BANNER
environmental engineering consultants ltd.

WATER TREATMENT SPECIALISTS

HUSKY ENERGY

OPERATIONAL REQUIREMENT FOR POTABLE WATER SYSTEM

Prepared for:
Husky Oil Inc.

TABLE OF CONTENTS

1.0 Artic Operations Introduction

January 22, 2013

Husky Energy – Operational Requirements for Potable Water System

Arctic Operations 2013

Raw Water Source, Bulk Truck Haul from McKenzie River

Critical Treatment Parameters

Total Suspended Solids

- Average <10 mg/L (predicted value)
- Daily Range 5-50 mg/L (predicted value)

Total Organic Carbon (mg/L)

- Average 5 mg/L (predicted value)
- Daily Range 1-10 mg/L (predicted value)

Flow Rate (L/(person*day))

- Average Daily 265
- Morning Peak Factor 5.5 times daily average flow
  - (peak @ 6:30 am from 3:30 to 8:30 am)
- Evening Peak Factor 4.0 times daily average flow
  - (peak @ 7 pm from 5 pm to 10 pm)

Raw Water Temperature (^{0}C)

- Average 1.0
- Range 0.2 to 3

Ambient Conditions (September until May)

Temperature (^{0}C)

- Typical -35
- Range +35 to -54
- Winter Design Temperature -55
- Summer Design Temperature 5

Wind Speed (km/hr)

- Average 10.7
- Range 9 to 117

Wind Chill Factor (Effective Temperature ^{0}C)

- Average -47
- Range -18 to -62
- Extreme Design Temperature -62

Camp Considerations, Two Camps

Camp 1: Construction Camp….100 persons
Camp 2: Completions and Testing Phase Camp…. 125 persons

Expected Daily Potable Flow Required (m^3/day)

- Construction Camp 26.5 m^3/day
- Completions Camp 33.125 m^3/day

Operating Design Capacity 50 – 100 Man WTP

- 50 Man Capacity ~ 10 hours/ day – 100 % Redundancy
- 100 Man Capacity ~ 10 hours/ day – 0 % Redundancy
- Daily Required Production 26.5 m^3/day (+7000 Usgal/day)
- Recommended Max Operating Period/day 12 hours/day
- Operating Capacity >5-14 Usgal/min

Operating Design Capacity 65 – 130 Man WTP

- 50 Man Capacity ~ 10 hours/ day – 100 % Redundancy
- 100 Man Capacity ~ 10 hours / day
- Daily Required Production 33.125 m^3/day
- Recommended Max Operation Period/day 12 hours/ day
- Operating Capacity >7.1 – 16 Usgal/min

Process Configuration

Stage 1 Treatment, Equalization of Pretreatment for Suspended Solids

Purpose: Removal of debris or control of solids event
Gravity storage/settling using batch treatment/chemical treatment

Expected Frequency of Operation and Description:

- Occasional solids events, batch tank treatment
- 2 only 1750 IG round poly tanks connected in parallel
  - Each tank c/w submersible feed pump system
  - 2 only 100% redundant feed pumps on duplex controller for each tank
    - Capacity @ 5-16 Usgal/min @ pressures high enough pressures to feed process plant line up
      - Cartridge filters
      - Multi Media Filters
      - Ultra Filtration Feed Pumps
  - 1 only PAC chemical feed systems
    - 2 only chemical feed pumps (100% redundancy)
    - 3 only chemical injection locations
      - Into tank recycle for batch treatment
      - Into bag filter system (stage 2 treatment)
      - Into multi media filter system (stage 4 treatment)
  - 1 only Sodium Hypochlorite chemical feed systems
    - 2 only chemical feed pumps (100% redundancy)
    - 4 only chemical injection locations
      - Into tank recycle for batch treatment
      - Into bag filter system (stage 2 treatment)
      - Into multi media filter system (stage 4 treatment)
      - Post Activated Carbon Filtration (stage 7 Treatment)

- 1 only Potassium Permanganate chemical feed systems
  - 2 only chemical feed pumps (100% redundancy)
  - 3 only chemical injection locations
    - Into tank recycle for batch treatment
    - Into bag filter system (stage 2 treatment)
    - Into multi media filter system (stage 4 treatment)

Log Removal Credits Awarded for Giardia, Crypotsporidium and Virus: None

Stage 2 Treatment, Rough Filtration, Dual Gradient Cartridge Filtration

Purpose: Removal of debris and large solids by filter straining

Description:
- Big Blue with high solids content filter housing
  - All Big Blue filter houses must be the largest sized
    - 20" BB- 1 ½" houses as plant standard
      - Stages 2, 3, 6 and 7
- 3 only in parallel Stage 2
- Banner to discuss with vendor to confirm preferred/recommended house
  - Necessary/expected cartridges to be shipped with unit

Log Removal Credits Awarded for Giardia, Crypotsporidium and Virus: None

Stage 3 Treatment, Filtration, 20 micron Cartridge Filtration

Purpose: Removal of suspended solids

Description:
- Big Blue with high solids content filter housing
- 3 only in parallel Stage 3
- Banner to discuss with vendor to confirm preferred/recommended house
  - Necessary/expected cartridges to be shipped with unit

Log Removal Credits Awarded for Giardia, Crypotsporidium and Virus: None

Stage 4 Treatments - Multi-Media Filtration

Purpose: Removal of fine silt and some clay particles

Description:
- 16 inch commercial multi media filter
  - c/w automatic backwash sequence
- High capacity pressure filter
  - Course Charcoal Media 1 (Coarse)
  - Silica Sand Media 2 (fine)
  - Garnet Sand Media 3 (very fine)
- Chemical Injections
  - PAC, see Stage 1 treatment
  - Sodium Hypochlorite Injection

Log Removal Credits Awarded for Giardia, Crypotsporidium and Virus:

- $LRV_{giardia}$ Combined filtration credit of 1.0
- LRV_{crypto} Combined filtration credit of 1.0
- LRV_{virus} Direct filtration credit of 2.0

Stage 5 Treatments - Ultra Filtration

Purpose: Removal of microscopic pathogens, namely Giardia and Cryptosporidium

Description:

- Back Pulse Ultra Filtration System
- 2 only single stage Ultra Filtration System
- Filter water, 93% efficient
- e/w high pressure pumps
- e/w controls and alarms

Log Removal Credits Awarded for Giardia, Crypotsporidium and Virus:

- $LRV_{giardia}$ +4 Log Removal
- LRV_{crypto} +4 Log Removal
- LRV_{virus} none

Stage 6 Treatment UV Disinfection

Purpose: Inactivation of microscopic pathogens, namely Giardia and Cryptosporidium

Description:

- Parallel flow through unit
- Visual and digital confirmation of units operation
- Stainless steel housing
- % output alarm
- 254nm UV intensity

Log Removal Credits Awarded for Giardia, Crypotsporidium and Virus:

- $LRV_{giardia}$ +3 Log Removal
- LRV_{crypto} +3 Log Removal
- LRV_{virus} +4 Log Removal

Stage 7 Treatment – 1 Micron Post Absolute Cartridge Filtration

Purpose: Pathogen Removal

Expected Frequency of Replacement and description:

- Big Blue Housings
- 2 only in parallel, Stage 6
- Back up removal of pathogens, reusable filters,
- Extended life expectancy in current position
- Banner to discuss with vendor to confirm preferred/recommended house
    - Necessary/expected cartridges to be shipped with unit
    -

Log Removal Credits Awarded for Giardia, Crypotsporidium and Virus:

- $LRV_{giardia}$ +2.8 Log Removal (Based upon Harmsco Filter)
- LRV_{crypto} +2.3 Log Removal (Based upon Harmsco Filter)
- LRV_{virus} C

Stage 8 Treatment – Activated Carbon Treatment

Purpose: Removal of organics or background color

Description:

- Big Blue with high solids content filter housing
- 3 only in parallel
- Banner to discuss with vendor to confirm preferred/recommended house
    - Necessary/expected cartridges to be shipped with unit
    - Likely RFC or CBC from Petwa web site

Log Removal Credits Awarded for Giardia, Crypotsporidium and Virus:

- $LRV_{giardia}$ None
- LRV_{crypto} None
- LRV_{virus} None

The effective operation of the Activated Carbon stage of treatment is important to the taste and odor and control of disinfection byproducts.

