

LIQUID SAMPLING PLAN— CLEANER AIR OREGON

J.H. BAXTER & CO.
EUGENE, OREGON



MAUL
FOSTER
ALONGI

Prepared for
LANE REGIONAL AIR PROTECTION AGENCY

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ACRONYMS AND ABBREVIATIONS

50/50	50/50 Heavy Oil Blends of Creosote and Bunker C Oil
ACQ	Alkaline Copper Quaternary, Type B
ACZA	Ammoniacal Copper Zinc Arsenate
CAO	Cleaner Air Oregon
COC	chain-of-custody
existing permit facility	Standard Air Contaminant Discharge Permit No. 200502 J.H Baxter & Co. wood preservation facility located at 3494 Roosevelt Blvd. in Eugene, Oregon
JHB	J.H. Baxter & Co.
LRAPA	Lane Regional Air Protection Agency
MFA	Maul Foster & Alongi, Inc.
MMBtu/hr	million British thermal units per hour
OAR	Oregon Administrative Rule
OWS-32	south tank farm oil-water separator
OWS-32B	north tank farm oil-water separator
PAHs	polycyclic aromatic hydrocarbons
PCP	pentachlorophenol
VOC	volatile organic compound
USEPA	U.S. Environmental Protection Agency

1 INTRODUCTION

J. H. Baxter & Co. (JHB) owns and operates a wood preservation facility located at 3494 Roosevelt Boulevard in Eugene, Oregon 97402 (the facility). The facility currently operates under Standard Air Contaminant Discharge Permit No. 200502 (existing permit) issued by the Lane Regional Air Protection Agency (LRAPA) on June 6, 2018.

On December 2, 2019, JHB received written notice from LRAPA that the facility was being called in to the Cleaner Air Oregon (CAO) program. Per Oregon Administrative Rule (OAR) 340-245-0030(1)(a)(A), the next step of the CAO process was to submit the CAO emissions inventory no later than 90 days after the call-in notice date, which would have been no later than March 2, 2020. JHB retained Maul Foster & Alongi, Inc. (MFA) to assist the facility with this initial step of the CAO process, including the CAO emissions inventory submittal.

On February 13, 2020, the facility submitted a request for an extension of the CAO emissions inventory submittal deadline to LRAPA following the criteria set forth under OAR 340-245-0030(3). As a part of the extension request justification, the facility proposed to submit a liquid sampling plan to LRAPA for approval prior to conducting the liquid sampling. Sampling of process liquids is necessary for emission calculations required by CAO because emission factors do not readily exist for the wood preservation industry, and especially not for the extensive list of chemicals regulated under the CAO program.

On February 20, 2020, LRAPA approved the extension request on the condition that the facility submit the liquid sampling plan by March 6, 2020. The remainder of this liquid sampling plan outlines the proposed sample collection methodologies and analyses.

2 FACILITY DESCRIPTION

2.1 Facility Location

The facility is located in Eugene, Oregon, within the Eugene urban growth boundary. Adjacent to the northern and southern property boundaries are Roosevelt Boulevard and the Central Oregon & Pacific Railroad line, respectively. The area immediately surrounding the facility is characterized primarily by residential land-use zoning to the north and light-to-heavy industrial zoning to the east, west, and south. An aerial image of the facility location and property boundary is shown in Figure 2-1. A site detail map presenting the general layout of the facility and the north and south tank farms areas are shown in Figures 2-2 and 2-3, respectively.

2.2 Process Description

The facility treats multiple commodity types including poles, railroad ties, glued laminated timbers (i.e. glulams and powerlams), pilings, posts, original equipment manufacturer parts and components, and miscellaneous lumber products. The majority of facility production is associated with the treating of poles, miscellaneous lumber products, railroad ties, and glulams, which together account for roughly 90 percent of total production.

Each commodity is treated under high pressure and temperature to standards established by the American Wood Protection Association using one of the wood preservative solutions shown in Table 2-1.

Table 2-1. Wood Preservative Solution Usage at the Facility

Preservative Solution Type	Preservative Solution Composition
Pentachlorophenol (PCP)	Oil-Based
Ammoniacal Copper Zinc Arsenate (ACZA)	Waterborne
50/50 Heavy Oil Blends of Creosote and Bunker C Oil (50/50)	Oil-Based
Creosote	Oil-Based
Alkaline Copper Quaternary—Type B (ACQ)	Waterborne

The facility receives green and previously kiln-dried wood from off-site sources by truck and the adjacent railroad. Unloaded material can be sent to the woodworking area for incising prior to treatment or directly to the treatment process. On-site lumber drying kilns can also be used to reduce the moisture content of green wood if required by the predetermined treatment process.

The treating process begins by packing untreated commodities into bundles on a tram. The bundle configurations vary depending on the commodity type and what retort will be used. A typical retort charge can range from two to 19 individual trams. After tram loading is complete, the entire tram is rolled into one of five wood treating cylinders (referred to as “retorts”) and sealed. Each retort has a unique identification number as shown in Table 2-2. Each retort is capable of using multiple preservative solutions except for Retort no. 85.

Table 2-2. Wood Preservative Solutions per Retort

Retort no.	Preservative Solution Option(s)
81	Creosote, 50/50 Blend, or PCP
82	ACZA or PCP
83	Creosote or 50/50 Blends
84	ACQ or ACZA
85	PCP

The following process description is representative of the typical PCP treatment process at the facility (PCP represents the most frequently used preservative solution). It is important to note that the individual treatment process steps may vary depending on the preservative solution used and product

specifications. Differences in the treatment process steps for the various preservative solutions have been noted below, where relevant. A process flow diagram outlining the wood treatment process and points of potential emissions to atmosphere is presented in Figures 2-4 and 2-5 for additional clarity.

Once the retort is sealed, a vacuum pump is activated to allow for the preservative solution to fill the retort. A work tank is used to supply the retort with the desired preservative solution. After filling is complete, while maintaining the vacuum, the retort temperature is increased to properly boultonize the wood product. Boultonizing conditions the wood by boiling off water entrapped deep in the wood pores.

