

WATER RECOVERY, LLC

**1819 Albert Street
Jacksonville, Florida 32202**

USED OIL PROCESS FLOW PLAN

MANAGEMENT PROCEDURE 4200

REVISION: 4

Attachment: MP 4200

Prepared By:



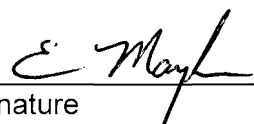
Signature



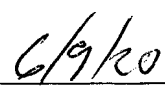
Date

Amanda Kimball
Assistant General Manager
Water Recovery, LLC

Approved By:



Signature



Date

Edward Maylon
General Manager
Water Recovery, LLC

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1.0 INTRODUCTION

This management procedure covers the Water Recovery, LLC (WRI) Used Oil Process Flow Plan. This plan discusses the overall scope of the operation including analysis, treatment, storage and other processing activities. The description begins with the arrival of an incoming shipment and goes through the departure of an outgoing shipment. The size and location of tanks and containers are included. A detailed site map with a written description is also included.

2.0 PROCESS DESCRIPTION

Used oil processing begins with the completion of a waste profile as provided by Enclosure 1. Upon review and approval of the waste profile, an approval number is assigned by WRI personnel before used oil is allowed to be accepted at WRI. Used oil is scheduled into the WRI facility once the waste stream is approved. Used oil is sampled and screened by fingerprint analysis when it arrives at WRI. Used oil is either accepted or rejected based upon the fingerprint analysis results. If accepted, used oil is transferred to a used oil tank where it is allowed to settle and separate. After settling/separation, water is decanted into an industrial wastewater tank and used oil is transferred into a tank filled mostly with oil. When enough used oil is collected the used oil is sampled, analyzed and classified. Used oil may be processed and treated to remove water by heat treatment with or without chemical addition. The batch of used oil may be retreated as necessary to achieve a marketable product. The processed and treated used oil is analyzed and classified. The used oil shipment is scheduled with the receiving facility. The used oil shipment is manifested and transported using a bill of lading to a permitted used oil burner, marketer or processing facility.

2.1 Analysis

Used oil is analyzed twice in the WRI used oil process. The first analysis is the fingerprint analysis on incoming shipments. The second analysis is the used oil parameters for the outgoing shipment. Standard parameters for each set of analyses are provided in Table 1.

Table 1 - Used Oil Analytical Parameters

Fingerprint Analysis	Out Going Shipment To Burner	Out Going Shipment To Marketer or Processor
Halogen Content	Halogen Content	Halogen Content
% Water	Quantity	% Water
Quantity	Flash Point	Quantity
Flashpoint	Total Cadmium	Flashpoint
	Total Arsenic	
	Total Chromium	
	Total Lead	

2.2 Treatment

Treatment of used oil at WRI is accomplished using primary settling, heat treatment and heat treatment with chemical addition. The treatment methods utilized will allow the used oil and water to be separated. Water is pumped from the bottom of the treatment tank into an industrial wastewater tank. Industrial wastewater is sent to a permitted industrial wastewater pretreatment facility.

2.2.1 Primary Settling

Used oil is treated at WRI by stationary settling in aboveground storage tanks. Primary settling is when the liquid mixture is allowed to remain stationary so that the used oil and the water separate into different phases. The oil and water are allowed to separate by gravity in the aboveground tanks for a period of hours up to several days. The stationary settling is the method of oil water separation selected by WRI as the first step of treatment for most used oil waste streams.

2.2.2 Heat Treatment

Used oil is processed by heat treatment to further remove water. The used oil is placed into the insulated tank and is heated to the optimum temperature to achieve the maximum separation of water. Tank number 2P is primarily used for used oil heat treatment. The used oil is allowed to cool, and water is given sufficient time to separate from the used oil. The heat-treated mixture is transferred to a different tank for cooling and separation.

2.2.3 Heat Treatment with Chemical Addition

Used oil is processed by heat treatment with chemical addition to remove water. The used oil is placed into the insulated tank and is heated to the optimum temperature to achieve the maximum separation of water using a demulsifier. Tank number 2P is primarily used for used oil heat treatment with chemical addition. Demulsified used oil is allowed to cool, and water is given sufficient time to separate from the used oil. The heat-treated mixture is transferred to a different tank for cooling and separation.