Stage 9 Chemical Disinfectant Using Free Chlorine and Pumped distribution

Purpose: Chemical Disinfection for Virus and pressurized distribution

Description: 100 man Construction Camp

- 3 only 1750 IG CT Storage Tanks for virus CT credit @ WTP
- 4 only 1200 IG CT Storage/Equalization tanks for CT Credit @ Camp Distribution Sys.
    - Total Volume of 10,500 IG capacity
- Potable Water Distribution Includes
    - 1 only Distribution Storage Tank
    - Typical Cl_2 residual 0.5 to 1.5 mg/L in camp
    - 2 only 100% pumps
        - Typical 35 Usgpm @ 60 psig
        - e/w pressure recycle valve
        - duplex controller for pumps
        - auto feed back control loop for Cl_2 addition
            - pumps e/w residual chlorine analyzer
            - very important feature

Log Removal Credits Awarded for Giardia, Crypotsporidium and Virus:

- $CT_{giardia}$ +3.0
- CT_{crypto} +3.0
- CT_{virus} +10.0

Description: 125 man Camp

- 5 only 1750 IG CT Storage Tanks for virus CT credit @ WTP
- 3 only 2500 IG CT Storage/Equalization tanks for CT Credit @ Camp Distribution Sys.
    - Total Volume of 16,250 IG capacity
- Potable Water Distribution Includes
    - 1 only Distribution Storage Tank
    - Typical Cl_2 residual 0.5 to 1.5 mg/L in camp
    - 2 only 100% pumps
        - Typical 35 Usgpm @ 60 psig
        - e/w pressure recycle valve
        - duplex controller for pumps
        - auto feed back control loop for Cl_2 addition
            - pumps e/w residual chlorine analyzer
            - very important feature

Log Removal Credits Awarded for Giardia, Crypotsporidium and Virus:

- $CT_{giardia}$ +3.0
- CT_{crypto} +3.0
- CT_{virus} +10.0

Disinfection Summary

Current standards for surface water treatment require a minimum LRV listed below indicating the system has the capability of exceeding the current standards with a large margin of contingency. However, it is important to the operating performance of each of these stages of treatment prior to applying disinfection credits. A conservative estimate of the LRV for each of the stages of treatment has been provided on a preliminary basis to help organize the sampling and monitoring program for the potable water system.

USEPA Surface Water Treatment Rule (SWTR) for require Log Removal Values (LRV)

- $LRV_{giardia}$ 3.0
- LRV_{crypto} 4.0
- LRV_{virus} 4.0

Disinfection Summary for Completions for 65 -130 Man Potable Plant at 8 USGPM

Stage of Treatment	LRV for Giardia	LRV for Crypotsporidium	LRV for Virus
Stage 1, 2, 3 & 4 Combined Filtration Credit	1	1	1
Stage 5 Ultra Filtration	3	3	0
Stage 7 UV Disinfection	+3	+3	2.0
Stage 6 Absolute Cartridge Filtration	+2	+2	0.0
Stage 8 Chlorine Disinfection@ 1.5mg/l	+6.5	+6.5	+236
Total	+15.5	+15.5	+239
Number of Barriers	5 Barriers	5 Barriers	3 Barriers

Disinfection Summary for Completions for 65 -130 Man Potable Plant at 16 USGPM

Stage of Treatment	LRV for Giardia	LRV for Crypotsporidium	LRV for Virus
Stage 1, 2, 3 & 4 Combined Filtration Credit	1	1	1
Stage 5 Ultra Filtration	3	3	0
Stage 7 UV Disinfection	+3	+3	2.0
Stage 6 Absolute Cartridge Filtration	+2	+2	0.0
Stage 8 Chlorine Disinfection@ 1.5mg/l	+3.7	+3.7	+135
Total	+12.3	+12.3	+138
Number of Barriers	5 Barriers	5 Barriers	3 Barriers

Disinfection Summary for the Construction camps 50 - 100 Man Potable Plant at 8 USGPM

Stage of Treatment	LRV for Giardia	LRV for Crypotsporidium	LRV for Virus
Stage 1, 2, 3 & 4 Combined Filtration Credit	1	1	1
Stage 5 Ultra Filtration	3	3	0
Stage 7 UV Disinfection	+3	+3	2.0
Stage 6 Absolute Cartridge Filtration	+2	+2	0.0
Stage 8 Chlorine Disinfection@ 1.5mg/l	+3.3	+3.3	+118
Total	+12.3	+12.3	+121
Number of Barriers	5 Barriers	5 Barriers	3 Barriers

Disinfection Summary for the Construction camps 50 - 100 Man Potable Plant at 14 USGPM

Stage of Treatment	LRV for Giardia	LRV for Crypotsporidium	LRV for Virus
Stage 1, 2, 3 & 4 Combined Filtration Credit	1	1	1
Stage 5 Ultra Filtration	3	3	0
Stage 7 UV Disinfection	+3	+3	2.0
Stage 6 Absolute Cartridge Filtration	+2	+2	0.0
Stage 8 Chlorine Disinfection@ 1.5mg/l	+1.2	+1.2	+44
Total	+10.2	+10.2	+47
Number of Barriers	5 Barriers	5 Barriers	3 Barriers

2.0 Summary of Process Narrative Husky Oil inc Water Treatment Plant

Summary of Process Control Narrative for
Husky Oil Inc
Water Treatment Plant

Prepared for:
Husky Oil Inc

Prepared by:
Banner Environmental Engineering Consultants Ltd.

BANNER
environmental engineering consultants ltd

100 Man Process Control Narrative

Introduction:

The process control narrative will follow the flow of raw untreated water from the beginning of treatment to the final stage of distribution.

Raw Water Storage and Recirculation:

Raw water is pumped into the raw water storage tanks at the front of the process. After being filled with raw water the water is re-circulated with chlorine and alum until treated.

Raw Pumps Auto Sequence:

Storage and CT tank process float needs to call for water for the pump can start to transfer water when the auto function is selected.

Equipment included:

- Low level floats
- Submersible sump pump
- Two (2) process pumps
- Chemical injection system
- Pressure regulating valves (PRV)

Chemical Injection Sequence:

The Alum and hypochlorite is controlled by a timer relay in the control panel. When the start button is activated the chemical pumps turn on for the selected period of time.

Table 1:

Event	Action
Low Level shut off in raw tanks	Process pumps shut down
Low level in CT tanks	Process pumps turn on if the auto function is selected

Table 1: Float Position Description.

Raw Water Filtration System:

When the chemically condition water is ready to be filtered process valves are opened to allow flow through the filtration equipment. The water is filtered, disinfected, measured and transferred to the storage tanks.

Equipment Included:

- Three (3) 20" - 75-25 micron dual gradient filters
- Three (3) 20" – 20 micron pleated filters
- One (1) 16" multimedia filter
- Two (2) cartridge membrane filtration units
- Two (2) UV disinfection units
- Three (3) Carbon block cartridge filters
- Two (2) 1 micron filtration units
- One (1) millivolt pulse totalizing meter
- One (1) Stenner chemical injection pump
- One (1) 750 imperial gallon waste storage tank
- Two (2) waste discharge pumps
- One (1) waste totalizing meter

Chemical Injection Sequence:

The chemical injection system is controlled by the flow meter. The flow meter sends a millivolt pulse from that is converted to an ON and OFF signal. The pump is manually set to deliver a standard dose of hypochlorite to disinfect the filtered water.

Backwash Sequence:

Back wash water for the multi-media filter is pumped over from the CT tanks. When the filter head controller calls for treated water it is delivered by the pressure from the distribution system. The backwash water is stored in a 750 imp gallon tank.

Backwash Discharge System:

The waste storage and discharge system is designed to discharge backwash water over a set amount of time. This is done by setting the recirculation valve to the desired pressure and allowing the pumps to discharge small amounts of waste per day.

CT Storage and Distribution System:

The CT storage system allows the chlorine and the filtrate to rest for a predetermined amount of time. The disinfected water is then distributed to the camp by using to submersible pumps on a re-circulation header.

Equipment Included:

- Three (3) 1750 Imp Gallon Storage tanks
- One (1) Stenner Chemical injection pumps
- One (1) Redox monitor
- NTU monitor HACH 1720
- Two (2) distribution pump systems
- Pressure regulating valves (PRV)
- Low level shut off float

Table 2:

Event	**Action**
Low Level shut off in Ct storage tanks	Distribution pumps shut down
Process start float	Starts process pumps if selector switch is in auto

Table 2: Float Position Description.

150 Man Process Control Narrative

Raw Water Storage and Recirculation:

Raw water is pumped into the raw water storage tanks at the front of the process. There are two (2) systems that can be operated at once, System "A" and System "B". After being filled with raw water the water is re-circulated with chlorine and alum until properly conditioned for filtration. Low level floats in the raw tanks protect the pumps from staying on when the liquid level is low.