Vapors generated during the conditioning process are routed to a condenser. The condenser removes liquid from the exhaust stream. Liquids removed by the condenser are routed to a hot well (i.e. sealed vessel) prior to flowing, via gravity, to a downstream collection sump. An open top catch basin is located directly below the hot well for maintenance purposes only. Process liquids collected in the sump are delivered to a recovery tank prior to entering the process water treatment system. The dried exhaust stream is routed to a knock-out drum prior to exhausting to atmosphere through the PCP stack. The dried exhaust stream during heavy oil charges are routed to a downstream air pollution control device for control of volatile organic compound (VOC) emissions prior to emitting to atmosphere.

A boiler is used to supply steam for heating during the wood treatment process. The boiler can be fueled by either natural gas-fired combustion during normal operation, or by supplemental no. 2 distillate fuel oil-fired combustion. The facility has two boilers onsite: the Kewanee boiler and the Stone Johnston boiler. The Kewanee and Stone Johnston boilers have maximum heat input capacities of 25.2 million British thermal units per hour (MMBtu/hr) and 16.8 MMBtu/hr, respectively.

After conditioning is complete, the retort is drained under atmospheric pressure and sealed. Compressed air is then held for a pre-designated amount of time at a specific pressure point, depending on product specifications. Pressure is released after the pre-designated amount of time has passed. The retort is then completely filled with preservative solution for second time. Displaced volumes of air, generated as the pressure is released and the retort is filled, are routed to the headspace of the specified PCP work tank.

Once the retort is completely filled for a second time, the pressure inside the retort is increased using a high-pressure pump. During this pressure period, no process vapors or preservative solution exits the retort. Pressure is then released during the expansion bath period when a portion of the preservative solution flows out of the wood and retort, and back into the work tank. At the same time, the vacuum is activated, and the temperature of the preservative solution inside the retort is increased. Vapors generated during the expansion bath period are routed to the downstream condenser, similar to the conditioning process described above.

Following the expansion bath period, the vacuum is released, and fresh air is drawn into the retort at atmospheric conditions. Preservative solution remaining in the retort is pumped back to the work tank for future use. After the retort is emptied, the vacuum is re-activated, and the steam cleanup process begins. The steam cleanup process is initiated by injecting live steam, or steam-under-pressure, into the retort. The live steam helps to recover preservative solution remaining in the retort. Displaced

volumes of air drawn by the vacuum pump are routed to the downstream condenser, similar to the conditioning process described above.

It is important to note that during heavy oil (i.e., creosote or 50/50 blends) treatment cycles, process exhaust during steam cleanup is routed to the live steam pot. The live steam pot is used to condense process liquids, which are routed to the heavy oil recovery tank for re-use. Exhaust from the live steam pot is routed to the headspace of work tank no. 4. The presence of the downstream control device (i.e., the carbon ventilation system), which is connected to the headspace of work tank no. 4, causes a negative pressure to build-up in the vacuum system. The negative pressure build-up prevents the removal of the last remaining preservative solution in the retort. As a result, the negative pressure is released during the final 5 to 10 minutes of the steam cleanup cycle to allow for the collection of the last remaining preservative solution in the retort. During this time, exhaust from the live steam pot is routed to the bypass vent stack.

After steam cleanup of the retort is complete, the final vacuum system is initiated by turning on the vacuum pump to further extract excess preservative solution for re-use. Once the final vacuum is released, the retort doors are cracked open while the vacuum pump is still on. The vacuum pump pulls in fresh air allowing for the charge to cool inside the retort. This process is referred to as the “crack-and-vac” cycle. Displaced volumes of air drawn by the vacuum pump are routed to the downstream condenser, similar to the conditioning process described above.

Next, the cooled tram is rolled onto the drip pad to air dry until the treatment engineer certifies that the charge is no longer dripping. Treated bundles are then loaded onto outbound trucks or trains for customers. However, if no orders are awaiting shipment, treated bundles are moved to the storage yard for future shipment offsite.

Multiple storage tanks and work tanks are used to store and supply the preservative solutions to specific retorts. Additional miscellaneous storage tanks are used to store raw materials including bunker C oil, hydrocarbon solvent type A oil, and aqueous ammonia, among others. Various storage tanks are also used to store water, collect rainwater, or store diesel for use by various equipment onsite, such as forklifts.

PROCESS WATER TREATMENT SYSTEM

The process water treatment system is used to collect, treat, and recycle preservative solutions and process water as shown in Figure 2-5. This process is primarily used to recover PCP and heavy oil preservative solutions (i.e., creosote and 50/50 blend preservative solutions) after use in a treatment cycle.

As previously mentioned, multiple sumps are used to collect condensed liquids from process vapors during the various steps of a treatment cycle. Condensed liquids are collected in hot wells. Hot wells are sealed vessels that route condensed liquids, via gravity, to downstream collection sumps. The collection sumps are connected to vertical tanks for preservative solution recovery.

The effluent from the heavy oil and PCP recovery tanks are routed to specific chambers within the north tank farm oil-water separator (OWS-32B). Accumulated heavy oils and PCP in the OWS-32B are delivered directly to retort nos. 81 and/or 83, or to work tank no. 25, respectively. The effluent of

the north tank farm oil-water-separator is then routed to the south tank farm oil-water separator (OWS-32). It is important to note that OWS-32 was in use during the 2018 calendar year, but is no longer in operation, and is not planned for use within the next permitting cycle. The current configuration is to route the effluent from OWS-32B directly to Tank-41A for primary settling.

Following Tank-41A, process water is routed through a holding tank, dosing tanks (for caustic and alum injection), a clarifier, and a clearwell prior to flowing through two parallel carbon filters. The effluent of the carbon filters is collected in the evaporator feed water tank identified as Tank-43C. Tank-43C is only used to feed treated process water into the evaporator. Process water used by the condensers is also fed into the evaporator for cooling. The overall purpose of the evaporator is to evaporate treated process water (i.e. the effluent from Tank-43C), and to cool and recirculate the process water from the condensers in a closed-loop system. Sludge accumulation in the evaporator is sent to the J-Press for eventual removal offsite.

STORMWATER TREATMENT SYSTEM

Stormwater collected by catch basins placed at strategic locations throughout the property is routed to two collection sumps. The two collection sumps are used to feed three stormwater treatment system influent storage/holding tanks that are exposed to atmospheric conditions (i.e., open top tanks). Each influent storage/holding tank can hold approximately 1 to 1.3 million gallons of stormwater.

