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DEP USE ONLY
Date Received

FORM R1
WASTE ANALYSIS AND CLASSIFICATION PLAN
FOR PROCESSING FACILITIES AND BENEFICIAL USE

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form R1, reference the item number and identify the date prepared. The "date prepared/revised" on any attached sheets needs to match the "date prepared/revised" on this page.

SECTION A. SITE IDENTIFIER
Applicant/permittee: Petroleum Recycling Corp.
Site Name: Petroleum Recycling Corp.
Facility ID (as issued by DEP): 565427

ATTACHMENT I - WASTE ANALYSIS AND CLASSIFICATION PLAN

1. INTRODUCTION

This Waste Analysis and Classification Plan (WACP) plan is being developed to establish the procedures by which Petroleum Recycling Corp. (PRC) will determine which wastes are acceptable to receive for processing. Once a waste has been determined to be acceptable, the WACP discusses the procedures to monitor its continued acceptability and what records will be maintained to demonstrate this. The WACP is not overly complicated so that plant personnel can understand its implementation and adhere to it.

PRC's specific purpose is to recover oil from oil-contaminated residual wastes in order to produce "On-Specification Waste Oil Fuel" for "Beneficial Use". The physical state of the oily waste to be processed will be solids, liquids and semi-solids which may arrive at the Facility in roll-off containers, tanker trucks, and drums. The source of the oily wastes will be mostly from generators of vehicular used oil, spills, tanks undergoing closure/cleaning, and industries that use lubricants for cutting and rolling.

PRC is not intending to provide treatment for metal, volatile and semi-volatile contaminants although there will be some reduction of metal contamination by pH adjustment during processing of waste oil.

2. ACCEPTABLE MATERIALS

The facility will process tank clean-out sludges, separator clean-out sludges, oil spill clean-up residue, waste oil, waste oil/water emulsions, and oil-saturated debris (solid waste). PADEP waste codes for the specific categories of material proposed for beneficial use or processing prior to beneficial use and which may be accepted by the facility are as follows:

SLUDGES, SCALES

- * 207 Tank Bottoms, which are contaminated with or contain oil.
- * 209 Oily Sludge, Petroleum Derived
- * 211 Other Industrial Sludges, which are contaminated with or contain oil.

CHEMICAL WASTES

317 Glycols/Antifreeze, Machine Coolants

GENERIC MANUFACTURING WASTES

- 420 Wastewaters Containing Chemicals, Cleaning Agents, Detergents, etc.
- 422 Oil/Water Emulsions, Oily Wastewaters
- 474 Grease

- 503 Oil Containing Waste (absorbent, rags)
- * 507 Waste Petroleum Material Contaminated Soil/Debris
- 508 Virgin Petroleum Fuel Contaminated Soil/Debris
- 509 Waste Oil That Is Not Hazardous Waste Oil (automotive, machining, cutting, etc.)

Residual Waste Generated From:	Waste Code
Used and unused oils	509, 317
Vehicular used oil	509, 317
Metal working oil	509
Turbine lubricating oil	509
Diesel lubricating oils	509
Quenching oils	509
* Emulsified oils from various metal processes	509, 422
* Di-Electric Fluid (PCBs concentrations <2 ppm)	
Residential and commercial tank clean-outs, which are contaminated with or contain oil.	509, 209, 207
Oily ship ballast	422, 509
Oil spill cleanup residue and oil saturated debris	509, 508, 507, 503, 474, 422
Car, truck, and bus wash waste systems	509, 209, 207
Waste material from service center floor drains, Sumps, and interceptors, which are contaminated with or contain oil.	509, 209, 207, 211
Storm water runoff - contaminated	509, 209, 207, 211
Waste material from traps, basins, sumps, and Interceptors, which are contaminated with or contain oil.	509, 209, 207
Ground water contaminated with >1% oil	509, 422, 209, 317
Oil contaminated wells - recovery products	509, 422, 209, 317
* Oil contaminated Industrial Sludge	211
Virgin Oil contaminated	508, 503, 209, 207
Used Oil contaminated	507, 503, 209, 207,

* These materials require submittal of a Form U to the Department for review at least 15 days prior to PRC accepting the waste for processing.