Raw Pumps Auto Sequence:

Storage and CT tank process float needs to call for water for the pump can start to transfer water when the auto function is selected.

Equipment included:

- Low level floats
- Four (4) submersible sump pump
- Four (4) process pumps
- Two (2) chemical injection system
- Four (4) pressure regulating valves (PRV)

Chemical Injection Sequence:

The Alum and hypochlorite is controlled by a timer relay in the control panel. When the start button is activated the chemical pumps turn on for the selected period of time.

Table 3:

Event	Action
Low Level shut off in raw tanks	Process pumps shut down
Low level in CT tanks	Process pumps turn on if the auto function is selected

Table 3: Float Position Description.

Raw Water Filtration System:

When the chemically condition water is ready to be filtered process valves are opened to allow flow through the filtration equipment. The water is filtered, disinfected, measured and transferred to the storage building.

Equipment Included:

- Three (3) 20" - 75-25 micron dual gradient filters
- Three (3) 20" – 20 micron pleated filters
- One (1) 21" multimedia filter
- Two (2) cartridge membrane filtration units
- Two (2) UV disinfection units
- Three (3) Carbon block cartridge filters
- Two (2) 1 micron filtration units
- One (1) millivolt pulse totalizing meter
- One (1) Stenner chemical injection pump
- One (1) 750 imperial gallon waste storage tank
- Two (2) waste discharge pumps
- One (1) waste totalizing meter

Chemical Injection Sequence:

The chemical injection system is controlled by the flow meter. The flow meter sends a millivolt pulse from that is converted to an ON and OFF signal. The pump is manually set to deliver a standard dose of hypochlorite to disinfect the filtered water.

Backwash Sequence:

Back wash water for the multi-media filter is pumped over from the CT tanks. When the filter head controller calls for treated water it is delivered by the pressure from the distribution system. The backwash water is stored in a 750 imp gallon tank.

Backwash Discharge System:

The waste storage and discharge system is designed to discharge backwash water over a set amount of time. This is done by setting the recirculation valve to the desired pressure and allowing the pumps to discharge small amounts of waste per day.

CT Storage and Distribution System:

The CT storage system allows the chlorine and the filtrate to rest for a predetermined amount of time. The disinfected water is then distributed to the camp by using to submersible pumps on a re-circulation header.

Equipment Included:

- Five (5) 1750 Imp Gallon Storage tanks
- One (1) Stenner Chemical injection pumps
- One (1) Redox monitor
- NTU monitor HACH 1720
- Two (2) distribution pump systems
- Pressure regulating valves (PRV)
- Low level shut off float

Table 4:

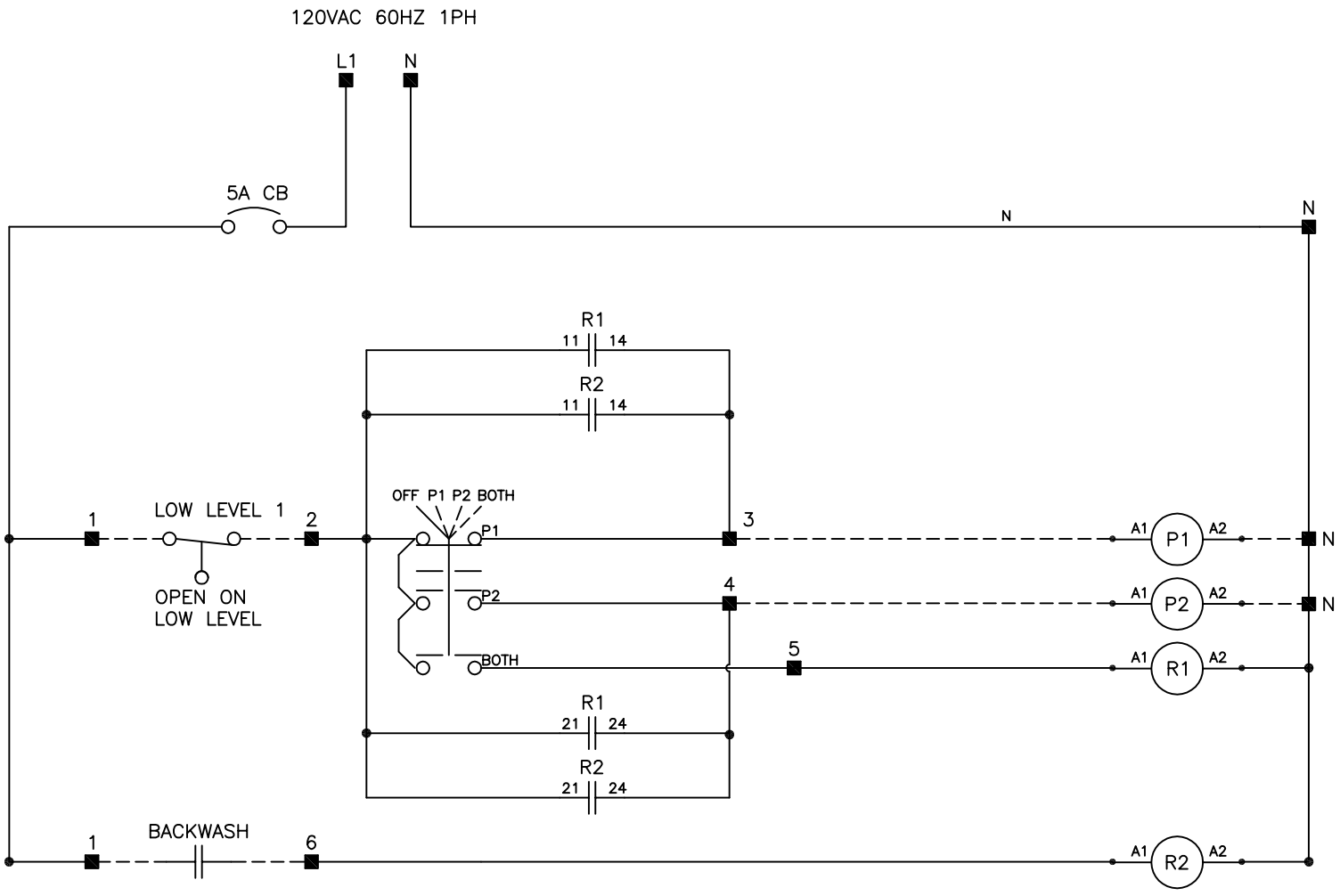
Event	**Action**
Low Level shut off in Ct storage tanks	Distribution pumps shut down
Process start float	Starts process pumps if selector switch is in auto

Table 4: Float Position Description.

Conclusion:

The 100 man WTP has safety systems hard wired in to protect the people and equipment. All the process pumps are equipped with low level floats to ensure the pumps never run without water. The chlorine injection system ensures the water is properly disinfected before being distributed to the public.

3.0 Atek Water System – Treated Water Pumps Electrical Drawings 100 Man



STARTER UNIT
CONTROL TERMINAL
8WA1011–1DG11

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		DRAWN:	JB	01.04.12	A			
		CHKD:			B			
		APPRVD:			C			

CUSTOMER: ATEK WATER SYSTEMS

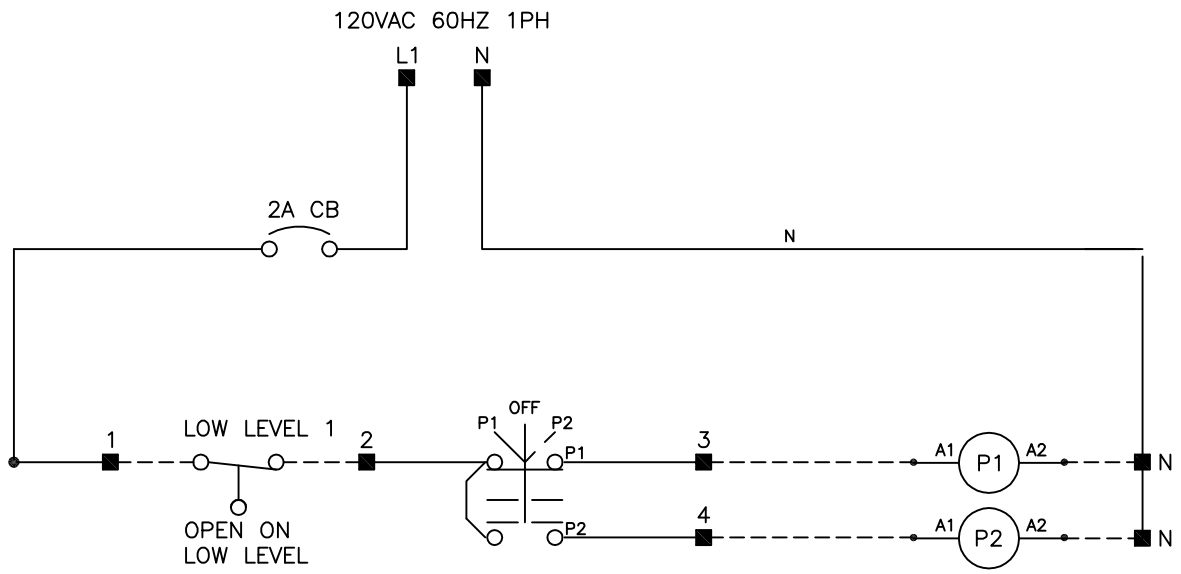
ORDER NO: 1201–1388

ECM

TITLE: TREATED WATER PUMPS

DRAWING NO: (3)PNL–1201–1388–S003

REV: 0



STARTER UNIT
CONTROL TERMINAL
8WA1011-1DG11

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		DRAWN:	JB	01.04.12	A			
		CHKD:			B			
		APPRVD:			C			

