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

B011581

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:**
WATER TREATMENT PLANT consisting of:

### EQUIPMENT

| Capacity | Equipment Description |
|---|---|
| 0 | J90-TK-01 Equalization Tank 45000 gallon |
| 20 | J90-P01 Clarifier Feed Pump |
| 20 | J90-P02 Clarifier Feed Pump |
| 20 | J90-P03 Clarifier Feed Pump |
| 0 | J90-Y01 Multiflo 1 System |
| 3 | J90-AG01 Multiflo 1 - Reactor 1 Mixer |
| 3 | J90-AG02 Multiflo 1 - Reactor 2 Mixer |
| 3 | J90-AG03 Multiflo 1 - Reactor 3 Mixer |
| 7.5 | J90-AG04 Multiflo 1 - Crystalization Tank Mixer |
| 1 | J90-AG05 Multiflo 1 - Flocculation Tank 1 Mixer |
| 1 | J90-AG06 Multiflo 1 - Flocculation Tank 2 Mixer |
| 0.5 | J90-AG07 Multiflo 1 - Settling Scraper |
| 5 | J90-P04 Multiflo 1 - Sludge Discharge Pump |
| 5 | J90-P05 Multiflo 1 - Sludge Discharge Pump |

Fee Schedule: 1 (d) Rating: 2419.5 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 |
|---|---|
| 0 | J90-TK16 Filter Feed Tank 1 5500 gallon |
| 0 | J90-TK17 Filter Feed Tank 2 5500 gallon |
| 50 | J90-P08 Filter Feed Pump |
| 50 | J90-P09 Filter Feed Pump |
| 50 | J90-P10 Filter Feed Pump |
| 0 | J90-PF01 Multimedia Filter |
| 0 | J90-PF02 Multimedia Filter |
| 0 | J90-PF03 Multimedia Filter |
| 15 | J90-B01 Filter Air Scour Blower |
| 15 | J90-B02 Filter Air Scour Blower |
| 0 | J90-IEC01 WAC Softener |
| 0 | J90-IEC02 WAC Softener |
| 0 | J90-IEC03 WAC Softener |
| 0 | J90-TK18 Soft Water Storage Tank 25500 gallon |
| 25 | J90-P11 RO Feed Pump |
| 25 | J90-P12 RO Feed Pump |
| 25 | J90-P13 RO Feed Pump |
| 30 | J90-P14 Filter Backwash Pump |
| 30 | J90-P15 Filter Backwash Pump |
| 0 | J90-Y04 Chemical Injection Quill |
| 0 | J90-FI01 FPRO Train A Cartridge Filter |
| 150 | J90-P16 FPRO Train A Booster Pump |
| 0 | J90-Y05 First Pass RO Train A |
| 0 | J90-Y06 Chemical Injection Quill |
| 0 | J90-FI02 FPRO Train B Cartridge Filter |
| 150 | J90-P17 FPRO Train B Booster Pump |
| 0 | J90-Y07 First Pass RO Train B |
| 0 | J90-Y08 Chemical Injection Quill |
| 0 | J90-FI03 FPRO Train C Cartridge Filter |
| 150 | J90-P18 FPRO Train C Booster Pump |
| 0 | J90-Y09 First Pass RO Train C |
| 0 | J90-TK19 Interpass Storage Tank 25500 gallon |
| 25 | J90-P21 SPRO Feed Pump |
| 25 | J90-P22 SPRO Feed Pump |
| 25 | J90-P23 SPRO Feed Pump |
| 0 | J90-FI06 SPRO Train A Cartridge Filter |
| 125 | J90-P24 SPRO Train A Booster Pump |
| 0 | J90-Y15 Second Pass RO Train A |
| 0 | J90-FI07 SPRO Train B Cartridge Filter |
| 125 | J90-P25 SPRO Train B Booster Pump |
| 0 | J90-Y17 Second Pass RO Train B |
| 0 | J90-FI08 SPRO Train C Cartridge Filter |
| 125 | J90-P26 SPRO Train C Booster Pump |
| 0 | J90-Y19 Second Pass RO Train C |
| 0 | J90-TK20 First Pass RO Reject Tank 750 gallon |
| 7.5 | J90-P29 Recovery RO Feed Pump 1 |
| 7.5 | J90-P30 Recovery RO Feed Pump 2 |
| 0 | J90-Y24 Chemical Injection Quill |
| 0 | J90-FI11 Recovery RO Train A Reject Cartridge Filter |
| 50 | J90-P32 Recovery RO Train A Reject Booster Pump |