A. FLUIDS

The facility will accept waste oils contaminated by physical or chemical impurities, including vehicular used oil, industrial oils, and di-electric fluid containing less than 2 ppm of PCBs for processing and resale to burners as on-specification waste oil fuel or to refiners as blend stock.

Waste oils contaminated by physical or chemical impurities accepted for processing and resale will originate primarily from residual product remaining in storage tanks being cleaned or undergoing closure. Vehicular used oil accepted may include any synthetic-, or petroleum-based oil that has been used and as a result of such use is contaminated by physical or chemical impurities. Note that the 40 CFR 279 definition of "used oil" is equivalent to the Pa. Code 287.1 definition of "waste oil". Fluids accepted may contain TOX concentrations of up to 1,000 ppm, PCBs less than 2 ppm, and a flash point of $>100^{\circ}$ F and will be on-specification in accordance with 25 Pa Code 266.40 (e).

B. OIL/WATER EMULSIONS AND SLUDGES

The facility will accept oil/water emulsions, anti-freeze and water, sludges and groundwater contaminated with oil. Oil/water emulsions will originate from the clean out of storage tanks, process vessels, and process buildings where the only identified contaminant is oil or non-hazardous waste oil. Anti-freeze and water will originate from automotive shops' separators. Groundwater will originate from groundwater investigation and remediation sites where accidental releases of oil or non-hazardous waste oil have occurred. Oil/water emulsions and sludges may contain TOX concentrations of up to 1,000 ppm, PCBs less than 2 ppm, and have a flash point $> 100^{\circ}$ F and meet the requirements set forth in **Table 1** of this WACP.

C. OIL-SATURATED DEBRIS (SOLID WASTE)

Spill cleanup residue generated from virgin petroleum products will be accepted when accompanied by a generator's certification that the waste is from virgin petroleum products, e.g., #2, #4, or #6 oils. No analyticals required.

Oil-saturated debris (solid waste) contaminated with non-virgin petroleum products or used oil will require analyticals for constituents in **Table 2** of this WACP, prior to acceptance.

3. UNACCEPTABLE MATERIALS

The following materials will not be accepted for treatment at PRC:

- Any material exhibiting RCRA characteristics of ignitability, corrosivity, reactivity, or toxicity unless that material is exempt from regulation as a hazardous waste.
- Any material containing a listed RCRA hazardous waste per 40 CFR 261.
- Any material containing more than 1% asbestos by weight that hand pressure can crumble, pulverize or reduce to powder when dry.
- Waste oil with a total halogen (TOX) concentration exceeding 1,000 ppm.
- Waste oil with less than 8,000 BTU's.
- Waste oil contaminated with chlorinated fluorocarbons (CFCs).
- Any material or fluid containing 2 ppm or more of PCBs.

- Any material with a flash point of $< 100^{\circ}$ F.
- Any material with Total or TCLP levels for Metals in excess of those levels as defined in Table 1 of this WACP.
- Oil/water emulsions and oil-saturated solid waste that has $< 5\%$ recoverable oil.

The generator of the waste will testify to the accuracy of the analytical testing method(s) and reported results and certify that the sample(s) were representative of the wastes to be processed at the facility. Additionally, the generator will accept liability for any wastes that do not meet the established acceptance criteria.

4. ACCEPTANCE PROCEDURES

Prior to acceptance, the following information relating to the source of the waste will be provided by the generator:

- Certification from the generator stating that the waste does not contain and has not been mixed with a listed hazardous waste and does not contain PCBs.
- The source, volume, and type of fluid.
- Name, address, and phone number of the generator and generator's agent, if applicable.