The effluent from each holding tank is pumped to the stormwater treatment system, which is comprised of the following tanks: a pretreatment tank, an inclined clarifier, four multi-media filter tanks, a pH adjustment tank, four activated carbon filter tanks, sludge holding tanks, a filter press, and two backwash tanks. The stormwater treatment system is used to remove metals (primarily arsenic, copper, and zinc) and VOCs from stormwater. Treated effluent from the stormwater treatment system is discharged to the south ditch via outfall 001.

GROUNDWATER TREATMENT SYSTEM

A groundwater treatment system is currently in use to remediate and prevent a PCP-contaminated groundwater plume from migrating off site. Groundwater is supplied to the groundwater treatment system via three extraction wells. Each extraction well is routed to the collection well tank prior to entering the sand filter tank. The effluent from the sand filter tank is pumped into one of two carbon filter tanks in series.

A backwash tank is used to supply water to the sand filter tank to prevent clogging. The carbon filter tanks contain activated carbon, which is used to remove PCP from groundwater. Treated effluent from the carbon filter tanks is pumped to one of two holding tanks prior to discharging to the west ditch via outfall 002. Each tank within the groundwater treatment system is exposed to atmospheric conditions (i.e., open top tanks).

MILL POND

A historical mill pond is located in the southwest corner of the facility, adjacent to the stormwater treatment system. Rainwater and runoff represent the only inputs to the mill pond. No inlet or outlet pipe networks are connected to control the standing water level of the mill pond.

3 PROPOSED SAMPLING PLAN

The following sections detail where the facility will collect liquid samples, how the facility will collect samples, and which test methods will be used by the analytical laboratory to test the composition of the liquid or oil sample. A summary of the proposed sampling campaign is presented in Table 3-1.

3.1 Proposed Sample Collection Locations

Raw material and process samples will be collected as a part of the proposed sampling campaign. Raw material samples will include the following (proposed unique sample IDs are shown in parentheses):

- PCP Work Tank Sample (PCP-01)
- 50/50 Blend Work Tank Sample (BLND-01)
- Bunker C Oil Work Tank Sample (OIL-01)

Process samples will include the following (proposed unique sample IDs are shown in parentheses):

- PCP Hot Well Sample (PCPHW-01)
- Heavy Oil Hot Well Sample (HOHW-01)
- ACZA Hot Well Sample (ACZAHW-01)
- North Tank Farm Oil-Water Separator Sample—Heavy Oil Chamber (OWSHO-01)
- North Tank Farm Oil-Water Separator Sample—PCP Chamber (OWSPCP-01)
- Evaporator Influent Sample (EVAP-01)
- Stormwater Treatment System Influent Sample (STRM-01)
- Mill Pond Sample (POND-01)

The proposed sample collection points are identified in Figures 2-4 and 2-5 with the unique sample IDs shown above. Where possible, samples will be collected from a flowing line via a sampling port. Sampling personnel will ensure collected samples are representative of the specific process or preservative solution currently in use at the facility.

The stormwater treatment system sample will be a time-composite sample, collected from the effluent of each storage/holding tank by facility sampling personnel. The time composite sample will be achieved by collecting an equal volume of discrete sample aliquots at a constant time interval from each storage/holding tank, and combining them into a single sample container. The sample container will be provided by the analytical laboratory. A time composite sample is appropriate because the

operation of each storage/holding tank is identical, and each tank is solely used to collect stormwater before it is routed to the treatment equipment.

The mill pond sample will be collected as a “grab” sample from the surface of the pond. During sample collection, the sample container should be dipped with the sample container partially below the pond surface, and angled slightly upwards. Facility sampling personnel will take care to minimize collection of floating sediment and debris, or disturb bottom sediment if applicable, to avoid issues with potential cross-contamination.

Facility sampling personnel will work in close coordination with the analytical laboratory to determine the exact instructions and guidelines to follow for each sample collection event.

3.2 Proposed Sample Test Methods

The facility proposes to have the analytical laboratory conduct multiple analyses of each sample as shown in Table 3-1. The test methods shown below were determined following analytical laboratory recommendations.

- PCP (CAS 87-86-5) and polycyclic aromatic hydrocarbons (PAHs) in the liquid or oil composition by U.S. Environmental Protection Agency (USEPA) Method 8270D using gas chromatography/mass spectrometry. The list of specific PAHs include the following:

Analyte	CAS	Analyte	CAS
1-Methylnaphthalene	90-12-0	Biphenyl	92-52-4
1-Methylphenanthrene	832-69-9	Carbazole	86-74-8
2-Methylnaphthalene	91-57-6	Chrysene	218-01-9
5-Methylchrysene	3697-24-3	Dibenz(a,h)anthracene	53-70-3
1,2-Dichloroethylene	156-60-5	Dibenzofuran	132-64-9
Acenaphthene	83-32-9	Fluoranthene	206-44-0
Acenaphthylene	208-96-8	Fluorene	86-73-7
Anthracene	120-12-7	Indeno(1,2,3-cd)pyrene	193-39-5
Benz(a)anthracene	56-55-3	Naphthalene	91-20-3
Benzo(b)fluoranthene	205-99-2	o-Cresol (2-Methylphenol)	95-48-7
Benzo(a)pyrene	50-32-8	Phenanthrene	85-01-8
Benzo(g,h,i)perylene	191-24-2	Pyrene	129-00-0
Benzo(k)fluoranthene	207-08-9	Quinoline	91-22-5

- Ammonia in the liquid or oil composition by USEPA Method 350.1.

- Acetaldehyde (CAS 75-07-0), acrolein (CAS 107-02-8), formaldehyde (CAS 50-00-0), and propionaldehyde (CAS 123-38-6) in the liquid or oil composition by modifying the USEPA Compendium of Methods for the Determination of Toxic Organic Compounds TO-11.
- Phenol (CAS 108-95-2) in the liquid or oil composition by modifying USEPA Method 8270.
- Benzene (CAS 71-43-2), ethylbenzene (CAS 100-41-4), methanol (CAS 67-56-1), toluene (CAS 108-88-3), and xylenes (CAS 1330-20-7) in the liquid or oil composition by modifying USEPA Method 8015D using gas chromatography/direct injection.
- Total metals, including arsenic (CAS 7440-38-2), barium (CAS 7440-39-3), beryllium (CAS 7440-41-7), cadmium (CAS 7440-43-9), total chromium (CAS 7440-47-3), cobalt (CAS 7440-43-9), copper (CAS 7440-50-8), lead (CAS 7439-92-1), manganese (CAS 7439-96-5), mercury (CAS 7439-97-6), nickel (CAS 7440-02-0), selenium (CAS 7782-49-2), vanadium (CAS 7440-62-2), and zinc (CAS 7440-66-6), in the liquid composition by USEPA 6020B using inductively coupled plasma-mass spectrometry. Samples will be digested by US EPA Method 3005A/3010A.