2.3 Storage

Used oil is stored in aboveground tanks within a concrete secondary containment area. Figure 1 shows the location of individual tanks and associated storage capacity. Used

oil, used oil filters, used oil residuals and used oil solid waste are stored in 55-gallon drums. Used oil filters and used oil residuals are stored in roll off boxes that are of 15, 20, or 30 cubic yard capacity. Roll off boxes are stored inside a secondary containment area. The used oil filter/drum crusher is stored and operated inside a concrete secondary containment area. Frac tanks are used for used oil processing. The maximum quantity of used oil filters, used oil residuals, and used oil solid waste that is stored on site is 7,350 gallons. For compliance with this permit, the following conversions shall be used:

55-gallon drum = 55 gallons
15 cubic yard container = 3,030 gallons
20 cubic yard container = 4,040 gallons
30 cubic yard container = 6,060 gallons

Storage in other types of containers may occur at the facility with prior written notification to the Florida Department of Environmental Protection (FDEP) as to the type and capacity of the container.

2.4 Other Processing

Used oil filters are processed by crushing the filters to remove residual used oil. The spent filter material is either recycled or shipped to a permitted facility for disposal or metal recycling. Used oil residuals are received and consolidated or shipped directly off site to a recycling facility. The original shipping container is cleaned in accordance with Title 40 Code of Federal Regulations (CFR) Part 261.7. WRI does not plan to conduct any other used oil processing at the present time. Should other processing become necessary, this section will be revised.

3.0 FACILITY DESCRIPTION

The facility description describes the access control, buildings, tanks, containers, loading and unloading areas, drainage and runoff control system as shown on Figure 1.

3.1 Access Control [4(a)]

Site access is controlled by the main gate located at the southwest corner of the property as shown in Figure 1. The gate is wide enough to allow the movement of tractor trailers and tankers into the facility. The east gate allows traffic to exit the facility. Access to the property may be through either gate. The facility may be operated up to 24 hours per day depending on business requirements. The facility gates will be locked at a minimum when the facility is not staffed.

3.2 Buildings [4(b)]

WRI has five buildings, the administrative office, the operations building, the laboratory building which has laboratory equipment for metals analysis, the maintenance building and the chemical storage building.

3.3 Tanks and Containers [4(c)]

WRI used oil is stored in tanks and containers. Aboveground tanks and their capacities are shown on Figure 1. Containers are stored on the containment slab noted as the Tote Storage Area on Figure 2. The used oil processing area is depicted on Figure 3. Containers of used oil are emptied daily. Containers of used oil filters, used oil residue, and used oil solid waste are stored until they are consolidated, processed or shipped off site. The empty containers are cleaned, crushed and recycled as scrap metal. Vacuum trucks and tanker trucks are commonly used to transport used oil to WRI.

3.4 Loading and Unloading Areas [4(d)]

The WRI loading and unloading area for used oil is the Sumped Work Area as shown in Figure 1. The Sumped Work Area is made from concrete with an epoxy coating. The Sumped Work Area is cleaned and decontaminated daily. The Sumped Work Area is a transfer zone where used oil is loaded and unloaded.

3.5 Drainage [4(e)]

Yard drainage is to the south side of the property. Drainage along Albert Street is to the east. A single storm drain is located at the southeast corner of the facility. The storm drain flows to the north and then to the east at the back of the property along Bryan Street.

3.6 Runoff Control System [4(f)]

Yard drainage is to the south side of the property. The storm drain flows to the north and then to the east at the back of the property along Bryan Street. Stormwater that falls into the processing area is collected in the secondary containment system. The secondary containment system serves as a runoff control system as it prevents rainwater from leaving the site.

Stormwater that has a visible sheen is pumped into a collection tank marked industrial wastewater or may be pumped out using a vacuum truck or tanker truck. The industrial wastewater is sent to a facility with an industrial wastewater pretreatment permit. The industrial wastewater is pretreated and discharged in accordance with the receiving facilities industrial wastewater pretreatment permit.

Stormwater that does not contain a visible sheen is discharged after an Oil and Grease scan has been completed and the result does not exceed 5 ppm in accordance with Chapter 62-302.530(49)(a) of the FAC. Stormwater discharges are documented by using Enclosure (2). Stormwater discharges from the secondary containment areas are conducted in accordance with all applicable local, state and federal rules and regulations.