| Capacity | Equipment Description |
|---|---|
| 0 | J90-Y25 Recovery RO Reject Train A |
| 0 | J90-Y26 Chemical Injection Quill |
| 0 | J90-FI12 Recovery RO Train B Reject Cartridge Filter |
| 50 | J90-P33 Recovery RO Train B Reject Booster Pump |
| 0 | J90-Y27 Recovery RO Reject Train B |
| 50 | J90-HE21 Immersion Heater |
| 0 | J90-TK21 CIP Tank 2000 gallon |
| 25 | J90-P35 FPRO/SPRO RO CIP Pump |
| 0 | J90-FI15 CIP Cartridge Filter |
| 7.5 | J90-P36 Recovery RO CIP Pump |
| 15 | J90-P37 RO Flushing Pump |
| 0 | J90-FI16 Flushing Cartridge Filter |
| 0 | J90-TK22 Permeate Storage Tank 10000 gallon |
| 100 | J90-P38 Permeate Transfer Pump 1 |
| 100 | J90-P39 Permeate Transfer Pump 2 |
| 100 | J90-P40 Permeate Transfer Pump 3 |
| 10 | J90-P41 Dilution Water Pump |
| 10 | J90-P42 Dilution Water Pump |
| 0 | J90-TK25 Filter Aid Tote 250 gallon |
| 2 | J90-P47 Filter Aid Feed Pump |
| 2 | J90-P48 Filter Aid Feed Pump |
| 0 | J90-TK26 Antiscalant Tote 250 gallon |
| 2 | J90-P49 FPRO Antiscalant Feed Pump |
| 2 | J90-P50 FPRO Antiscalant Feed Pump |
| 2 | J90-P51 FPRO Antiscalant Feed Pump |
| 2 | J90-P52 FPRO Antiscalant Feed Pump |
| 2 | J90-P53 FPRO Antiscalant Feed Pump |
| 2 | J90-TK27 Ferric Chloride Tote |
| 2 | J90-P54 Ferric Chloride Feed Pump |
| 2 | J90-P55 Ferric Chloride Feed Pump |
| 2 | J90-P56 Ferric Chloride Feed Pump |
| 2 | J90-P57 SPRO Acid Feed Pump |
| 2 | J90-P58 SPRO Acid Feed Pump |
| 2 | J90-P62 Multiflo Caustic Feed Pump |
| 2 | J90-P63 Multiflo Caustic Feed Pump |
| 2 | J90-P64 Multiflo Caustic Feed Pump |
| 0.5 | J90-TH01 Solids Clarifier |
| 1 | J90-AG16 Solids Clarifier Scraper |
| 0.5 | J90-Y03 Solids Clarifier Lift |
| 2 | J90-P65 Filter Press Feed Pump |
| 2 | J90-P66 Filter Press Feed Pump |
| 5.5 | J90-Y37 Filter Press |
| 0 | J90-TK28 Spent Caustic Storage Tank 8000 gallon |
| 5 | J90-P67 Spent Caustic Recirculation Pump |
| 5 | J90-P68 Spent Caustic Recirculation Pump |
| 0 | J90-TK29 Spent Acid Storage Tank 8000 gallon |
| 25 | J90-P69 Acid Waste Pump |
| 25 | J90-P70 Acid Waste Pump |
| 0 | J90-TK37 Polymer Tote 250 gallon |
| 2 | J90-Y31 Multiflo 1 Polymer Feed System |