Reporting limits will be dependent upon the matrix interferences present in each sample per information provided by the analytical laboratory. Field duplicates (i.e., field blanks) will also be collected for each aqueous sample location following guidance protocols provided by the analytical laboratory in order to assess field precision.

3.3 Analytical Laboratory

JHB has selected the RJ Lee Group to analyze the samples for this proposed sampling campaign. The RJ Lee Group will follow quality assurance and quality control procedures consistent with applicable American Industrial Hygiene Association, Oregon Environmental Laboratory Accreditation Program, and American Association for Laboratory Accreditation: U.S. Department of Energy Consolidated Audit Program accreditations. The RJ Lee Group is located at 2710 North 20th Avenue in Pasco, Washington.

4 QUALITY ASSURANCE AND CONTROL PLAN

4.1 Sample Protection

Clean sample containers ready for sample collection will be provided by the analytical laboratory. A label will be affixed to each sample container and marked with identifying information. Sample containers containing preservatives (pre-filled by the analytical laboratory) will not be overfilled to avoid any potential issues with dilution or reduced effectiveness of the preservative solution. Sample containers will be stored in a cooled ice chest supplied by the analytical laboratory, out of direct sunlight. Sample containers will remain in the cooled ice chest until transported to intermittent

refrigerated storage prior to shipping to the analytical laboratory (if necessary), or until shipment to the analytical laboratory.

Disposable nitrile gloves will be worn while collecting and handling samples to minimize the potential for contamination. Following the completion of sampling, used gloves will be discarded and a new pair of gloves will be worn for each sample location. Other personal protective equipment, such as eye protection, will be used as-directed by facility requirements.

4.2 Sample Labels and Fieldwork Documentation

Each sample container will have a secure affixed label with a unique identifier. The unique identifier will be representative of the sample collection point and numbered in sequential order, if multiple samples are collected at a single sample location. Information collected on the label will include the unique sample ID, sample collection date, and sample collection time. This information will match the information added to the chain-of-custody (COC) form.

The collection and location of each sample will be documented in field notes and pictures. The sampler will document the sample conditions at the time of collection including the sample temperature and the atmospheric conditions (i.e., atmospheric temperature and weather conditions). Any deviations from this sampling plan or relevant observations will be documented. A camera will also be used to further document the sample collection location and site conditions.

4.3 Quality Assurance and Quality Control

The selected analytical laboratory will perform quality control analyses (e.g., matrix spikes and method blanks) per the requirements of the test methods. Detection limits will be consistent with industry standards and, when practicable, below or comparable to promulgated regulatory standards.

4.4 Chain-of-Custody Form

A COC form will be maintained from the time the sample is collected to the arrival and subsequent processing at the analytical laboratory. Each transfer of samples and custody will be noted and signed for, and a copy will be kept by each signee. The COC form has been provided by the analytical laboratory for use by the facility and is presented in Attachment A.

4.5 Sample Handling and Shipment

After completion of the sampling campaign, the facility will ship collected samples to the following location:

RJ Lee Group, Inc.
dba Columbia Basin Analytical Laboratories
2710 N. 20th Avenue
Pasco, WA 99301

Samples will be shipped to the above location in containers provided by the analytical laboratory. Glass containers will be packed in bubble wrap to avoid breakage. Samples will be chilled by ice placed in Ziploc bags to maintain cool internal temperatures within the shipping container. The facility will take the appropriate precautions to ensure the containers are watertight to prevent any potential leaking issues during shipping.

The shipping container will be shipped with the COC forms and relevant field notes affixed to the underside of the shipping container lid. The lid of the shipping container will be sealed using custody seals such that the container cannot be opened without breaking the seal, and will be signed and dated. Custody seals will be used to demonstrate that the shipping container has not been tampered with or opened since being sealed by sampling personnel. In accordance with U.S. Department of Transportation regulations, any potentially hazardous materials will be marked, packaged, and labeled where appropriate.

Hold times are up to seven days for each analysis, and the samples will remain at or below 4° Celsius for the entire hold time. Overnight shipping is available Monday through Friday and must be shipped by 4:00 p.m. Pacific Standard Time at the nearest UPS location. The nearest UPS store location to the facility is located at 4325 Commerce Street, Suite 111, Eugene, Oregon 97402.

5 CLOSING

JHB looks forward to working with LRAPA throughout the CAO permit application process. If there are any questions or comments regarding this liquid sampling plan, please contact Jeanne Olson at (541) 689-3801 extension 3.

LIMITATIONS

The services undertaken in completing this document were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This document is solely for the use and information of our client unless otherwise noted. Any reliance on this document by a third party is at such party's sole risk.

Opinions and recommendations contained in this document apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this document.

TABLES



**Table 3-1
Summary of the Proposed Sampling Campaign
J.H. Baxter & Co. — Eugene, Oregon**

Sampling Location	Tank ID	Sample State	Analyte					
			Speciated Organic/Inorganic Compounds					Total Metals ⁽⁴⁾
			PCP	PAH ⁽¹⁾	Ammonia	Wood Organics ⁽²⁾	BTEX ⁽³⁾	
RAW MATERIAL								
Pentachlorophenol Treating Solution	WT-20	Oil-Based	Yes	Yes				
Bunker C Oil Solution	WT-03	Oil-Based		Yes			Yes	
50/50 Blend Treating Solution	WT-02	Oil-Based		Yes			Yes	
PROCESS SAMPLE								
PCP Hot Well Influent	RT-85 Hot Well	Oil-Based	Yes	Yes		Yes	Yes	
Heavy Oil Hot Well Influent	RT-83 Hot Well	Oil-Based		Yes		Yes	Yes	
ACZA Hot Well Influent	RT-84 Hot Well	Liquid			Yes	Yes		
Heavy Oil Chamber Influent of OWS-32B	OWS-32B	Oil-Based	Yes	Yes	Yes	Yes	Yes	
PCP Chamber Influent of OWS-32B	OWS-32B	Oil-Based	Yes	Yes		Yes		
Evaporator Influent	TANK-43C	Liquid	Yes	Yes	Yes	Yes	Yes	Yes
Stormwater Treatment System Influent	Storage Tank	Liquid	Yes	Yes			Yes	
Mill Pond	--	Liquid	Yes	Yes			Yes	
<i>Total Number of Samples</i>	--	--	7	10	3	6	8	1

NOTES:

BTEX = benzene, toluene, ethylbenzene, and xylenes.

