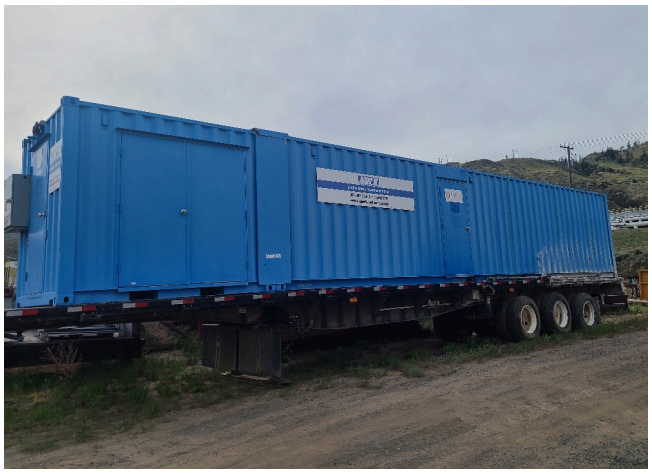
P.O. Box 176, Savona, BC, Canada V0K 2J0
Phone: (250) 373-2424 Fax: (250) 373-2323
Website: savonaequipment.com
Email: sales@savonaequipment.com
Located just 20 minutes west of Kamloops, BC

Mobile Water Treatment Plant

[Inventory ID #1628523]



Mobile Water Treatment Plant

- Make: Applied Water Treatment Inc.
- Model/Type: Mobile Water Treatment Plant
- Style: Mobile / Portable
- Year: 2021
- Condition: Used Condition

- Flowrate: Up To 1,296 m³/day (342,367 US Gallons Per Day)
- Water Chemistry: Remove Heavy Metals Including; Al, As, Cd, Cu, Fe^{2+}, Fe^{3+}, Mn, Mg, Ni, Pb, Zn, SO_4
- Mobile: Plant On 53ft Trailer That Can Be Driven to the Site
- Process Uses Hydrated Lime to Remove Heavy Metals to Meet Compliance
- Automated Process Control Producing Consistent Water Quality
- Plant Used at Sites to Meet Environment Canada and EPA Discharge Targets
- Robust Process Utilizing Well Proven Technology Used at Over 100 Mines Globally
- Plant Can Be Easily Modified For Site Specific Requirements (Mo & Se Removal)

- Process: The heart of the treatment system is the chemistry utilized to treat contaminated water to meet regulatory compliance. pH is an indicator of what form metals in the contaminated water will take, that is, whether they are in solution (soluble) or are in solid particulate form (insoluble). pH of the contaminated water (feed to the plant) is typically acidic indicating soluble metals that must be treated to remove metals as solids.
    - In the plant, lime slurry is added to precipitate metals in optimum range for effective metals removal.
        - $M^{++} + SO_4^{=} + Ca^{++} + 2(OH)^{-} + H_2O$? $M(OH)_2 + CaSO_4 \bullet H_2O$

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$$2M^{+++} + 3(SO_4)^{=} + 3Ca^{++} + 6(OH)^{-} + 6H_2O \rightarrow 2M(OH)_3 + 3CaSO_4 \bullet H_2O$$

$$Ca(OH)_2 + H_2SO_4 \rightarrow CaSO_4 \bullet 2H_2O$$

- The amount of lime added to maintain the pH in the optimum range and effectively remove heavy metals is regulated by pH controller and site specific based on water chemistry. Excess addition of lime is wasteful with no benefits to the treatment efficiency. But causes additional problems with settling and sludge management. On the other hand, insufficient lime will result in low treatment efficiency and out of compliance water quality. Flocculant is added to the treated prior to discharge into the Sludge Pond where the solution is clarified. The precipitated metals settle in the sludge pond and clear solution can be discharged to the environment.

- Water Chemistry: The mobile treatment plant has been meeting Environment Canada and EPA compliance limits at site in Canada (summarized in table below). However, the process can be easily modified based on site requirements.

	Feed (mg/L)	Discharge (mg/L)
Arsenic	0.0416	0.00028
Cadmium	0.441	0.000052
Cobalt	8.49	0.00038
Copper	1.11	0.0061
Iron	760	0.008
Lead	0.0057	<0.0002
Manganese	170	0.0175
Nickel	24.9	0.002
Zinc	54.2	<0.005
Sulphate	8350	2210

- Mounted on a 53ft Renn Flat Deck Tri-Axle Trailer
- Plant Components:
    - Ingersoll Rand UP6-7.5 Tank-Mounted Compressor - 28 CFM
    - (2) Hayward Gordon Agitators with Impellers - Model HRFX-10-614
    - (3) MX Direct Agitators with Impellers and VFD - Model TBE075VGD
    - Tsurumi Submersible Pump - Model KTZ43.7
    - Vertical Pump
    - Metering Pump
    - (4) Slamjet Spargers
    - 600 Amp Allen Bradley MCC
    - Transformer
    - Control Panel
    - Electrical Cables
    - Piping
    - Steelworks

- Overall Dimensions:

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  - Length: 56ft
  - Width: 104in
  - Height: 161in
  - Weight: 12,000 kg (Estimate)

- Location: Savona, British Columbia, Canada

View More **Water Treatment Plants**