| Capacity | Equipment Description |
|---|---|
| 2 | J90-Y32 Multiflo 2 Polymer Feed System |
| 2 | J90-Y35 Multiflo Polymer Feed System |
| 2 | J90-TK35 Recovery RO Antiscalant Tote |
| 2 | J90-P79 Recovery RO Antiscalant Feed Pump |
| 2 | J90-P80 Recovery RO Antiscalant Feed Pump |
| 2 | J90-P81 Recovery RO Antiscalant Feed Pump |
| 2 | J90-P82 Caustic CIP Feed Pump |
| 2 | J90-P83 Acid CIP Feed Pump |
| 2 | J90-TK43 Na EDTA Tote 250 gallon |
| 2 | J90-P84 Na EDTA Pump |
| 2 | J90-TK36 Polymer Tote 250 gallon |
| 2 | J90-Y33 Solids Clarifier Polymer Feed System |
| 2 | J90-TK39 Caustic Dilution Tank 250 gallon |
| 2 | TBD Caustic Dilution Tank Mixer |
| 2 | J90-P85 SPRO Reject Recycle Dilute Caustic Feed Pump 1 |
| 2 | J90-P86 SPRO Reject Recycle Dilute Caustic Feed Pump 2 |
| 2 | J90-P87 SPRO Reject Recycle Caustic Pump |
| 2 | J90-P88 SPRO Reject Recycle Caustic Pump |
| 2 | J90-SMP01 Filtrate Sump 1 3000 gallon |
| 2 | J90-P91 Filtrate Transfer Pump |
| 2 | J90-P92 Filtrate Transfer Pump |
| 25 | J90-P95 Recovery RO Reject Pump 1 |
| 25 | J90-P96 Recovery RO Reject Pump 2 |
| 0 | J90-TK42 Recovery RO Reject Tank 10000 gallon |
| 20 | J90-P59 Service Water Pump 1 |
| 20 | J90-P60 Service Water Pump 2 |
| 20 | J90-P61 Service Water Pump 3 |
| 0 | J90-Y02 Multiflo 2 System |
| 3 | J90-AG09 Multiflo 2 - Reactor 1 Mixer |
| 3 | J90-AG10 Multiflo 2 - Reactor 2 Mixer |
| 3 | J90-AG11 Multiflo 2 - Reactor 3 Mixer |
| 7.5 | J90-AG12 Multiflo 2 - Crystalization Tank Mixer |
| 1 | J90-AG13 Multiflo 2 - Flocculation Tank 1 Mixer |
| 1 | J90-AG14 Multiflo 2 - Flocculation Tank 2 Mixer |
| 0.5 | J90-AG15 Multiflo 2 - Settling Scraper |
| 5 | J90-P06 Multiflo 2 - Sludge Discharge Pump |
| 5 | J90-P07 Multiflo 2 - Sludge Discharge Pump |
| 0 | J90-PF04 Multimedia Filter |
| 0 | J90-PF05 Multimedia Filter |
| 0 | J90-IEC04 WAC Softener |
| 0 | J90-IEC05 WAC Softener |
| 0 | J90-Y10 Chemical Injection Quill |
| 0 | J90-FI04 FPRO Train D Cartridge Filter |
| 150 | J90-P19 FPRO Train D Booster Pump |
| 0 | J90-Y11 First Pass RO Train D |
| 0 | J90-Y12 Chemical Injection Quill |
| 0 | J90-FI05 FPRO Train E Cartridge Filter |
| 150 | J90-P20 FPRO Train E Booster Pump |
| 0 | J90-Y13 First Pass RO Train E |
| 0 | J90-FI09 SPRO Train D Cartridge Filter |

| Capacity | Equipment Description |
|---|---|
| 125 | J90-P27 SPRO Train D Booster Pump |
| 0 | J90-Y21 Second Pass RO Train D |
| 0 | J90-FI10 SPRO Train E Cartridge Filter |
| 125 | J90-P28 SPRO Train E Booster Pump |
| 0 | J90-Y23 Second Pass RO Train E |
| 0 | J90-Y28 Chemical Injection Quill |
| 0 | J90-FI13 Recovery RO Train C Reject Cartridge Filter |
| 50 | J90-P34 Recovery RO Train C Reject Booster Pump |
| 0 | J90-Y29 Recovery RO Reject Train C |
| 0 | J90-TK24 Sodium Hydroxide Bulk Storage Tank 2000 gallon |
| 7.5 | J90-P45 Caustic Regeneration Pump |
| 7.5 | J90-P46 Caustic Regeneration Pump |
| 0 | TBD Caustic Bulk Storage Tank Heat Trace |

## 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. The waste acid storage tank shall not discharge hydrogen chloride at more than a maximum of 800 ppm v/v, per District rule 406. To demonstrate compliance with this limit, the owner/operator, o/o, shall demonstrate that the HCl concentration in the liquid shall remain at or below an HCl concentration of 6% in the waste acid storage tank.

The concentration shall be estimated weekly according to a district approved protocol, with results logged. The log shall be maintained current, kept on-site for a minimum of 5 years, and provided to District personnel on request.

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]