CUSTOMER: ATEK WATER SYSTEMS

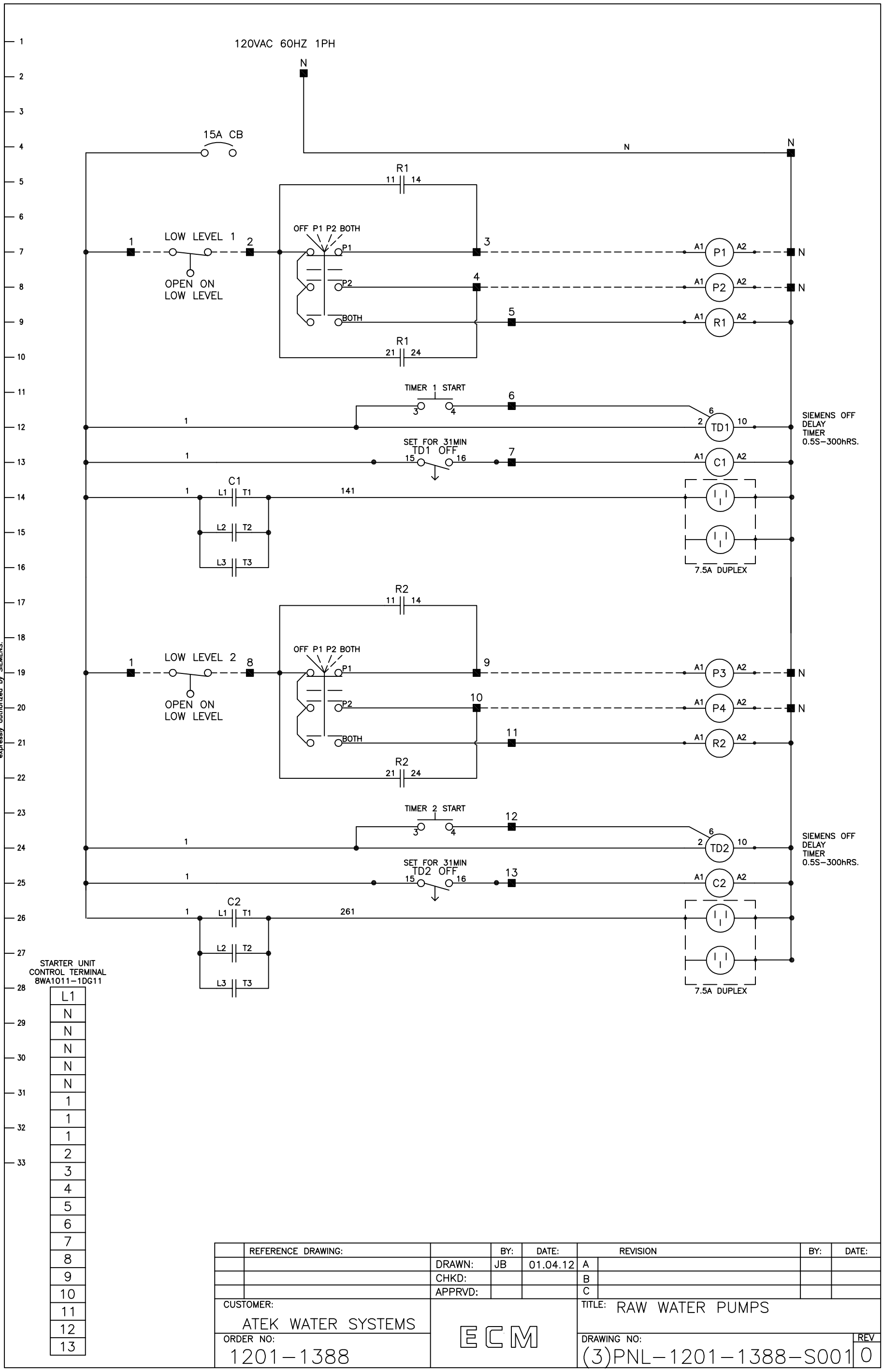
ECM

TITLE: WASTE WATER HUSKEY

ORDER NO: 1201-1388

DRAWING NO: (3)PNL-1201-1388-S002

REV: 0



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		DRAWN:	JB	01.04.12	A		
		CHKD:			B		
		APPRVD:			C		

CUSTOMER: ATEK WATER SYSTEMS

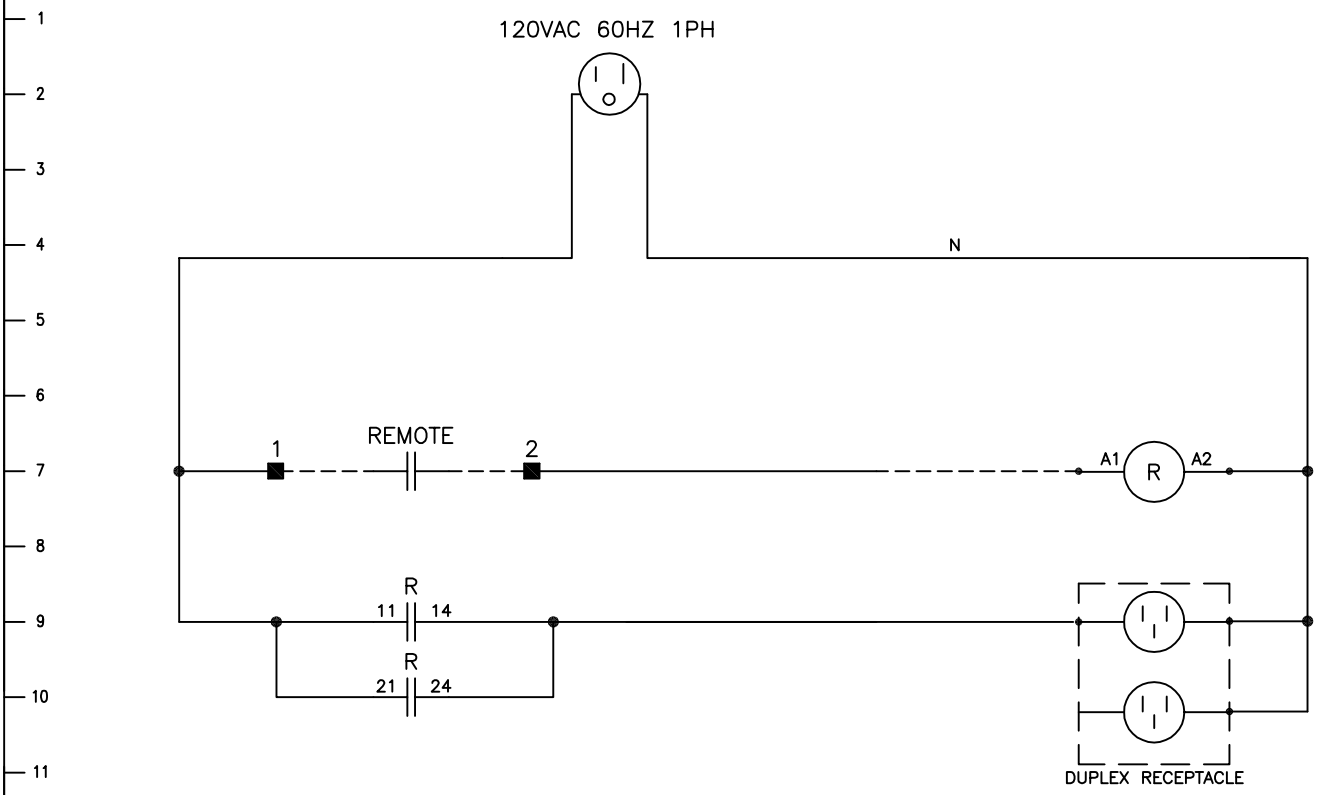
ORDER NO: 1201–1388

ECM

TITLE: RAW WATER PUMPS

DRAWING NO: (3)PNL–1201–1388–S001

REV: 0



STARTER UNIT
CONTROL TERMINAL
8WA1011–1DG11

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		CHKD:			B			
		APPRVD:			C			