Water Recovery
a **MER** company

Non – Hazardous Waste Stream Profile
(904) 475-9320 • 1819 Albert St. Jacksonville, FL 32202

Generator Information

Generator Name: _____ Generator EPA ID #: _____
Address: _____ City: _____ State: _____ Zip: _____
Contact: _____ Title: _____ Email: _____
Phone: _____ Transporter: _____ Transporter EPA ID#: _____

Billing Information

Mark If Same as Generator ☐
Company Name: _____ Contact: _____
Title: _____ Phone: _____ Email: _____

Waste Stream Description

Waste Type: ☒ Wastewater ☐ Petroleum Contact Water (PCW) *Attach PCW Cert. ☐ Used Oil ☐ Sludge ☐ Leachate ☐ Other: _____
Waste Stream Name: _____
Generation Location: _____
Process of Generation: _____
Volume per Load: _____ Gallons in ☒ Truck ☐ Drums ☐ Roll Off ☐ Tote ☐ Other: _____
Delivery Frequency: ☐ Once ☐ Daily ☐ Weekly ☐ Monthly ☐ Annually ☒ Other: _____

Waste Classification Questions

- | | |
|--|---|
| 1. Is this waste hazardous as defined by Federal, State or Local laws and regulations? | <input type="radio"/> yes <input checked="" type="radio"/> no |
| 2. Does this waste exhibit any of the following characteristics? (circle characteristic if yes) | <input type="radio"/> yes <input checked="" type="radio"/> no |
| a. Ignitability Corrosivity Reactivity Toxicity | |
| 3. Does this waste contain any of the following? (circle if yes) | <input type="radio"/> yes <input checked="" type="radio"/> no |
| a. Pesticides, Herbicides, Insecticides, Domestic Waste, Biohazardous Materials, listed hazardous waste (F, K, P, and U) | |
| 4. Has this waste been mixed with any hazardous waste as defined by 40 CFR part 261? | <input type="radio"/> yes <input checked="" type="radio"/> no |
| 5. Does this waste contain $\geq 90\%$ used oil? | <input type="radio"/> yes <input checked="" type="radio"/> no |
| 6. If waste contains oil, does it contain less than 1000 ppm Total Organic Halogens? | <input type="radio"/> yes <input checked="" type="radio"/> no |
| 7. Does this waste contain any concentration of PCBs? | <input type="radio"/> yes <input checked="" type="radio"/> no |

Waste Characteristics

General Description	pH	Flash Point	Total Suspended Solids	Metals (mg/L)
Analytical/MSDS Attached? <input type="radio"/> yes <input checked="" type="radio"/> no	<input type="radio"/> < 2	<input type="radio"/> < 140	<input type="radio"/> Low	<input type="radio"/> Antimony _____ <input type="radio"/> Molybdenum _____
Multiple Layers present? <input type="radio"/> yes <input checked="" type="radio"/> no	<input type="radio"/> 2-4	<input type="radio"/> 140-200	<input type="radio"/> Medium	<input type="radio"/> Arsenic _____ <input type="radio"/> Nickel _____
Oil and Grease? <input type="radio"/> yes <input checked="" type="radio"/> no	<input type="radio"/> 5-6	<input type="radio"/> > 200	<input type="radio"/> High	<input type="radio"/> Barium _____ <input type="radio"/> Selenium _____
Petroleum %: _____	<input type="radio"/> 7	Viscosity	COD Range (mg/L)	
Color/Odor: _____	<input type="radio"/> 8-9			
Total Nitrogen: _____	<input type="radio"/> 10-12.5			
Total Phosphorous: _____	<input type="radio"/> > 12.5	<input type="radio"/> Low	<input type="radio"/> <1000	<input type="radio"/> 10K-30K
Organics Present: _____		<input type="radio"/> Medium	<input type="radio"/> 1000-5000	<input type="radio"/> 30K-50K
		<input type="radio"/> High	<input type="radio"/> 5000-10K	<input type="radio"/> >50K
				<input type="radio"/> Chromium _____ <input type="radio"/> Tin _____
				<input type="radio"/> Cobalt _____ <input type="radio"/> Titanium _____
				<input type="radio"/> Copper _____ <input type="radio"/> Vanadium _____
				<input type="radio"/> Lead _____ <input type="radio"/> Zinc _____
				<input type="radio"/> Mercury _____

Certification and WRI Approval

I certify that this waste is not classified as, mixed with, or derived from a hazardous or special waste under the Resource Conservation and Recovery Act (40 CFR Part 261). I further certify that the above information is true and accurate to the best of my knowledge and is based on analysis of a representative sample of the water in accordance with the EPA guidelines and documents, or on my thorough knowledge of the waste and the generating process.