OWS-32B = north tank farm oil-water separator.

PAH = polycyclic aromatic hydrocarbon.

PCP = pentachlorophenol.

REFERENCES:

- (1) Polycyclic aromatic hydrocarbons represent the following list of analytes:

Analyte	CAS	CAS
1-Methylnaphthalene	90-12-0	90-12-0
1-Methylphenanthrene	832-69-9	832-69-9
2-Methylnaphthalene	91-57-6	91-57-6
5-Methylchrysene	3697-24-3	3697-24-3
1,2-Dichloroethylene	156-60-5	156-60-5
Acenaphthene	83-32-9	83-32-9
Acenaphthylene	208-96-8	208-96-8
Anthracene	120-12-7	120-12-7
Benz(a)anthracene	56-55-3	56-55-3
Benzo(b)fluoranthene	205-99-2	205-99-2
Benzo(a)pyrene	50-32-8	50-32-8
Benzo(g,h,i)perylene	191-24-2	191-24-2
Benzo(k)fluoranthene	207-08-9	207-08-9
Biphenyl	92-52-4	92-52-4
Carbazole	86-74-8	86-74-8
Chrysene	218-01-9	218-01-9
Dibenz(a,h)anthracene	53-70-3	53-70-3
Dibenzofuran	132-64-9	132-64-9
Fluoranthene	206-44-0	206-44-0
Fluorene	86-73-7	86-73-7
Indeno(1,2,3-cd)pyrene	193-39-5	193-39-5
Naphthalene	91-20-3	91-20-3
o-Cresol (2-Methylphenol)	95-48-7	95-48-7
Phenanthrene	85-01-8	85-01-8
Pyrene	129-00-0	129-00-0
Quinoline	91-22-5	91-22-5

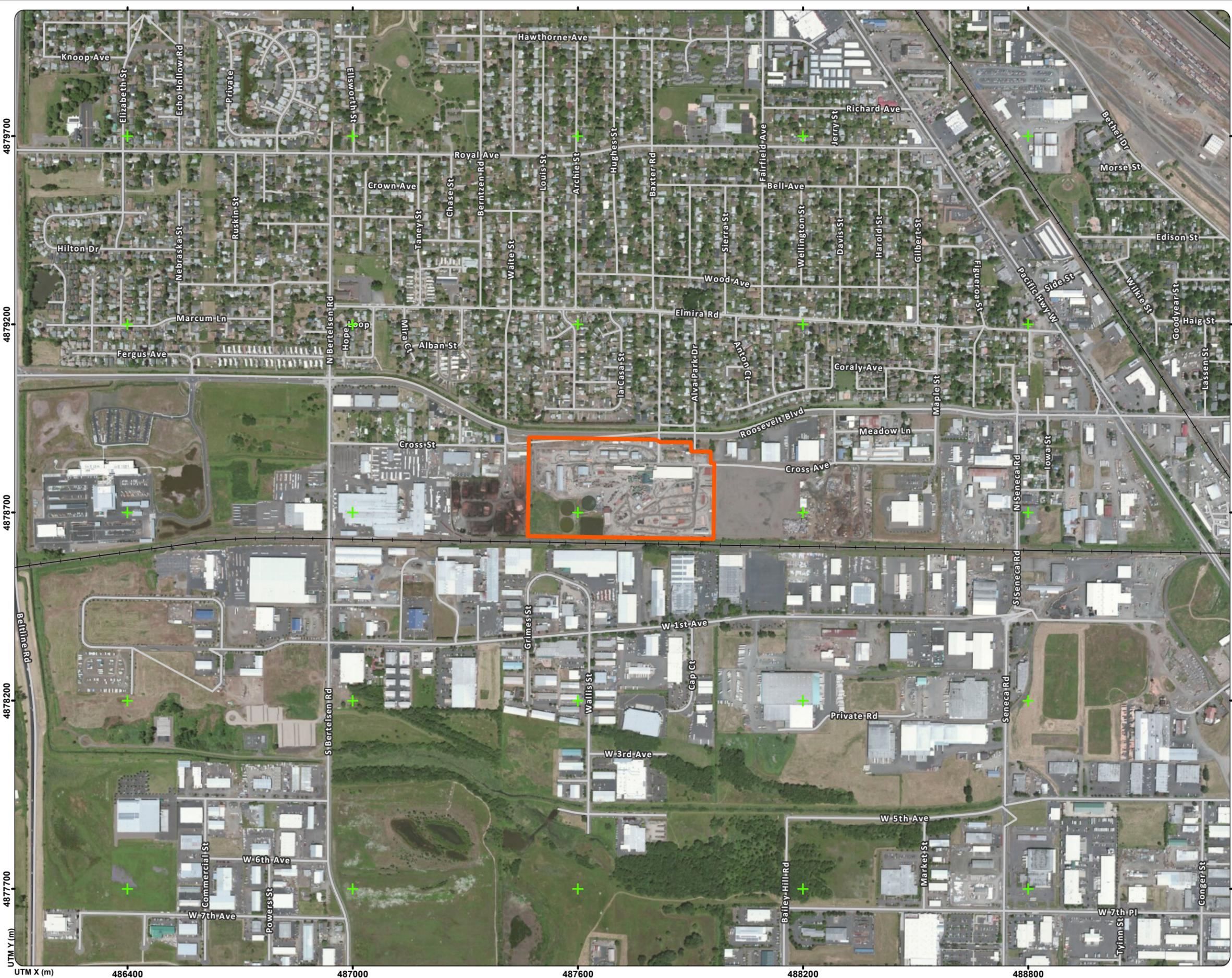
- (2) Wood organics is representative of the following analytes: Acetaldehyde (CAS 75-07-0), Acrolein (CAS 107-02-8), Formaldehyde (CAS 50-00-0), Methanol (CAS 67-56-1), Phenol (CAS 108-95-2), and Propionaldehyde (CAS 123-38-6).
- (3) BTEX is representative of the following analytes: Benzene (CAS 71-43-2), Toluene (CAS 108-88-3), Ethylbenzene (CAS 100-41-4), and Xylenes-mixed isomers (CAS 1330-20-7).
- (4) Total metals is representative of the following analytes: arsenic (CAS 7440-38-2), barium (CAS 7440-39-3), beryllium (CAS 7440-41-7), cadmium (CAS 7440-43-9), total chromium (CAS 7440-47-3), cobalt (CAS 7440-43-9), copper (CAS 7440-50-8), lead (CAS 7439-92-1), manganese (CAS 7439-96-5), mercury (CAS 7439-97-6), nickel (CAS 7440-02-0), selenium (CAS 7782-49-2), vanadium (CAS 7440-62-2), and zinc (CAS 7440-66-6).