CUSTOMER: ATEK WATER SYSTEMS

ECM

TITLE: RECEPTACLE BOX

ORDER NO: 1201–1388

DRAWING NO: (3)PNL–1201–1388–S004

REV: 0

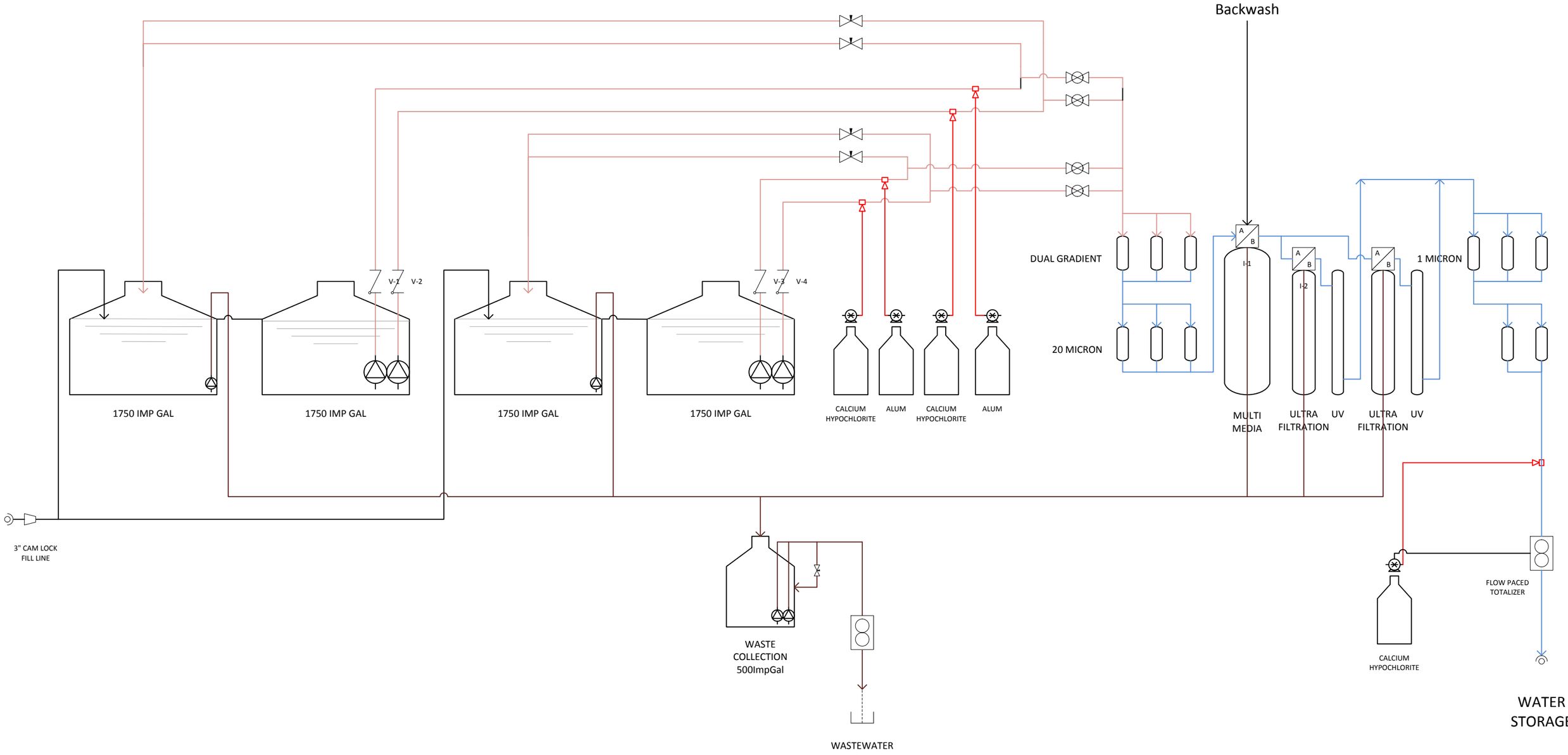
4.0 Husky Water Treatment Plant – P&ID

4.1 65-130 Man Water Treatment Plant (WTP)

4.2 65-130 Man – CT and Distribution Storage Building

4.3 50 -100 Man Raw Water Treatment Building

4.4 50-100 Man Water Treatment & Distribution Building



REVISIONS

DATE	DRAWN BY	REVIEWED BY	APPROVED BY	REVISION
OCT 12, 2012	AW	AW		
JAN 21, 2013	AW	AW		

HUSKY ENERGY INC

65 - 130 MAN WATER TREATMENT PLANT (WTP)

SCALE: NOT TO SCALE

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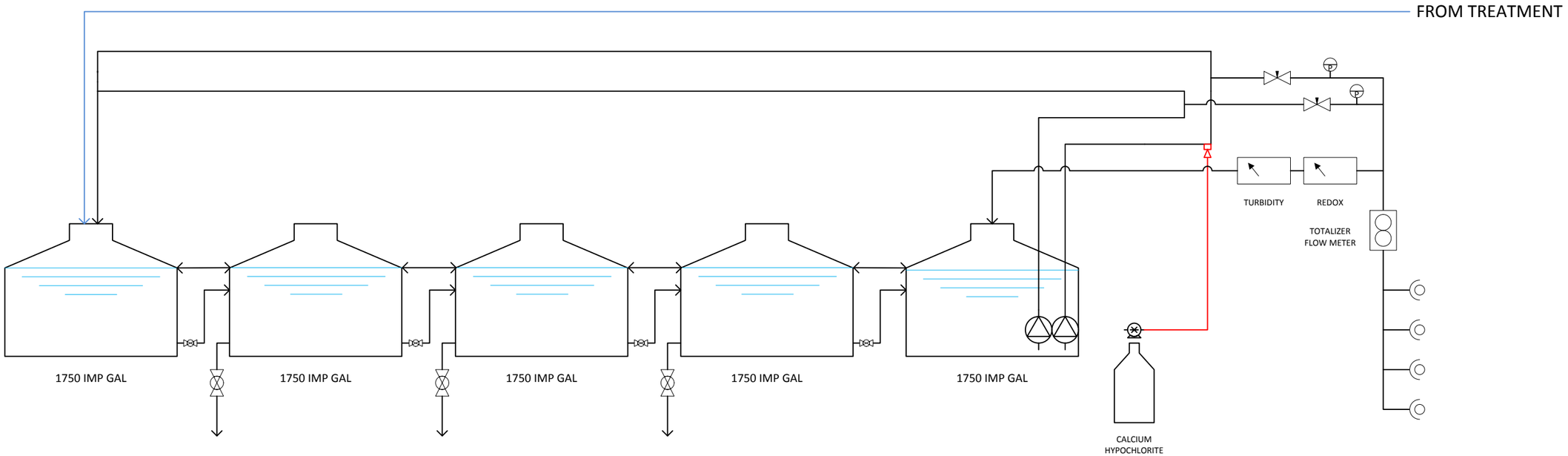