Name: _____ Title: _____

Signature: _____ Date: _____

WRI Approval? ☐ yes ☐ no Approved By: _____ Date: _____ Approval #: _____

SPCC PLAN SECONDARY CONTAINMENT FLUID REMOVAL RECORD

WATER RECOVERY, LLC

1819B Albert Street
Jacksonville, Florida 32202

LOCATION: _____

DATE: _____

TIME: _____

OPERATOR: _____

ACCUMULATED FLUID (Circle): Diesel / Water / Used Oil / Other (Specify): _____

APPROXIMATE VOLUME OF FLUID: _____

SOURCE OF ACCUMULATED FLUID: _____

APPEARANCE OF FLUID PRIOR TO REMOVAL (Color, Sheen, Etc.): _____

ACTION TAKEN PRIOR TO REMOVAL OF PETROLEUM: _____

DESCRIBE ANY WASTES GENERATED (Volume, Disposal, Etc.): _____

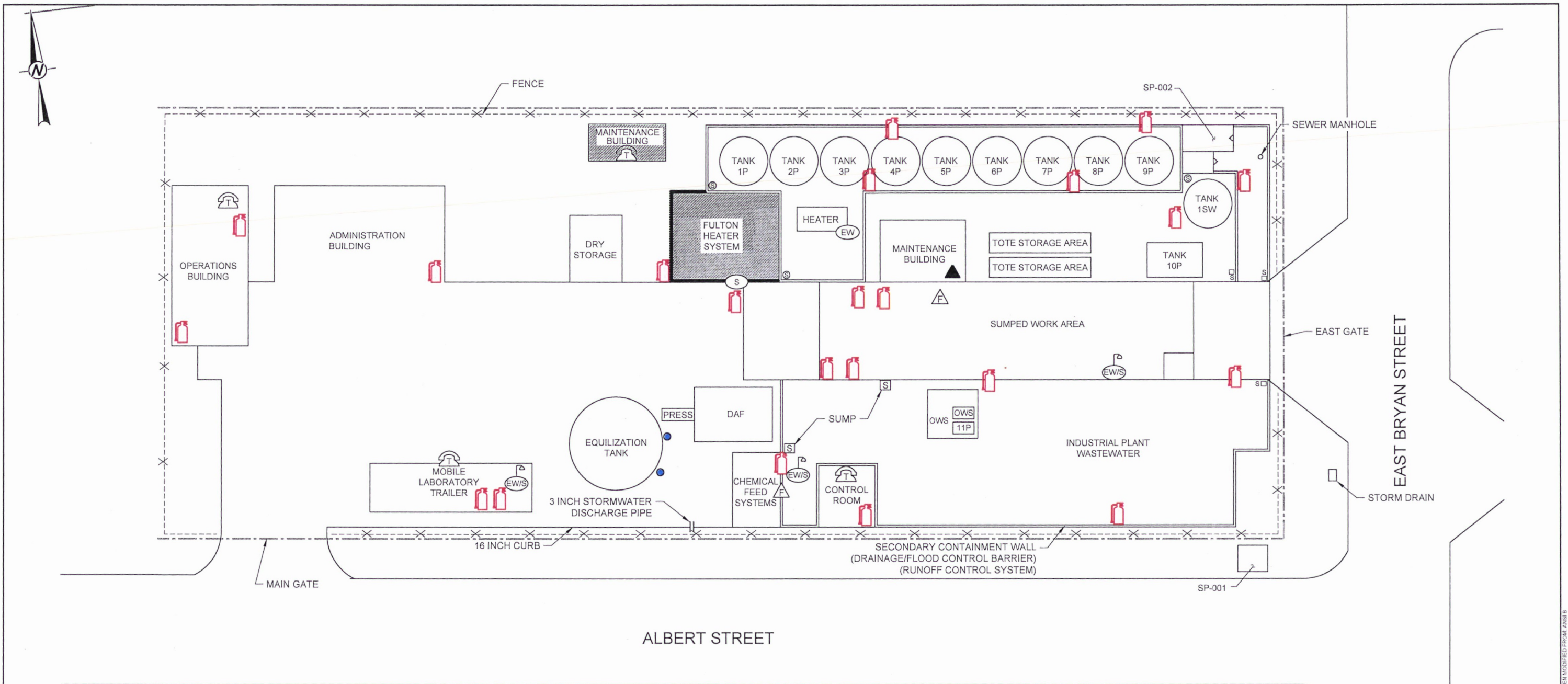
**REMOVAL OF INDUSTRIAL WASTEWATER MUST BE IN ACCORDANCE WITH
SECTIONS 3.4 & 4.2.2 OF MANAGEMENT PROCEDURES 4700 & 4600,
RESPECTIVELY.**

