

WATER RECOVERY, LLC

1819 Albert Street
Jacksonville, Florida 32202

USED OIL PROCESS FLOW PLAN

MANAGEMENT PROCEDURE 4200

REVISION: 3

Attachment: MP 4200

Prepared By:

Gregory G. Reynolds
Vice President and General Manager
Water Recovery, LLC

Signature:



Date:



Approved By:

Gregory G. Reynolds
Vice President and General Manager
Water Recovery, LLC

Signature:



Date:

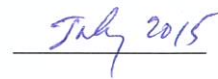


Table of Contents

	<u>Page Number</u>
1.0 INTRODUCTION	1
2.0 PROCESS DESCRIPTION	1
2.1 Analysis.....	1
2.2 Treatment	2
2.2.1 Primary settling.....	2
2.2.2 Heat treatment.....	2
2.2.3 Heat treatment with chemical addition	3
2.3 Storage	3
2.4 Other Processing	3
3.0 FACILITY DESCRIPTION	4
3.1 Access Control [4(a)].....	4
3.2 Buildings [4(b)].....	4
3.3 Tanks and Containers [4(c)].....	4
3.4 Loading and Unloading Areas [4(d)]	4
3.5 Drainage [4(e)].....	5
3.6 Runoff Control System [4(f)].....	5
TABLE 1. USED OIL ANALYTICAL PARAMETERS	2
FIGURE (1) WATER RECOVERY, LLC USED OIL FACILITY SITE PLAN	
FIGURE (2) HAZARDOUS MATERIAL STORAGE LOCATION	
FIGURE (3) USED OIL PROCESSING AREA	
ENCLOSURE (1) WATER RECOVERY, LLC WASTE PROFILE	
ENCLOSURE (2) SECONDARY CONTAINMENT FLUID REMOVAL RECORD	

1.0 INTRODUCTION

This management procedure covers the Water Recovery, LLC (WR LLC) Used Oil Process Flow Plan. This plan discusses the overall scope of the operation including analysis, treatment, storage and other processing. The description begins with the arrival of an incoming shipment and goes through the departure of an out going 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

The WR LLC Used Oil Processing is completed by allowing the oil and water to separate in individual tanks. The water is decanted into an industrial wastewater tank and the used oil into a tank filled mostly with oil. The used oil is sampled, analyzed and classified when enough used oil is collected. The used oil is then either transported off site, or treated, analyzed, classified and then transported off site. The used oil will be transported off site for one of the following actions including but not limited to incineration, recycling, marketing, fuel blending or re-distillation. Used oil treatment is accomplished by heat treatment or heat treatment with chemical addition. The used oil may be retreated as necessary to obtain a marketable product.

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 WR LLC personnel before the used oil is allowed to be accepted at WR LLC. The used oil is scheduled into the WR LLC facility once the waste stream is approved. The used oil will be sampled and screened by fingerprint analysis when it arrives at the WR LLC facility. The used oil shipment is either accepted or rejected based upon the fingerprint analysis results. The used oil is transferred to a used oil tank if the shipment is accepted. The used oil is allowed to settle and separate in the tank. The water is decanted into an industrial wastewater tank and the used oil into a tank filled mostly with oil. When enough used oil is collected the used oil is sampled, analyzed and classified. The 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 will be analyzed and classified. The used oil shipment is scheduled with the receiving facility. The used oil is manifested and transported using a bill of lading to a permitted used oil burner, marketer or processing facility.

2.1 Analysis

The used oil will be analyzed twice in the WR LLC Used Oil Process. The first analysis is the fingerprint analysis on incoming shipments. The second analysis is the used oil parameters for the out going shipment. The standard parameters for each set of analyses are provided in Table 1.

Table 1. USED OIL ANALYTICAL PARAMETERS

<u>FINGERPRINT ANALYSIS</u>	<u>OUT GOING SHIPMENT - To Burner</u>	<u>OUT GOING SHIPMENT – To Marketer or Processor</u>
HALOGEN CONTENT	HALOGEN CONTENT	HALOGEN CONTENT
pH	TOTAL LEAD	FLASH POINT
COLOR	TOTAL CHROMIUM	QUANTITY
ODOR	TOTAL CADMIUM	% WATER
QUANTITY	TOTAL ARSENIC	
FLASH POINT	FLASH POINT	
	QUANTITY	

2.2 Treatment

The treatment of used oil at WR LLC will be 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. The water is pumped from the bottom of the treatment tank into an industrial wastewater tank. The industrial wastewater is sent to a permitted industrial wastewater pretreatment facility.

2.2.1 Primary settling

Used oil is treated at WR LLC 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 WR LLC as the first step of treatment for most used oil waste streams.

2.2.2 Heat treatment

Used oil may be 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 will be 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 may be transferred to a different tank for cooling and separation.

2.2.3 Heat treatment with chemical addition

Used oil may be 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 will be primarily used for used oil heat treatment with chemical addition. The demulsified used oil is allowed to cool and water is given sufficient time to separate from the used oil. The heat-treated mixture may be transferred to a different tank for cooling and separation.

2.3 Storage

Used Oil is stored in aboveground tanks with a concrete secondary containment area. Figure 1 shows the location of individual tanks with each tanks capacity. Used oil, used oil filters, used oil residuals and used oil solid waste may be stored in 55-gallon drums. Used oil filters and used oil residuals may be stored in roll off boxes that are of 15, 20, or 30 cubic yard capacity. Roll off boxes will be stored inside secondary containment. The facility used oil filter/drum crusher will be stored and operated inside secondary containment. Frac tanks will not be used for used oil processing. The maximum quantity of used oil filters, used oil residuals and used oil solid waste that will be stored on site will be 7,350 gallons. For compliance with this permit, the following conversions shall be used:

55 gallon drum = 55 gallons
15 cubic yard container = 3030 gallons
20 cubic yard container = 4040 gallons
30 cubic yard container = 6060 gallons

Storage in other types of containers may occur at the facility with prior written notification to FDEP as to the type and capacity of the container.

2.4 Other Processing

Used oil filters will be processed by crushing the filters to remove the used oil. The spent filter material will either be recycled or shipped to a permitted facility for disposal or metal recycling. Used oil residuals will be received and consolidated or shipped directly off site to a recycling facility. The original shipping container will be cleaned in accordance with Title 40 Code of Federal Regulations (CFR) Part 261.7. WR LLC 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)]

The facility has three buildings for administrative operation. Supply and several offices are located in the Office Building. The Receptionist/Accountant, Plant Manager and President/Vice-President work in the Office Building. The Laboratory has office space for the Lab Manager and the analytical equipment. The Control Room Building is where the Operators work.

3.3 Tanks and Containers [4(c)]

WR LLC used oil is stored in tanks and containers. The 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 will be 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 WR LLC.

3.4 Loading and Unloading Areas [4(d)]

The WR LLC 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)]

The WR LLC yard drainage is to the south side of the property. The 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. The drainage system is sufficient to prevent standing water after most rainfall events.

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

Stormwater that does not contain a visible sheen may be 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 will be documented by using Enclosure (2). Stormwater discharges from the secondary containment areas will be conducted in accordance with all applicable local, state and federal rules and regulations.