PROPRIETARY INFORMATION

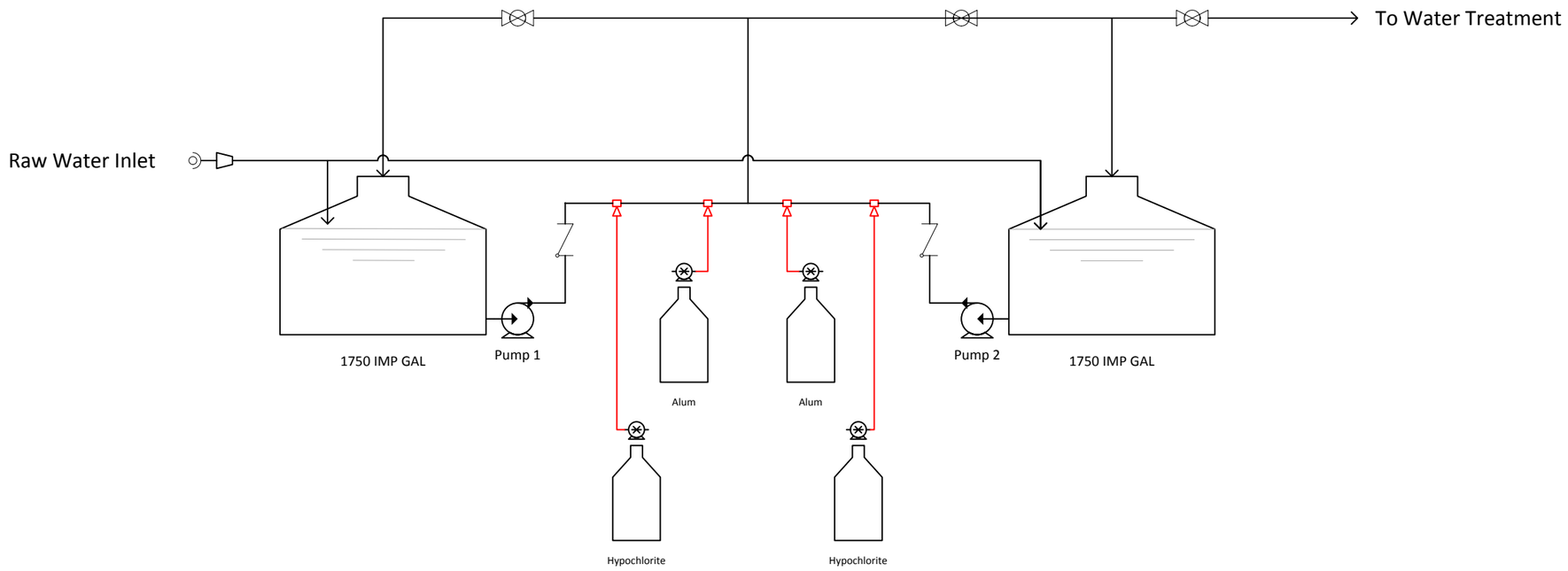
REVISIONS

DATE	DRAWN BY	REVIEWED BY	APPROVED BY	REVISION
OCT 12, 2012	AW	AW	AW	
JAN 21, 2013	AW	AW		

HUSKY ENERGY INC

65 -130 MAN - CT STORAGE AND DISTRIBUTION STORAGE BUILDING

SCALE: NOT TO SCALE



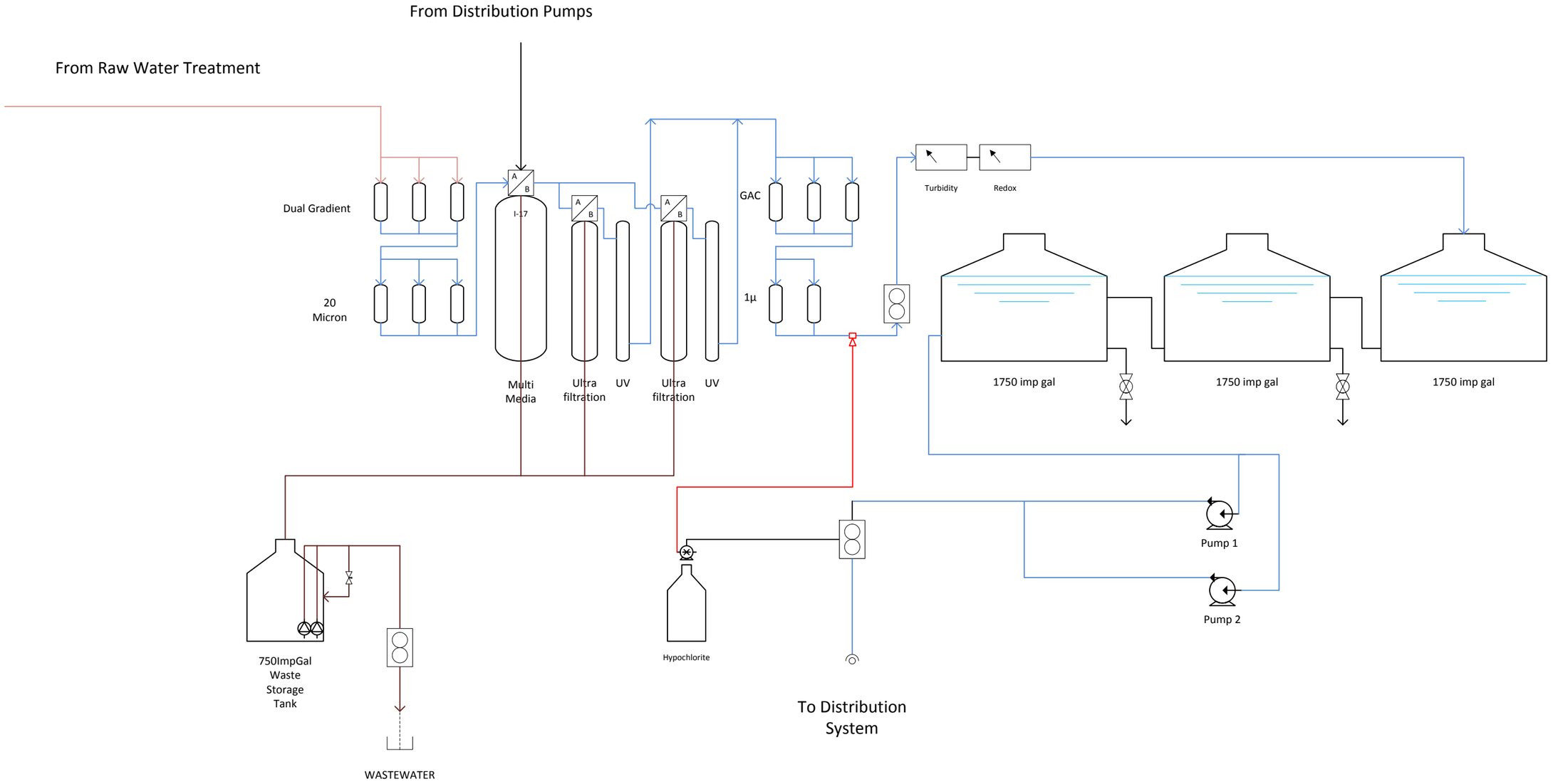
REVISIONS

DATE	DRAWN BY	REVIEWED BY	APPROVED BY	REVISION
OCT 12, 2012	AW	AW	AW	
JAN 21, 2013	AW	AW		

HUSKY ENERGY INC

50 - 100 MAN RAW WATER TREATMENT BUILDING

SCALE: NOT TO SCALE



REVISIONS

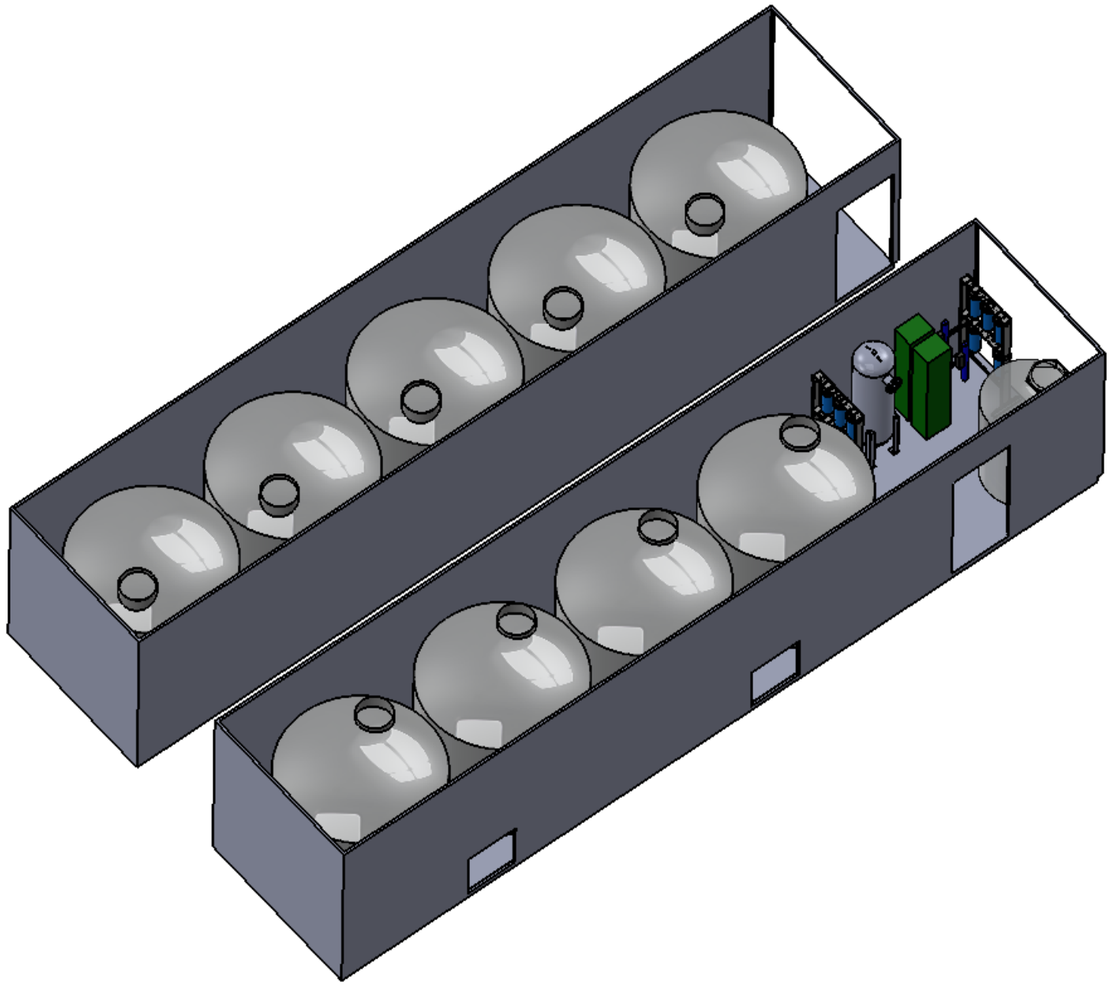
DATE	DRAWN BY	REVIEWED BY	APPROVED BY	REVISION
OCT 12, 2012	AW	AW	AW	
JAN 21, 2013	AW	AW		