DESCRIBE ANY WASTES GENERATED (Volume, Disposal, Etc.): _____

COMMENTS: _____

Oil and Grease Scan does not exceed 5 ppm **Yes / No - CIRCLE ONE AND ENCLOSE
ANALYTICAL RESULTS, IF NO IS CIRCLED HAVE INDUSTRIAL WASTEWATER
SENT TO A PERMITTED PRETREATMENT FACILITY FOR PROCESSING.**

Path: E:\Golder\Projects\19128621 - Water Recovery\19128621 - SPCC plan\Drawings\19128621-A002.dwg



TANK NUMBER	CAPACITY (GALLONS)	CONTENTS OF TANK
1P	23,232	USED OIL
2P	23,232	USED OIL
3P	23,232	USED OIL
4P	21,445	USED OIL
5P	20,778	USED OIL
6P	25,806	USED OIL
7P	21,446	PETROLEUM CONTACT WATER
8P	21,446	INDUSTRIAL WASTE WATER/ PETROLEUM PRODUCTS
9P	20,833	INDUSTRIAL WASTE WATER/ PETROLEUM PRODUCTS
10P	10,000	INDUSTRIAL WASTE WATER
11P	500	USED OIL
1SW	30,000	STORMWATER

- LEGEND
- SPILL KIT
 - FIRE EXTINGUISHER
 - TELEPHONE
 - EMERGENCY EYEWASH/SHOWER
 - EMERGENCY EYEWASH
 - EMERGENCY SHOWER
 - FIRE ALARM / AIR HORN
 - DECONTAMINATION SUPPLIES
 - OIL/WATER SEPARATOR