These above details and additional details should all be included in a completed Form U – Request to Process or Dispose of Residual Waste (PADEP Document 2540-PM-BWM0395) which shall be provided to PRC by the generator. Results of analytical testing of the source material as conducted by the generator in accordance with their waste sampling plan as required in §271.611(a)(3) or §287.132(a)(3) and the Final Guidance Document on Radioactivity Monitoring at Solid Waste Processing and Disposal Facilities (PADEP Document Number 250-3100-001) shall also be provided to PRC. PRC will review the Form U package for completeness prior to acceptance of any materials. The Form U package for certain wastes will be required to be sent to the Department for review, as specified in **Section 2** of this WACP above, at least 15 days prior to PRC accepting the waste for processing.

A completed manifest or bill of lading will be completed and required for all incoming waste accepted at the facility.

5. SAMPLE COLLECTION (APPLIES TO GENERATOR)

A. FLUIDS (WASTE OIL, OIL/WATER EMULSIONS, AND SLUDGES)

All wastes will be sampled and analyzed in accordance with **Table 2** of this WACP below.

No analysis will be required from the generator for on-specification #2, #4 and #6 oil contaminated by physical or chemical impurities from tanks undergoing closure (as certified by the generator).

Analysis for the parameters listed in **Table 1** of this WACP will be required on a case-by-case basis for oily water, vehicular used oil and industrial oils and PRC will generally rely on a generator's certification based on process knowledge, MSDS, and analyticals from waste generators with similar process.

Di-electric Fluid will be analyzed prior to acceptance at the PRC facility in all cases. No di-electric fluid will be accepted with PCB level in excess of 2 ppm.

All sampling shall be conducted in accordance with SW-846 protocols and appropriate field methods. An example of an acceptable method would be "ASTM Standard D140-70; Method Used For Obtaining Samples of Viscous Liquids".

Any analysis required by the facility prior to approval or acceptance will be performed by the generator or generator's authorized representative. It will be the generator's responsibility to adhere to the procedures described to collect samples which are representative of the waste material.

B. OIL-SATURATED DEBRIS (SOLID WASTE)

Spill cleanup residue generated from virgin petroleum products will be accepted when accompanied by a generator's certification that the waste is from virgin petroleum products, e.g., #2, #4, or #6 oils. No analyticals required.

Oil-saturated debris (solid waste) contaminated with non-virgin petroleum products or used oil will require analyticals for constituents in **Table 2** of this WACP, prior to acceptance.

6. SAMPLE ANALYSIS (APPLIES TO GENERATOR)

A. FLUIDS (WASTE OIL, OIL/WATER EMULSIONS, AND SLUDGES)

No analysis will be required from the generator for on-specification #2, #4 and 6 oil contaminated by physical or chemical impurities (if so certified by the generator). In the case of oily water and vehicular used oil, PRC will generally rely upon certifications by the generator that oil and oily water is non-hazardous. Field screening described in this WACP will ensure that the TOX concentration is below 1,000 ppm. In some circumstances, however, where the origin of the oil or oily water is in doubt, PRC will additionally require the generator to provide analytical results showing PCB content or confirm that the waste is not RCRA hazardous.

Upon receipt of any requested analytical data or generator's certification, PRC will determine if the analytical results are consistent with the stated source of the waste provided by the generator or generator's agent. If PRC determines that the fluids are contaminated with substances not consistent with the acceptance criteria, the fluids will not be accepted at the facility. If the fluids are determined to be acceptable for processing at PRC, the customer will be notified and the fluids will be scheduled for shipment to the facility.

B. OIL-SATURATED DEBRIS (SOLID WASTE)

Spill cleanup residue generated from virgin petroleum products will be accepted when accompanied by a generator's certification that the waste is from virgin petroleum products, e.g., #2, #4, or #6 oils. No analyticals required.

