F85-HX380 Chlorine Cooler 950 gallon |
| 0 | F85-FI385 Wet Chlorine Filter 5100 gallon |
| 30 | F85-P342 Anolyte Pump #1 |
| 0 | F80-HX126 TOC Regeneration Condenser |
| 0 | F85-HX330 Hydrogen Cooler |
| 0 | F80-ER802 First Effect Falling Film Evaporator |
| 30 | F85-P343 Anolyte Pump #2 |
| 0 | F80-TK128 TOC Regen Waste Tank 4500 gallon |
| 0 | F80-ER810 Second Effect Falling Film Evaporator |
| 0 | F80-ER818 Third Effect Falling Film Evaporator |
| 0 | F85-TK358 Dechlorination Tower 1500 gallon |
| 75 | F80-P130 TOC Regen Waste Pump |
| 0 | F80-ER838 Fourth Effect Falling Film Evaporator |
| 0 | F80-HX836 Preheater #3 |
| 0 | F85-HX352 Dechlorination Condenser |
| 0 | F80-TK110 Saturator 170000 gallon |
| 0 | F80-HX834 Preheater #2 |
| 0 | F80-HX832 Preheater #1 |
| 0 | F85-E354 Dechlorination Vacuum Ejector |
| 60 | F80-P113 Raw Brine Pump #1 |
| 0 | F80-HX828 Surface Condenser |
| 40 | F80-P806 Brine First Effect Transfer Pump #1 |
| 0 | F85-HX355 Dechlor Tower Ejector After Condenser |
| 60 | F80-P114 Raw Brine Pump #2 |
| 40 | F80-P808 Brine First Effect Transfer Pump #2 |
| 40 | F80-P814 Brine Second Effect Transfer Pump #1 |
| 75 | F85-P592 Chlorate Decomposition Tank Acid Pump |
| 0 | F80-HX263 Brine Cross Exchanger |
| 40 | F80-P816 Brine Second Effect Transfer Pump #2 |
| 40 | F80-P824 Brine Third Effect Transfer Pump #1 |
| 0 | F85-HX344 Chlorate Decomposition Heater |
| 0 | F80-HX268 Filtered Brine Heater |
| 40 | F80-P826 Brine Third Effect Transfer Pump #2 |
| 50 | F80-P842 Brine Fourth Effect Transfer Pump #1 |
| 0 | F85-RE370 Chlorate Decomposition Reactor 3800 gallon |
| 0 | F80-CO222 Heavy Metals IX Column 1 12000 gallon |
| 50 | F80-P844 Brine Fourth Effect Transfer Pump #2 |
| 15 | F80-P858 Vacuum Pump #1 |
| 0 | F85-TK350 Dechlorinated Brine Tank 4900 gallon |
| 0 | F80-CO224 Heavy Metals IX Column 2 12000 gallon |
| 15 | F80-P860 Vacuum Pump #2 |
| 0 | F80-TK868 LRVP Discharge Separator #1 |
| 0 | F80-TK870 LRVP Discharge Separator #2 |
| 40 | F80-P237 Brine IX Booster Pump #1 |
| 0 | F80-TK864 Condensate Collector - Process 210 gallon |

| Capacity | Equipment Description |
|---|---|
| 40 | F80-P854 Process Condensate Pump #1 |
| 40 | F80-P238 Brine IX Booster Pump #2 |
| 40 | F80-P856 Process Condensate Pump #2 |
| 0 | F80-TK866 Concentrate Tank |
| 75 | F80-P474 Primary Ca/Mg IX Feed Caustic Pump |
| 75 | F80-P846 Concentrate Discharge Pump #1 |
| 75 | F80-P848 Concentrate Discharge Pump #2 |
| 0 | F80-CO282 Primary Ca/Mg IX Column 1 12000 gallon |
| 0 | F80-TK862 Condensate Collector - Steam 66 gallon |
| 15 | F80-P850 Steam Condensate Pump #1 |
| 0 | F80-CO284 Primary Ca/Mg IX Column 2 12000 gallon |
| 10 | F80-P386 Lean Brine Purge Booster Pump #1 |
| 15 | F80-P852 Steam Condensate Pump #2 |
| 0 | F85-HX439 Caustic Evaporator Condenser |
| 10 | F80-P387 Lean Brine Purge Booster Pump #2 |
| 0 | F80-CO333 Hydrogen Peroxide Removal Column 1500 gallon |
| 0 | F85-TK421 Caustic 2nd Effect Separator 750 gallon |
| 0 | F85-ER420 Caustic 2nd Effect Evaporator |
| 0 | F80-TK264 Filtered Brine Tank 170000 gallon |
| 125 | F80-P265 Filtered Brine Pump #1 |
| 0 | F85-TK411 Caustic 1st Effect Separator 370 gallon |
| 0 | F85-ER410 Caustic 1st Effect Evaporator |
| 125 | F80-P266 Filtered Brine Pump #2 |
| 75 | F80-P584 Filtered Brine Acid Pump |
| 0 | F85-TK442 Caustic Evaporator Process Condensate Tank 290 gallon |
| 3 | F85-P415 Caustic Evaporator Steam Condensate Pump #1 |
| 0 | F80-FI250 Polishing Filter #1 |
| 0 | F80-FI252 Polishing Filter #2 |
| 3 | F85-P416 Caustic Evaporator Steam Condensate Pump #2 |
| 3 | F85-P423 Caustic 2nd Effect Discharge Pump #1 |
| 0 | F80-TK260 Precoat Mix Tank 4500 gallon |
| 75 | F80-P202 Body Feed Pump #1 |
| 3 | F85-P424 Caustic 2nd Effect Discharge Pump #2 |
| 0 | F85-HX455 Caustic Evaporator Vacuum Seal Water Cooler |
| 75 | F80-P203 Body Feed Pump #2 |
| 50 | F80-P274 Precoat Pump #1 |
| 15 | F85-P450 Caustic Evaporator Vacuum Pump #1 |
| 15 | F85-P452 Caustic Evaporator Vacuum Pump #2 |
| 50 | F80-P275 Precoat Pump #2 |
| 0 | F80-TK270 Polished Brine Tank 170000 gallon |
| 0 | F85-HX445 Caustic Evaporator Product Cooler |
| 5 | F85-P413 Caustic 1st Effect Discharge Pump #1 |
| 100 | F80-P272 Polished Brine Pump #1 |
| 100 | F80-P273 Polished Brine Pump #2 |
| 5 | F85-P414 Caustic 1st Effect Discharge Pump #2 |
| 0 | F85-HX425 Caustic Evaporator Feed Preheater #1 |
| 75 | F80-P476 Polishing Ca/Mg IX Feed Caustic Pump |
| 0 | F80-CO286 Polishing Ca/Mg IX Column 1 6500 gallon |
| 0 | F85-HX426 Caustic Evaporator Feed Preheater #2 |
| 0 | F85-TK412 Caustic Evaporator Steam Condensate Tank 55 gallon |

