MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT

14306 Park AvenueVictorville,CA92392-2310
760.245.1661 -- 800.635.4617 -- FAX760.245.2022

PERMIT TO OPERATE

B001936

Operation under this permit must be conducted in compliance with all information included with the initial application, initial permit condition, and conditions contained herein. The equipment must be maintained and kept in good operating condition at all times. This Permit to Operate or copy must be posted on or within 8 meters of equipment. If a copy is posted, the original must be maintained on site, available for inspection at all times.

EXPIRES LAST DAY OF:FEBRUARY 2026

OWNER OF OPERATOR (Co.#2349)

MP Mine Operations LLC
67750 Bailey Road
Mountain Pass,CA92366

EQUIPMENT LOCATION (Fac.#364)

Mountain Pass Mine
67750 Bailey Road
Mountain Pass,CA92366

Description:

SX TANKS, LANTHANIDE PROCESS consisting of:The following descriptions, definitions and conditions apply to the SX-1 and SX-2 extraction circuits: 1. Definitions (a) Process tank means a tank that is used within a process (including a solvent or raw material recovery process) to collect material discharged from a feedstock storage vessel or equipment within the process before the material is transferred to other equipment within the process, to a product or by-product storage vessel, or to a vessel used to store recovered solvent or raw material. In many process tanks, unit operations such as reactions and blending are conducted. Other process tanks, such as surge control vessels and bottoms receivers, however, may not involve unit operations. (b) Floating cover means a process tank cover consisting of a single layer floating cover which rests upon and is supported by the liquid being contained. (c) Maximum true vapor pressure means the equilibrium partial pressure exerted by the volatile organic compounds (as defined in 40 CFR 51.100) in the stored Volatile Organic Liquid (VOL) at the temperature equal to the highest calendar-month average of the VOL storage temperature for VOL's stored above or below the ambient temperature or at the local maximum monthly average temperature for VOL's stored at the ambient temperature, as determined: (1) As obtained from standard reference texts; or (2) As determined by ASTM D2879–83, 96, or 97 (incorporated by reference); (3) Any other method approved by the APCO. (d) Volatile organic liquid (VOL) means any organic liquid which can emit volatile organic compounds (as defined in 40 CFR 51.100) into the atmosphere. 2. Standard for Volatile Organic Compounds (VOC) (a) The owner or operator of SX-1 and SX-2 shall equip each SX-1 and SX-2 process vessel with a floating cover according to the following conditions: (1) The cover is to be floating on the liquid at all times except during initial fill and when the tank is completely emptied and subsequently refilled. (2) There are to be no holes, tears, or other openings in the cover. (3) The combined total area of all gaps between the tank walls and the floating cover shall not exceed 38% of the total surface area of the tank. (b) The limits specified in paragraph (a) of this part apply to use in the process tanks of any volatile organic liquid (VOL) having true vapor pressure less than or equal to that of kerosene. (1) The owner or operator shall notify the APCO at least 30 days prior to use in any SX-1 or SX-2 process vessel of a VOL or mixture of VOL with maximum true vapor pressure greater than that of kerosene. (2) The notification specified in part 2(b)(1) shall include a report that evaluates the floating cover configuration and certifies that the cover provides an increased reduction in surface area over the limits specified in 2(a)(3) equivalent to the increase in maximum true vapor pressure of the planned VOL over that of kerosene. SX-1-35 Extraction cells, 35, whose total volume is 24,000 gal, one stream feeds La precipitation and the others feed SX-2, 10 @ 3hp each and 24 @ 2 hp each. Note also that the above SX-1-35 is also fed by the HCl tank (T000834) and the filtrate from Pb thickener (part of T001938 and T001939). SX-1-35 vents to Venturi scrubber (C001935). NOTE: SX-2 vents

Fee Schedule: 1 (c) Rating: 239 bhp SIC: 1099 SCC: 39999999 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,NV89135

By: **COPY**

Brad Poiriez
Air Pollution Control Officer

UNOFFICIAL

Viron Scrubber (C001934) and feed the Nd extraction process, feeds the La precipitators (B001947) in concert with SX-1 and bleeds off organic barren material into the organic barren sump (TF-38) and the organic material is re-pumped into SX-1-18.