FIGURES



Project: 1443.03.01 Produced By: aguse Approved By: 3/2/2020 Print Date: 3/2/2020 Path: X:\0461_03_JH_Baxter\01\Projects\Fig-1_Site_Aerial.mxd

Figure 2-1
Aerial Photograph of Facility
J.H. Baxter & Co.
Eugene, OR



- Legend**
-  Railroad
 -  Property Boundary
 -  UTM Grid Guideline



Source: Aerial photograph obtained from Esri ArcGIS Online



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4878854
4878754
4878654
Approved By: 4878654
Produced By: aguse
Project: 1443.03.01
UTM Y (m)
UTM X (m)

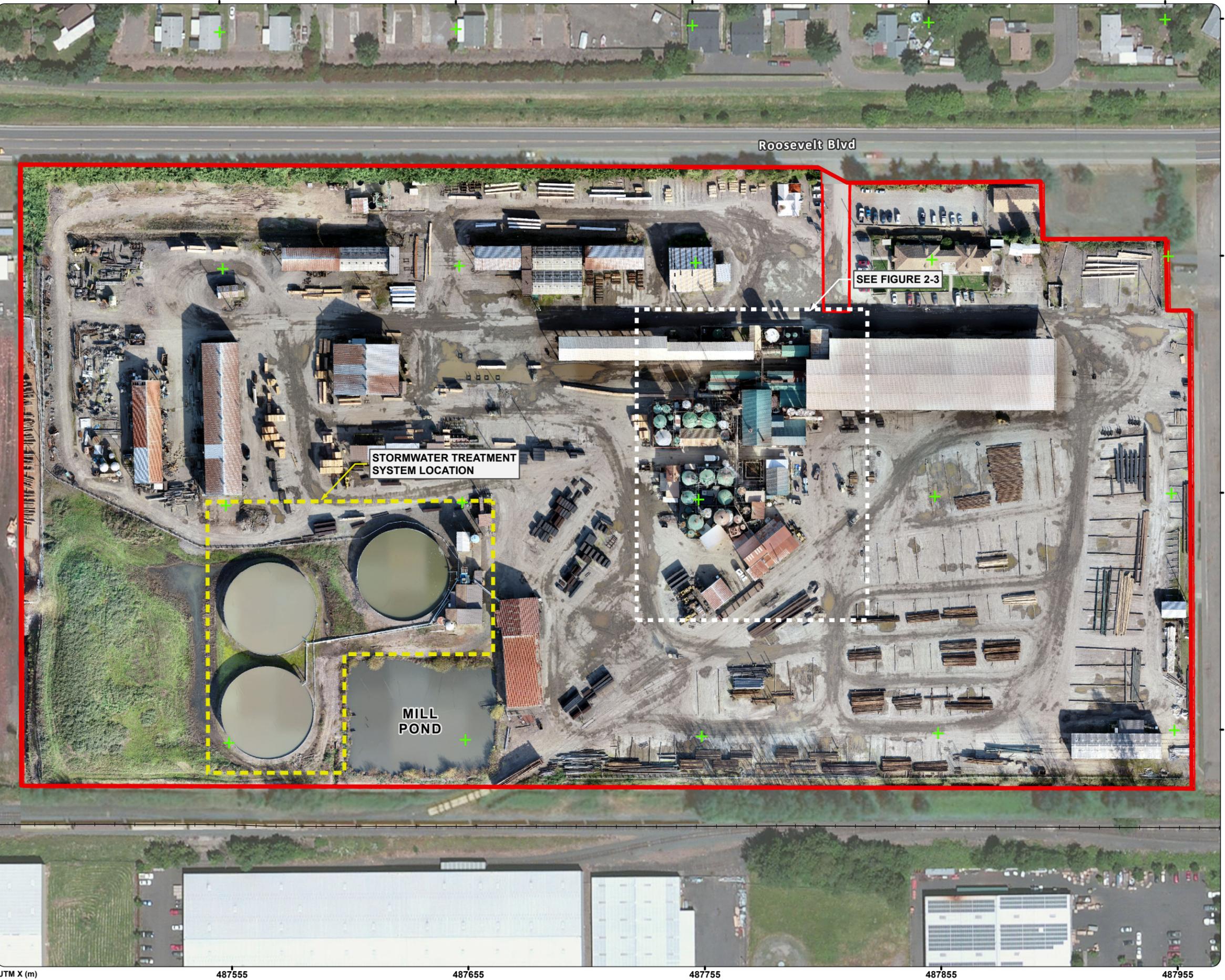


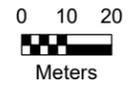
Figure 2-2 Site Detail Map- Overview

