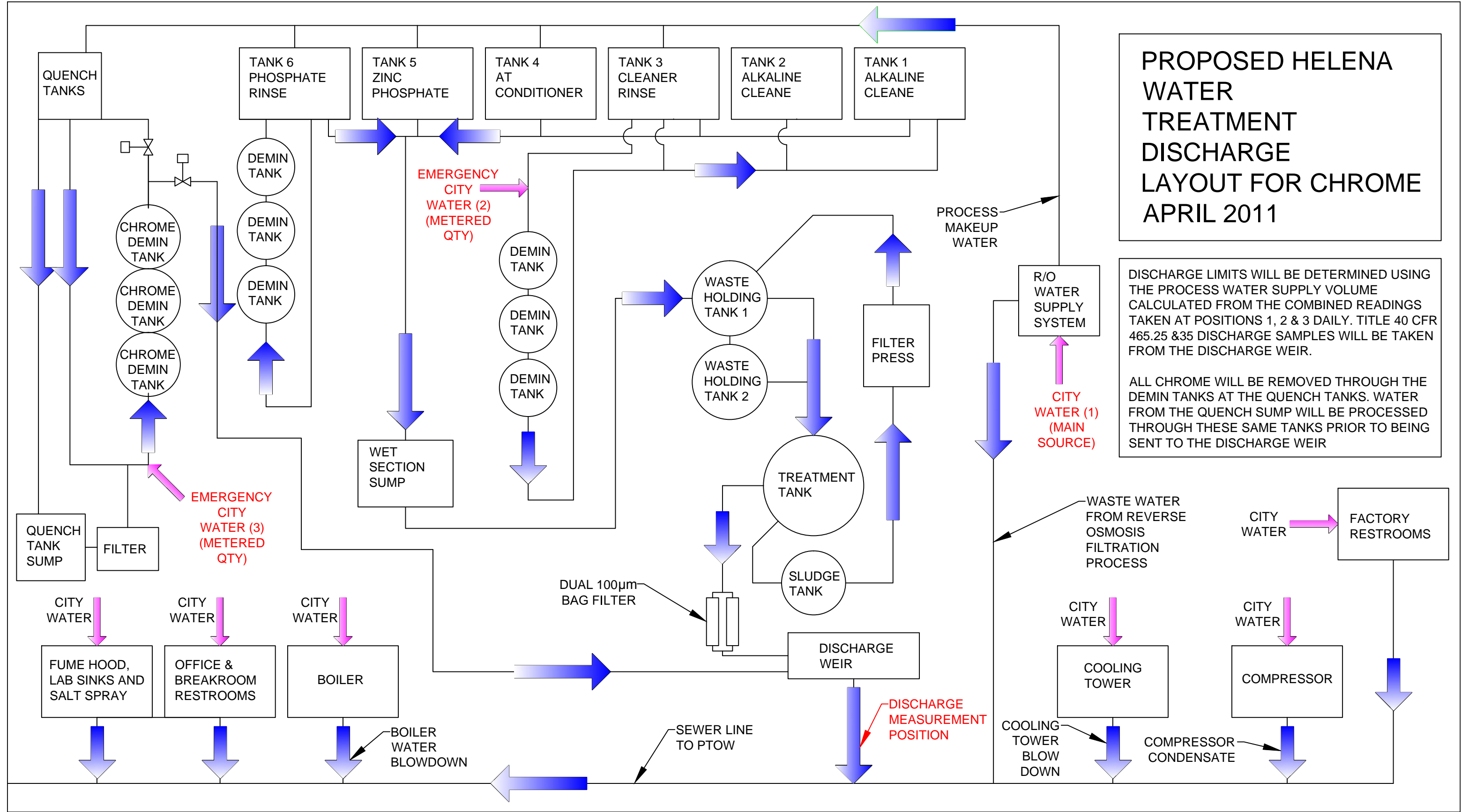


PROPOSED HELENA WATER TREATMENT DISCHARGE LAYOUT FOR CHROME APRIL 2011

DISCHARGE LIMITS WILL BE DETERMINED USING THE PROCESS WATER SUPPLY VOLUME CALCULATED FROM THE COMBINED READINGS TAKEN AT POSITIONS 1, 2 & 3 DAILY. TITLE 40 CFR 465.25 & 35 DISCHARGE SAMPLES WILL BE TAKEN FROM THE DISCHARGE WEIR.

ALL CHROME WILL BE REMOVED THROUGH THE DEMIN TANKS AT THE QUENCH TANKS. WATER FROM THE QUENCH SUMP WILL BE PROCESSED THROUGH THESE SAME TANKS PRIOR TO BEING SENT TO THE DISCHARGE WEIR



CITY WATER → FACTORY RESTROOMS

WASTE WATER FROM REVERSE OSMOSIS FILTRATION PROCESS

CITY WATER ↓

CITY WATER ↓

COOLING TOWER

COMPRESSOR

COOLING TOWER BLOW DOWN

COMPRESSOR CONDENSATE

DISCHARGE WEIR

DISCHARGE MEASUREMENT POSITION

SEWER LINE TO PTOW

BOILER WATER BLOWDOWN

CITY WATER ↓

CITY WATER ↓

CITY WATER ↓

FUME HOOD, LAB SINKS AND SALT SPRAY

OFFICE & BREAKROOM RESTROOMS

BOILER

EMERGENCY CITY WATER (3) (METERED QTY)

EMERGENCY CITY WATER (2) (METERED QTY)

PROCESS MAKEUP WATER

CITY WATER (1) (MAIN SOURCE)

R/O WATER SUPPLY SYSTEM

FILTER PRESS

TREATMENT TANK

WASTE HOLDING TANK 2

WASTE HOLDING TANK 1

DEMIN TANK

DEMIN TANK

DEMIN TANK

WET SECTION SUMP

DEMIN TANK

DEMIN TANK

DEMIN TANK

CHROME DEMIN TANK

CHROME DEMIN TANK

CHROME DEMIN TANK

QUENCH TANKS

TANK 6 PHOSPHATE RINSE

TANK 5 ZINC PHOSPHATE

TANK 4 AT CONDITIONER

TANK 3 CLEANER RINSE

TANK 2 ALKALINE CLEAN

TANK 1 ALKALINE CLEAN

QUENCH TANK SUMP

FILTER