| Capacity | Equipment Description |
|---|---|
| 0 | F80-CO288 Polishing Ca/Mg IX Column 2 6500 gallon |
| 0 | F80-HX280 Brine Trim Heater |
| 10 | F85-P443 Caustic Evaporator Process Condensate Pump #1 |
| 10 | F85-P444 Caustic Evaporator Process Condensate Pump #2 |
| 0 | F80-HX281 Brine Cooler |
| 0 | F85-Y300 Electrolyzer - A |
| 0 | F85-TK451 Caustic Evaporator Vacuum Discharge Separator #1 |
| 0 | F85-TK453 Caustic Evaporator Vacuum Discharge Separator #2 |
| 0 | F85-Y310 Electrolyzer - B |
| 0 | F85-Y390 Electrolyzer - C |
| 0.5 | F85-P492 SBH Dosing Pump #1 |
| 0.5 | F85-P493 SBH Dosing Pump #2 |
| 0 | F85-TK321 Catholyte Drain Tank 1200 gallon |
| 0 | F85-TK320 Catholyte Tank 9000 gallon |
| 0 | F80-Y118 Saturator Sparger |
| 0 | F80-FI1000 TOC AC Bed Strainer |
| 5 | F85-P324 Catholyte Drain Pump |
| 75 | F85-P322 Catholyte Pump #1 |
| 0 | F80-FI1010 TOC A IX Resin Trap #1 |
| 0 | F80-FI1020 TOC A IX Resin Trap #2 |
| 75 | F85-P323 Catholyte Pump #2 |
| 0 | F85-HX326 Catholyte Heater |
| 0 | F80-Y256 Decarbonation Air Sparger |
| 0 | F80-Y258 Decarbonation Brine Sparger |
| 0 | F85-HX327 Catholyte Cooler |
| 0 | F85-HX329 Catholyte Filling Cooler |
| 3 | F80-AG261 Precoat Agitator |
| 0 | F80-FI2900 Heavy Metals IX Resin Trap 1 |
| 0 | F85-TK340 Anolyte Tank 5100 gallon |
| 30 | F85-P356 Lean Brine Pump #1 |
| 0 | F80-FI2910 Heavy Metals IX Resin Trap 2 |
| 0 | F80-FI2960 Primary Ca/Mg IX Resin Trap 1 |
| 0 | F80-FI2970 Primary Ca/Mg IX Resin Trap 2 |
| 0 | F80-FI2980 Polishing Ca/Mg IX Resin Trap 1 |
| 0 | F80-FI2990 Polishing Ca/Mg IX Resin Trap 2 |
| 0 | F80-FI3334 Hydrogen Peroxide AC Bed Strainer |
| 0 | F80-TK861 Steam Condensate Drain Tank 24 gallon |
| 0 | F80-TK890 Boilout Tank 35000 gallon |
| 150 | F80-P891 Boilout Pump |

## 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 shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.

3. This equipment shall not be operated with a VOC concentration above 150 ppm v/v in any tank. To demonstrate compliance with this condition, the owner/operator, o/o, shall conduct weekly VOC sampling using a handheld PID at the Surge Tanks (E080-TK101, E80-TK102) associated with the Brine Recovery Equipment permit T011873.

4. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NOx, 25 tons per year of VOC, 46 tons per year of PM10, 25 tons per year of SOx, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).
(b). Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.
(c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.
[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]
[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR 52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]
[California Clean Air Act, Health and Safety Code \S\S39607 and \S\S44300 et seq., and the Federal Clean Air Act, \S110(a)(2)(F)(ii), codified in 40 CFR 60]