CLIENT
WATER RECOVERY, LLC

CONSULTANT	YYYY-MM-DD	2020-02-10
DESIGNED	BTH	
PREPARED	BCL	
REVIEWED	BTH	
APPROVED	DJM	

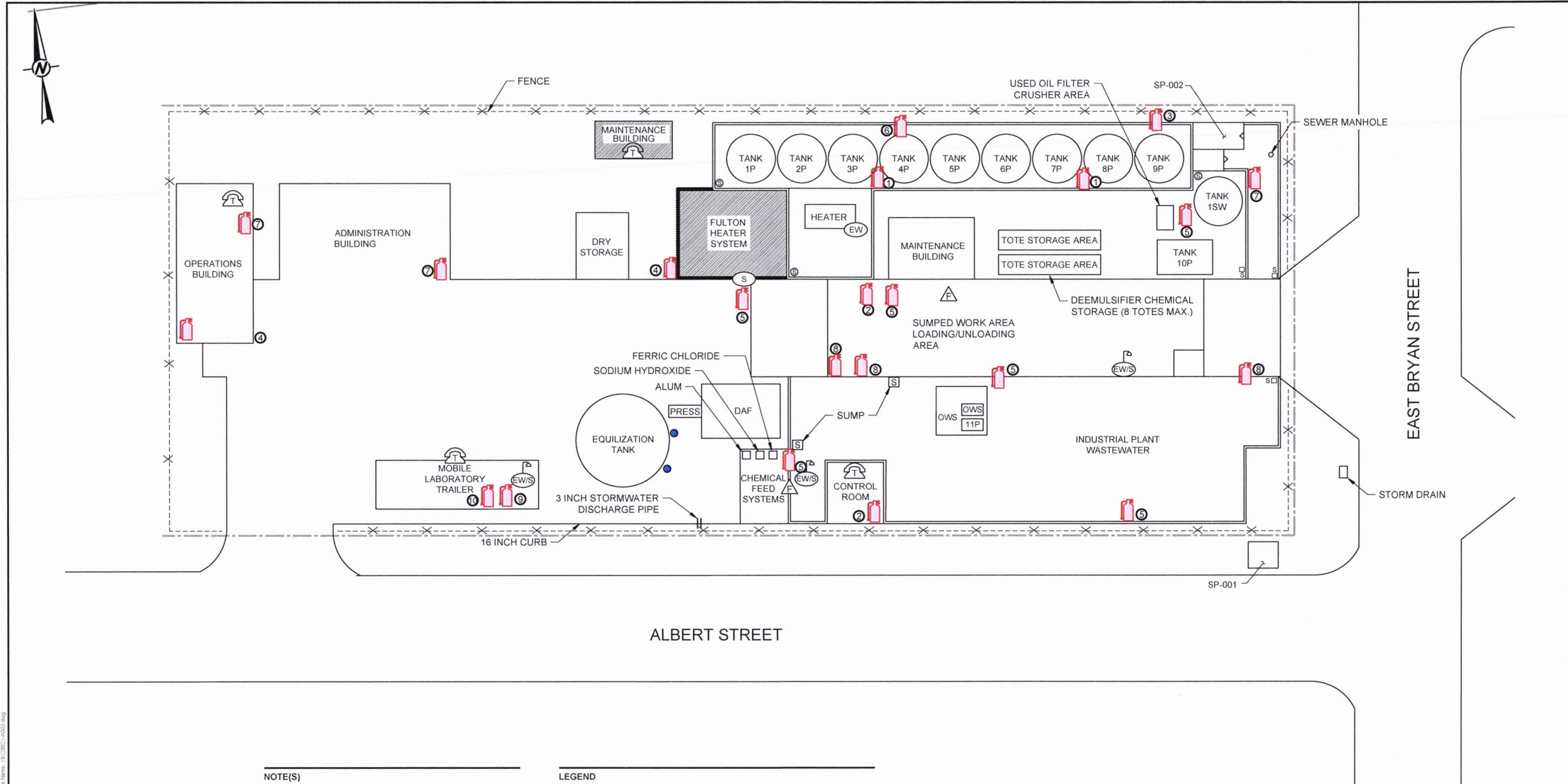


PROJECT
SPCC PLAN
1819 ALBERT ST., JACKSONVILLE, FL

TITLE	WRI USED OIL FACILITY SITE PLAN - FIGURE 1
	WRI-4200-1/4800-1/SPCC
PROJECT NO.	19-128621
Control No.	19128621-A002
REV.	
FIGURE	4034-2



IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



NOTE(S)
1. FIRE EXTINGUISHER TYPE, LOCATION, AND QUANTITY PER NFPA10.

- LEGEND**
- SPILL KIT
 - 🔥 FIRE EXTINGUISHER
 - ☎ TELEPHONE
 - 🚿 EMERGENCY EYEWASH/SHOWER
 - EW EMERGENCY EYEWASH
 - S EMERGENCY SHOWER
 - 📢 FIRE ALARM / AIR HORN
 - OWS OIL/WATER SEPARATOR