HUSKY ENERGY INC

50 - 100 MAN WATER TREATMENT AND DISTRIBUTION BUILDING

SCALE: NOT TO SCALE

5.0 Water Treatment Plant Skid General Arrangement Drawings



NOTES

1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE STATED

GENERAL TOLERANCES:

Fractions: ± 1/32, Decimals: .X ±0.1, .XX ±0.01

REVISION DATE	DRAWN BY	APPD BY	DESCRIPTION
JAN 22,13	SA	JM	DRAFT
JAN 23, 13	SA	JM	IFR

DESCRIPTION:

PROJECT:

HUSKY MAX. 130 MAN CAMP

WTP SKID GENERAL ARRANGEMENT DRAWINGS

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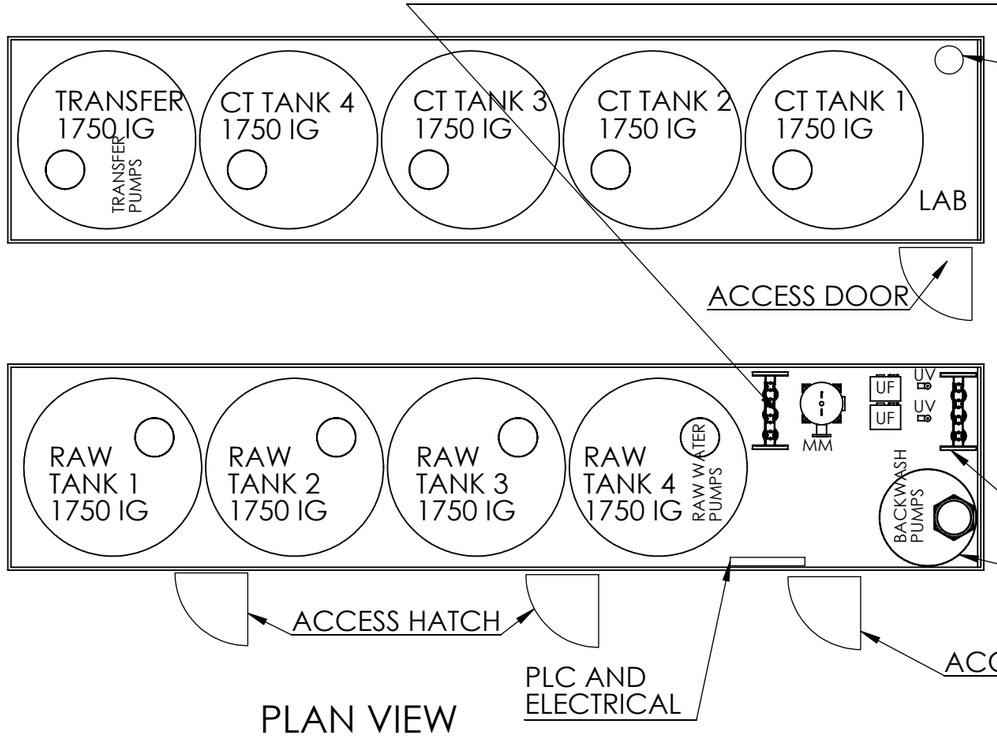
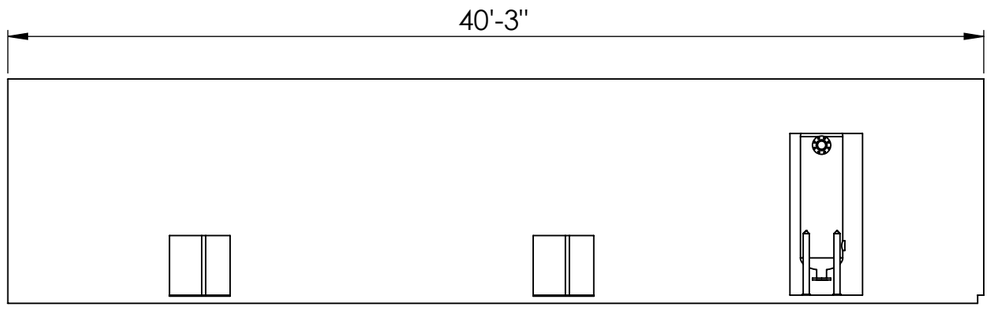
SCALE: 1:75 | SIZE: B | PAGE 1 OF 2

DO NOT SCALE DRAWING

3 Big Blue housings 1.5” with DG-7525-20 cartridges both housing and cartridges Pentek
3 Big Blue housings 1.5” with DG-5005-20 cartridges both housing and cartridges Pentek



PLAN VIEW



SIDE VIEW

NOTES:

MM - ATMM21 Multimedia with separate source backwash
UF - 2 ONLY UF filters RSUF24040S Waterite/Turi
UV - 2 ONLY UV SCM 600 UV sterilite/viqua

NOTES:

1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE STATED
2. SCALE IS ONLY VALID FOR ORIGINAL DRAWINGS. DO NOT SCALE DRAWINGS.

GENERAL TOLERANCES:

Fractions: ± 1/32, Decimals: .X ±0.1, .XX ±0.01

REVISION DATE	DRAWN BY	APPD BY	DESCRIPTION
JAN 22,13	SA	JM	DRAFT
JAN 23, 13	SA	JM	IFR

FILE NAME:

General Arrangement Husky Max. 130 Man

PROJECT:

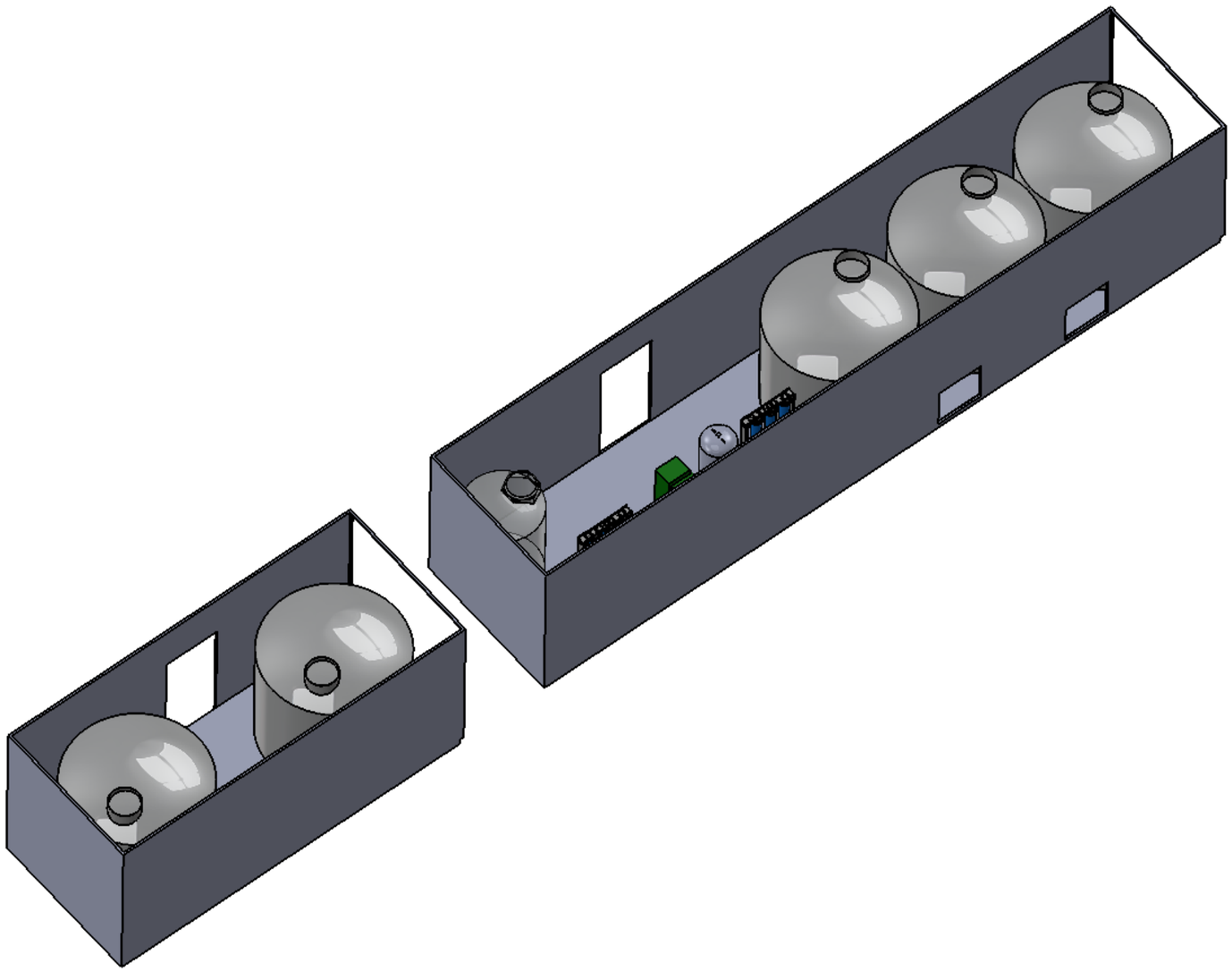
HUSKY MAX. 130 MAN CAMP

WTP SKID GENERAL ARRANGEMENT DRAWINGS

BANNER
environmental engineering consultants ltd

SCALE: 1:75 | SIZE: **B** | PAGE 2 OF 2

DO NOT SCALE DRAWING



NOTES

1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE STATED

GENERAL TOLERANCES:

Fractions: ± 1/32, Decimals: .X ±0.1, .XX ±0.01

REVISION DATE	DRAWN BY	APPD BY	DESCRIPTION
JAN 22,13	SA	JM	DRAFT
JAN 23, 13	SA	JM	IFR

DESCRIPTION:

PROJECT:

HUSKY MAX. 100 MAN

WTP SKID GENERAL ARRANGEMENT DRAWINGS

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SCALE: 1:75 | SIZE: B | PAGE 1 OF 2

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NOTES:

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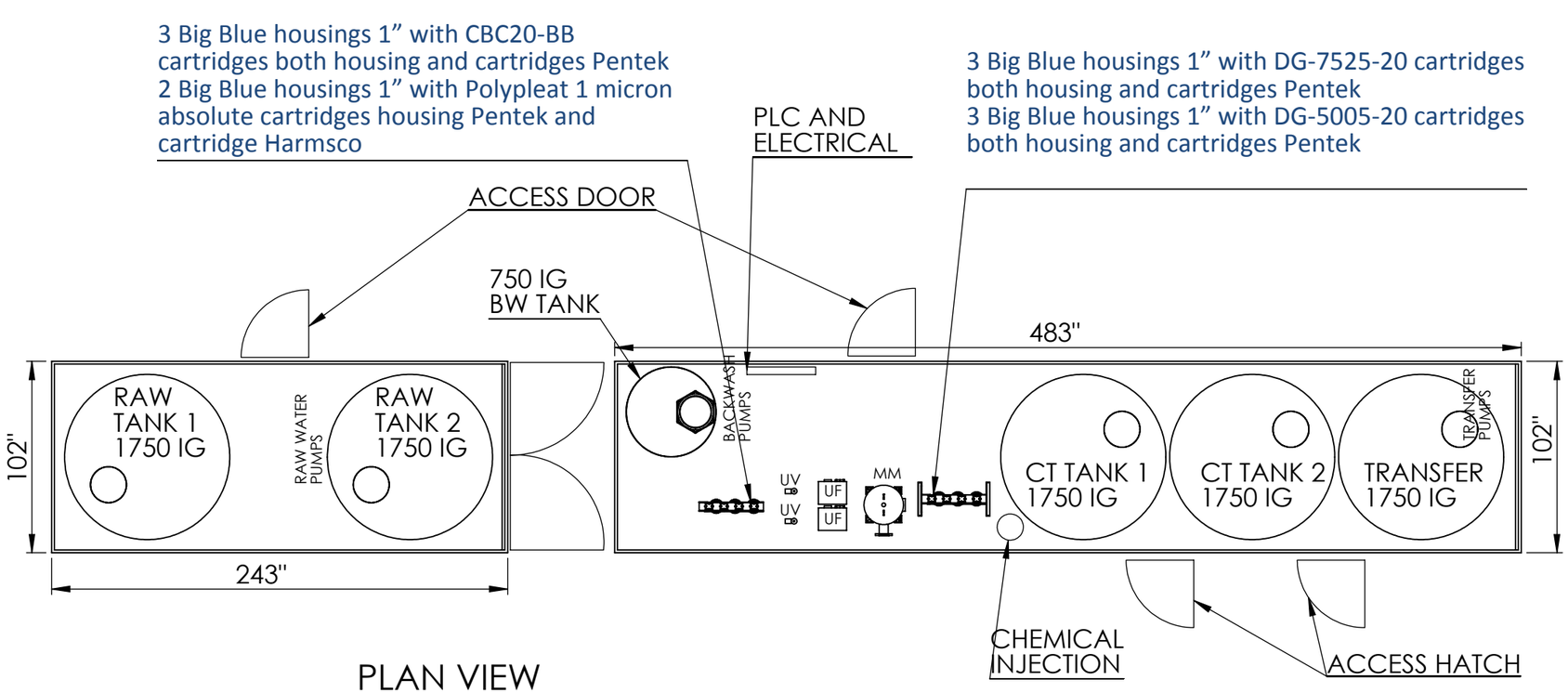
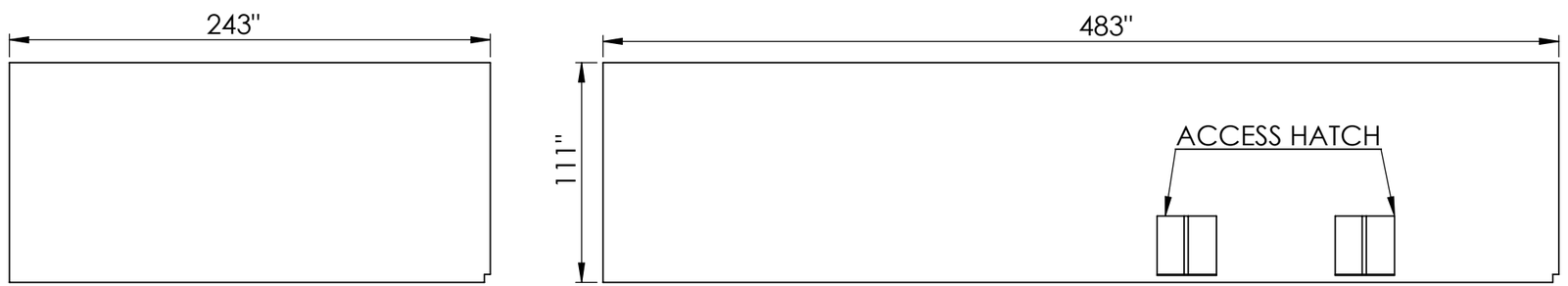
GENERAL TOLERANCES:

Fractions: ± 1/32, Decimals: .X ±0.1, .XX ±0.01

REVISION DATE	DRAWN BY	APPD BY	DESCRIPTION
JAN 22,13	SA	JM	DRAFT
JAN 23, 13	SA	JM	IFR



PLAN VIEW



SIDE VIEW

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FILE NAME:

General Arrangement Husky Max. 100 Man

PROJECT:

HUSKY MAX. 100 MAN

WTP SKID GENERAL ARRANGEMENT DRAWINGS

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SCALE: 1:75 | SIZE: **B** | PAGE 2 OF 2

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