EQUIPMENT

Capacity	Equipment Description
78	SX-1-35 Extraction cells, 35, whose total volume is 24,000 gal, one stream feeds La precipitation and the others feeds SX-2, 10 @ 3hp each and 24 @ 2 hp each.
0	Note also that the above SX-1-35 is also fed by the HCl tank (T000834) and the filtrate from Pb thickener (part of T001938 and T001939). SX-1-35 vents to Viron Scrubber (C001935).
3	SHP-48 Pregnant Liquor Pump
3	SX-1 Transfer Tank, Barium Organic Tank (36-38), 500 gal
32.5	SX-2-18 Extraction cell, 18, whose volume is 16,000 gal is fed by SX-1-35 are are 11 @ 2 hp each and 7 @ 1.5 hp each SX-2 is also fed by the HCl tank (T000834)
0	36-38 Barren Organic Sump, 500 gal
10	Barren Organic Pump
0	TF-20 SX-1 Organic make-up tank, 500 gal
0.75	SHP-64-1 Organic Transfer Pump
0.75	Organic Reclaim Pump
4	Neutralization Feed Pump, 2 @ 2 hp each
0	TF-23 SX-1 Organic Storage Tank, 10,000 gal
0.75	Aqueous Return Pump
0.75	Organic Return Pump
0	SX-2 Organic Make-up Tank @ 150 gal
0.75	SHP-64-2 Organic Transfer Pump
0.87	Feed NeutralizationTank and agitator
5	Neutraization Tanks Feed Pump
0.43	Feed Neutralization Tank and agitator
3	Storage Tank Feed Pump
1.5	Organic Storage Tank Pump
0	TF-26 SX-2 Organic Storage Tank @ 5,000 gal
0	TF-27 SX-2 Feed Storage Tank @ 16,500 gal
3	Storage Tank Feed Pump
0.3	Hydroxlamine Tank and agitator
1.5	SX-2 Make-up Tank and pump
84	SX-2 2SX-1-36, 16,000 gal and mixers; 4 @ 5 hp each and 32 @ 2 hp each
1	Cell 7 bleed stream
0.75	Aqueous Return Pump
3	Barren Organic Pump
0	TF-38 Barren Organic Sump, 500 gal
1	SHP-62 Pregnant Pump
0	NOTE: SX-2 vents to Viron Scrubber (C001934) and feed the Nd extraction process, feeds the La precipitators (B001947) in concert with SX-1 and bleeds off organic barren material into the organic barren sump (TF-38) and the organic material is re-pumped
0	into SX-1-18.
9	Mech-Chem - Diffusion dialysis system (DD) 1 gpm 3 motors @ 3 hp each

CONDITIONS:

1.The equipment shall not be operated unless it is vented to functioning scrubbers under valid District permits C001934 and C001935.

2.This equipment shall be operated/maintained in strict accord with the recommendations of the manufacturer/supplier and/or sound

engineering principles.
The following conditions apply to the SX-1 and SX-2 extraction circuits:

3.Testing and procedures
(a) After installing the control equipment, the owner or operator shall:
(1) Determine the total area of the gap between the floating covers and the tank walls by calculation based on the dimensions of the tanks and of the floating covers.
(2) Visually inspect the floating cover at least once every five years.
(3) Notify the APCO 30 days in advance of any modification to the physical dimensions of the floating covers to afford the APCO the opportunity to have an observer present.
(4) Visually inspect the floating cover each time the vessel is emptied.
(i) If the floating cover has defects or openings, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with Volatile Organic Liquids (VOL).
(ii) The owner or operator shall notify the APCO in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the APCO the opportunity to inspect the storage vessel prior to refilling.
(5) Make necessary repairs or empty the process vessel within 45 days of identification in any inspection of floating covers not meeting the requirements of 2(a).

4.Reporting and Recordkeeping Requirements.
(a) The owner or operator shall keep copies of all reports and records required by this section for at least 2 years.
(b) After installing control equipment in accordance with part 2, the owner or operator shall meet the following requirements.
(1) Within 60 days of installing the control equipment required by 2(a), furnish the APCO with a report that contains the calculations described in 3(a)(1).
(2) Keep a record of each inspection performed as required by 3(a)(2), and 3(a)(4). Each record shall identify the process vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of the control equipment.

5.Monitoring of operations.
(a) The owner or operator shall keep readily accessible records showing the dimension of the process vessels, an analysis showing the capacity of the process vessels, and the dimensions of the floating covers.

6.Mountain Pass Mine Voluntary Emissions Limit/Synthetic Minor Hazardous Air Pollutant Limits:
(a). General Limits for Entire Facility. The total emissions for the Mountain Pass Mine shall be less than 25 tons per year of VOC. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall not exceed 7 tons per year for any single HAP and 18 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 Lists of pollutants and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).
(b). Monitoring, Periodic Monitoring & Recordkeeping Conditions. To prove compliance with condition (a) above, permittee shall maintain usage records of all VOC- and HAP-containing solvent materials. Such records shall be compiled into an annual usage report and total HAP emissions from solvent operations shall be added to the annual HAP emissions from fuel burning and other HAP emitting equipment. Annual HAP/VOC emissions from fuel burning and other emitting equipment for purposes of this condition shall be determined by use of HAP/VOC emissions factors (as set forth by District approved emission factors), or by annual actual emissions as determined by source test of the equipment, or by methods and emission factors established in an approved comprehensive Emission Inventory Plan (CEIP).
(c) A facility wide Comprehensive Emission Inventory (CEIR) for all emitted criteria and toxic air pollutant must submit to the District, in a format approved by the District, on a yearly basis, which is to be received by the District no later than Mayl 31 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 Subpart Q]