CLIENT
WATER RECOVERY, LLC

CONSULTANT



YYYY-MM-DD	2020-02-10
DESIGNED	BTH
PREPARED	BCL
REVIEWED	BTH
APPROVED	DJM

PROJECT
SPCC PLAN
1819 ALBERT ST., JACKSONVILLE, FL

TITLE
HAZARD MATERIAL STORAGE LOCATION
WRI-4200-2

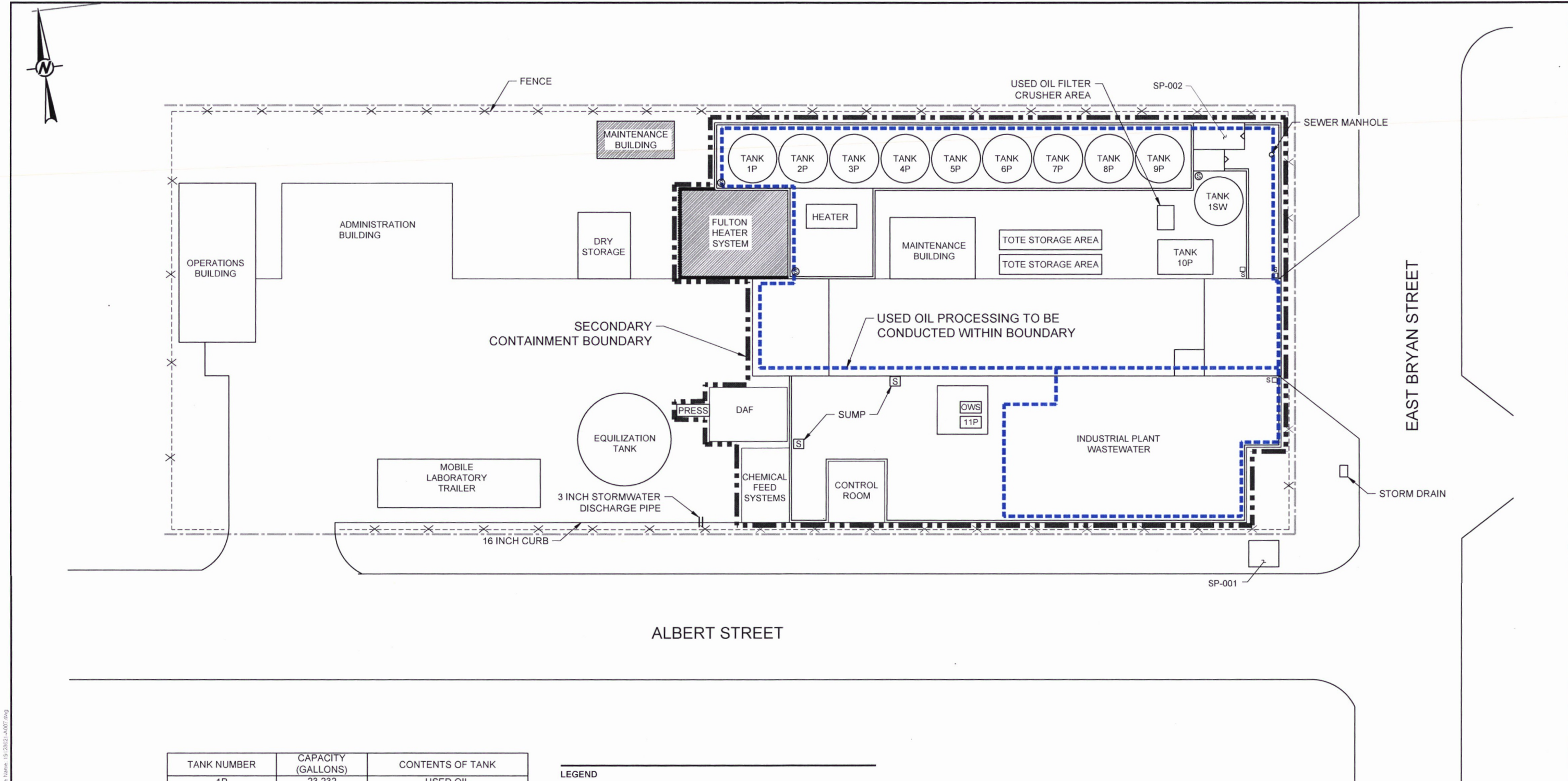
PROJECT NO. 19-128621
Control No. 19128621-A003

REV.

FIGURE
4034-4



PAUL E. GOLDBERGER, PROJECTS (15-128621) Water Recovery, LLC - SPCC Plan/Active Drawings | File Name: 19128621-A007.dwg



TANK NUMBER	CAPACITY (GALLONS)	CONTENTS OF TANK
1P	23,232	USED OIL
2P	23,233	USED OIL
3P	23,234	USED OIL
4P	21,445	USED OIL
5P	20,778	USED OIL
6P	25,806	USED OIL
7P	21,446	PETROLEUM CONTACT WATER INDUSTRIAL WASTE WATER/ PETROLEUM PRODUCTS
8P	21,446	INDUSTRIAL WASTE WATER/ PETROLEUM PRODUCTS
9P	20,833	INDUSTRIAL WASTE WATER/ PETROLEUM PRODUCTS
10P	10,000	INDUSTRIAL WASTE WATER
11P	500	USED OIL
1SW	30,000	STORMWATER

LEGEND

USED OIL PROCESSING PERMIT BOUNDARY

SECONDARY CONTAINMENT BOUNDARY

OWS

OIL/WATER SEPARATOR



CLIENT
WATER RECOVERY, LLC

CONSULTANT
 GOLDER

PROJECT
SPCC PLAN
1819 ALBERT ST., JACKSONVILLE, FL

TITLE
USED OIL PROCESSING AREA - FIGURE 3

YYYY-MM-DD	2020-02-10
DESIGNED	BTH
PREPARED	BCL
REVIEWED	BTH
APPROVED	DJM

PROJECT NO. 19-128621	Control No. 19128621-A007	REV.	FIGURE 4034-7
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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B