Oil-saturated debris (solid waste) contaminated with non-virgin petroleum products or used oil will require analyticals for constituents in **Table 2** of this WACP, prior to acceptance.

7. SCREENING OF INCOMING LOADS

All incoming loads will be tested for TOX using a Dexsil® Q-4000 Chlor-D-Tect test kit, or equivalent. Flash point will be tested using a Pensky-Marten Closed Cup Flash Tester to confirm a flash of >100° F. All loads will be manifested and shall be checked for accuracy. A discreet sample of each incoming load shall be obtained and retained until such time as a PCB scan is performed.

A. EVALUATION OF FLUIDS (AFTER SCREENING OF INCOMING LOADS TO PRC, WASTE OIL, WASTE OIL/WATER EMULSIONS, AND SLUDGES)

All recoverable oil will be processed and either marketed for use directly to buyers who will burn it for energy recovery or sold to other recycling facilities as blend stock. Waste oil marketed directly to burners as "On Specification Waste Oil Fuel" will meet the criteria in **Table 1** of this WACP and will be analyzed prior to being sold or transported. A copy will be maintained at the PRC facility and furnished with each load delivered or picked up.

Table 1. On-Specification Waste Oil Fuel Criteria

Analytical Parameter	Allowable Concentration
Arsenic (Total)	5 ppm
Cadmium (Total)	2 ppm
Chromium (Total)	10 ppm
Lead (Total)	100 ppm
Flash Point	100 °F (minimum)
TOX	1,000 ppm

Table from 40 CFR 279.11 for on-specification oils and PADEP Residual Waste Management Regulation Section 298.11

Oil/water emulsions, sludges, and antifreeze accepted at the facility will be treated thermally to recover all oil from the wastes. The treated water will be collected in aboveground storage tanks and shipped to POTW or a permitted offsite treatment facility. The treatment facilities include International Petroleum of Delaware, Clean Venture/Cycle Chem of New Jersey, Lancaster Oil of PA, US Filter of Baltimore, MD or Yankee Point Terminal of Philadelphia, PA.

Solids generated from the treatment process will be managed and treated with the oil-saturated debris.

B. EVALUATION OF SOLID WASTE (OIL-SATURATED DEBRIS WITH RECOVERABLE OIL CONTENT OF >5% OSD)

Since the generator using process knowledge has certified that the OSD is non-hazardous and does not contain PCB's the incoming screening of OSD will be limited to a load verification from each drum or container being received at the facility. PRC will screen incoming drums once very ten (total 550 gallons) per generator or fraction thereof.

A discrete sample of the free liquids will be collected in accordance with SW-846 protocols and analyzed for the following parameters:

- Flash point using ASTM D-93
- Total Halogens using EPA 9077

A retention sample from each generator load will be maintained at the facility until the load has been processed and is ready shipment off site to a permitted facility for further treatment and beneficial use or to a permitted landfill and the analyticals have been completed by an outside certified laboratory.

Prior to shipment off-site the OSD will be analyzed for the following:

- RCRA metals
- PCB's
- TOX
- Reactivity Cyanide/Sulfide
- Ignitability
- pH

Analytical requirements prior to shipment off site may vary based on the receiving facility requirements.

The solid contingents of accepted wastes are separated out from free liquids via heat screening separation and settling. Separated wastes requiring stabilization are transported to a roll-off container located on-site for addition of and mixing with inert material such as clean soils. Stabilized materials are then transported off-site for disposal. Other solid wastes are drummed and stored on-site pending off-site disposal.