J.H. Baxter & Co.
Eugene, OR

Legend

- Property Boundary
- Railroad
- UTM Grid Guideline

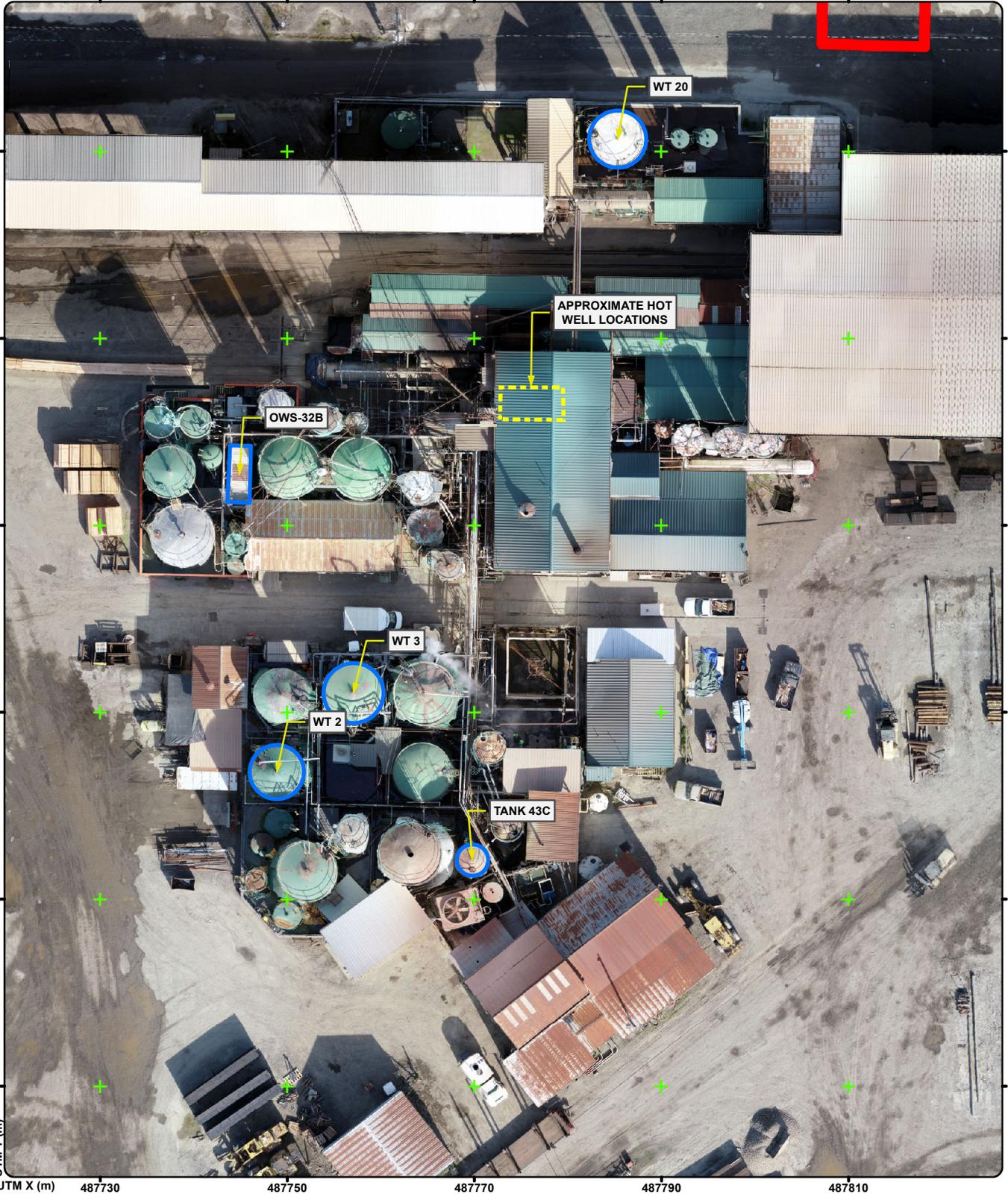
Key Map



Source: Aerial photograph obtained from
Esri ArcGIS Online



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UTM X (m) 487730 487750 487770 487790 487810

Source: Aerial photograph obtained from Esri ArcGIS Online

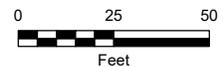
- Legend**
- Proposed Tanks for Sampling
 - + UTM Grid Guideline

Figure 2-3
Site Detail Map - Tank Farms
 J.H. Baxter & Co.
 Eugene, OR



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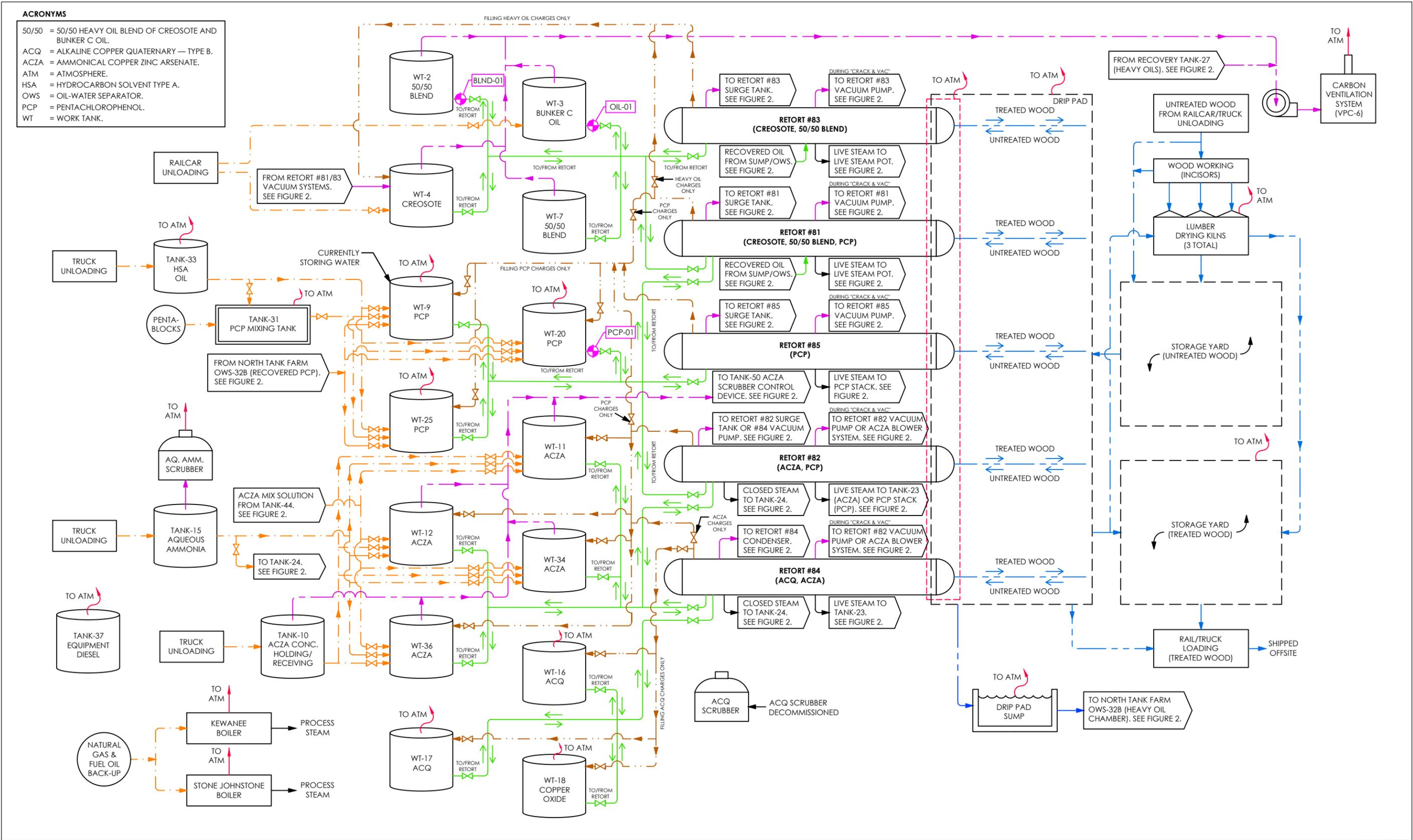
ACRONYMS