Table 2. Required Analyses for Incoming Waste

Waste Type	Analytical Requirement	Allowable Limit
Waste Oil ³	Generator Certification ¹	--
	Halogens (TOX)	<1,000 ppm
	Flash Point	>100° F
	PCBs ¹	<2 ppm
Industrial Oils (includes hydraulic and process oils such as cutting/grinding, machining, honing, and cooling oils)	Generator Certification ^{1,2}	--
	Halogens (TOX)	<1,000 ppm
	Flash Point	>100° F
	PCBs ²	<2 ppm
Di-electric Fluids	Halogens (TOX)	<1,000 ppm
	Flash Point	>100° F
	PCBs	<2 ppm
Oil/Water Emulsions and Sludge (contaminated with on-specification #2, #4, and #6 oil contaminated by physical or chemical impurities)	Generator Certification ¹	--
	Halogens (TOX)	<1,000 ppm
	Flash Point	>100° F
	PCBs ¹	<2 ppm
Oil/Water Emulsions and Sludge (contaminated with vehicular used oil or antifreeze)	Generator Certification ^{1,2}	--
	Halogens (TOX)	<1,000 ppm
	Flash Point ¹	>100° F
	PCBs ²	<2 ppm
Oil-saturated debris (solid waste) from spills of waste materials (non-virgin oil) ³	Generator Laboratory Analysis	--
	TOX	<1,000 ppm
	Flash Point	>100° F

¹ The Generator Certification (GC) will describe the waste material (e.g., type of petroleum) and flash point. GC will also state that no co-mingling with hazardous wastes including PCBs has been done and provide a summary of process which generated the waste. The generator certification which is found on the lower right corner of each PRC manifest or bill of lading certifies that the waste being picked up or delivered to PRC has not been mixed, combined or otherwise blended in any quantity with materials containing PCBs or any other material defined as hazardous waste under applicable laws, including but not limited to, those wastes defined by 40 CFR 261.

² Proposed characterization for PCBs will occur once per load of oily material delivered to the facility. Discrete samples are obtained from each load of fluids being accepted by PRC for retention and until PCB scan is completed for each outgoing load being sent to a permitted facility for treatment or certification as on- specification waste oil fuel. Samples are maintained at PRC until notification has been given to PRC by accepting facility or analysis certifying that < 2ppm PCBs are present as a result of their analytical testing. PRC will test every load of oily material received at its facility for PCBs and maintain these analyticals for the life of the facility. All Di-electric fluids require independent laboratory analyticals prior to being shipped or accepted by PRC. The results of which must be < 2ppm PCBs to be deemed acceptable. Industrial oils may require additional analyticals based on process knowledge of waste being generated. This will be evaluated on a case by case basis.

³ PRC will conduct metals analysis for all outgoing shipments of product being marketed directly to burners of "On-Specification Waste Fuel Oil" as per 40 CFR 279.11.

	PCBs RCRA Metals	<2 ppm Per 40 CFR 261 and receiving facility requirements
Oil-saturated debris (solid waste) from spills of virgin oils or USTs undergoing closure	General Certification ¹ Flash Point	-- >100° F

8. WASTE MONITORING

To assure that the waste sent to PRC is consistent with the WACP and the authorization, a monitoring effort will be implemented. The frequency and degree of monitoring will vary depending on the chemical parameters and the volume of waste shipped.

A discrete sample will be collected from the bulk shipment when it arrives at the facility before the shipment is unloaded. A COLIWASA sampler will be used to collect a core sample from the tanker. The sample will be tested for the parameters listed in **Table 2** of this WACP.

9. RECORD KEEPING

PRC is proposing to maintain detailed records of transactions involving the approval and acceptance of the wastes. In that regard the following records will be maintained for at least five (5) years from the date that a record is generated:

1. Bills of Lading (In and Out of the Facility)
2. Chain-of -custody forms
3. PRC testing work forms
4. Any analytical results
5. Historical data from the generator
6. QA reports
7. Generator Certifications
8. Form 26R's
8. PADEP inspection reports and letters
9. Any letters from the generator about their waste

It is our intent to dispose of laboratory samples within 60 days or sooner after the results are reported from the laboratory.

This concludes the WACP. This WACP has been developed to control the wastes arriving at PRC and to assure that the wastes are maintained in compliance with any approvals.