50/50 = 50/50 HEAVY OIL BLEND OF CREOSOTE AND BUNKER C OIL.
 ACQ = ALKALINE COPPER QUATERNARY — TYPE B.
 ACZA = AMMONICAL COPPER ZINC ARSENATE.
 ATM = ATMOSPHERE.
 HSA = HYDROCARBON SOLVENT TYPE A.
 OWS = OIL-WATER SEPARATOR.
 PCP = PENTACHLOROPHENOL.
 WT = WORK TANK.

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LEGEND

- PRESERVATIVE SOLUTION
- - - PROCESS VAPOR
- - - RETORT DOOR RELEASE
- - - RAW MATERIAL OR FUEL
- - - DISPLACED VAPOR
- - - DRIP PAD/STORAGE YARD AREA
- - - UNTREATED/TREATED WOOD
- ↑ EMISSIONS TO ATMOSPHERE (POINT SOURCE)
- ↑ EMISSIONS TO ATMOSPHERE (FUGITIVE SOURCE)
- PROPOSED SAMPLE LOCATION

Figure 2-4
Process Flow Diagram (1 of 2)
 J. H. Baxter & Co.
 Eugene, Oregon

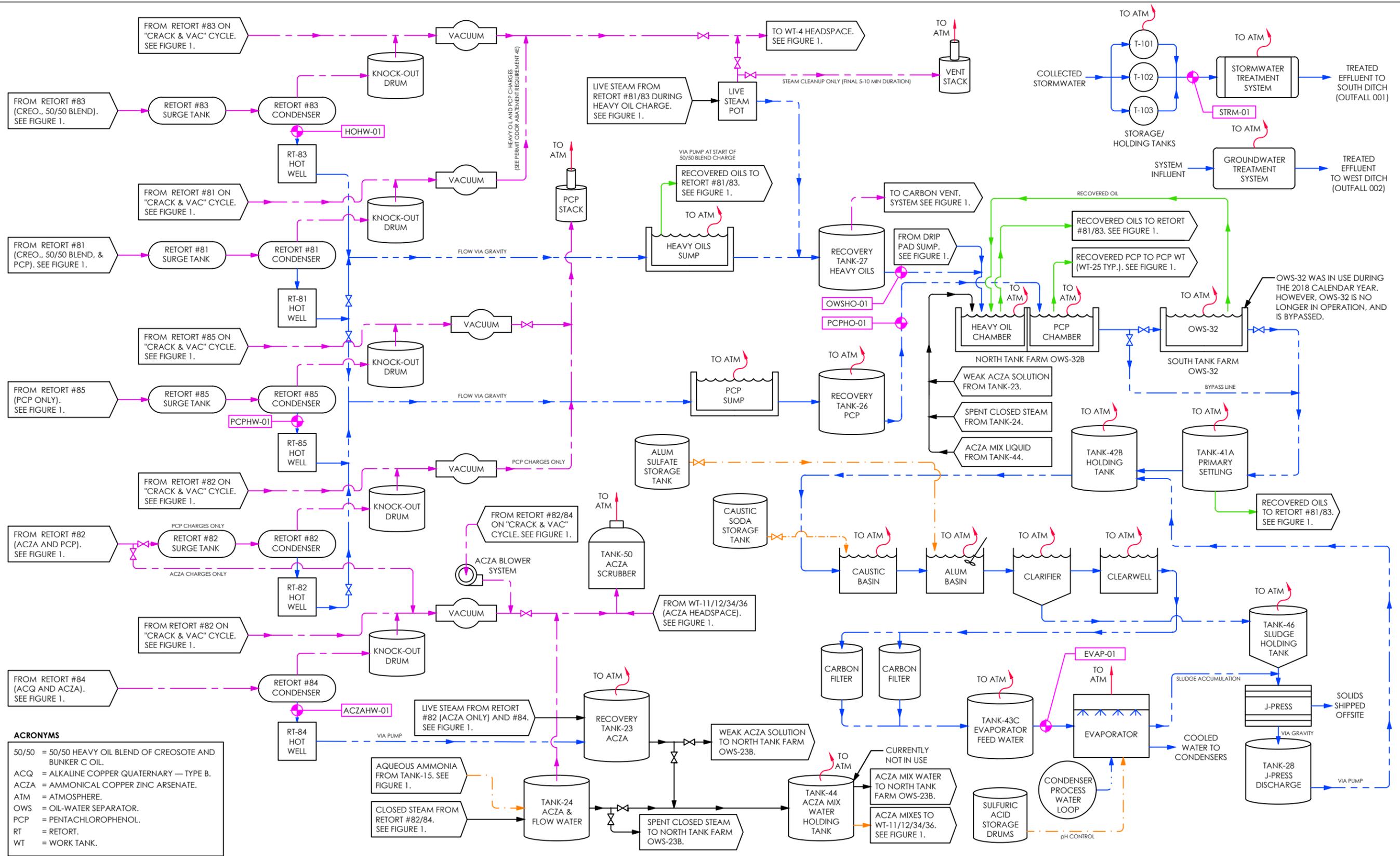


Figure 2-5
Process Flow Diagram (2 of 2)
 J. H. Baxter & Co.
 Eugene, Oregon

ATTACHMENT A

CHAIN-OF-CUSTODY FORM



