US Environmental Protection Agency – Region 2
Caribbean Environmental Protection Division
Response and Remediation Branch

Resource Conservation and Recovery Act (RCRA)
Compliance Evaluation Inspection

Facility Name:	Oil Energy System, Inc.		
EPA ID Number:	PRR000023820		
Date of Inspection:	March 4, 2025		
Generator Status in Record:	Non-Generator - Used Oil Processors and Re-Refiners		
Generator Status at the time of inspection:	VSQG – Used Oil Collector, Storage, Transporter, Oil Processor and Re-Refiner		
RCRA Permitted:	Yes – Commonwealth of Puerto Rico Used Oil Processor Permit		
Basis for Inspection:	Complaint		
Corrective Action:	No		
Facility Physical Location: (Municipality, PR, zip code)	Carretera PR-2, km 62.5, BO. Sabana Hoyos, Arecibo, Puerto Rico 00652		
Geographical Coordinates:	Latitude: 18.433772 Longitude: -66.613253		
Facility Owner:	Jose A. Gonzalez Amador, President	(787) 787-832-5790	
	gonzalezja@oespr.net		
	Mailing address: P.O. 711, Mayaguez, Puerto Rico 00681		
Facility Operator:	Carlos Juarbe Toledo, Plant Manager	(787) 241-4140	
	cjuarbe@oespr.net		
	Mailing address: P.O. 711, Mayaguez, Puerto Rico 00681		
NAICS:	42471 - Petroleum Bulk Stations and Terminals		
SIC:	4247 Petroleum and Petroleum Products Merchant Wholesalers		
Area:	3,749,60 m^2		
Number Employees:	15		
Personnel participating in inspection:			
Eduardo R. Gonzalez	EPA Region 2-CEPD	Enforcement Officer	(787) 977-5839 gonzalez.eduardo@epa.gov
Carlos Huertas	EPA Region 2-CEPD	On-Scene Coordinator	(787) 692-9453/ hernandez-huertas.carlos@epa.gov
Hector Rodriguez	EPA Weston Contractor	START Contactor	(787) 602-8424/ Hector.Rodriguez-Cesani@WestonSolutions.com
Angel Luis Alicea	EPA Weston Contractor	START Contactor	(787) 629-1912/ Angel.Alicea@WestonSolutions.com
Status:	Final		
Record Schedule:	1044(c)		
Multi-media Checklist: ATTACHMENT #		Referral: CAA, SPCC, FRP, OPA, CWA	

EPA Lead Inspector Signature/Date	X Eduardo Gonzalez April 4, 2025
Supervisor Signature/Date	X DAVID CUEVAS-MIRANDA Digitally signed by DAVID CUEVAS-MIRANDA Date: 2025.04.04 12:33:17 -04'00' David N. Cuevas Miranda, Ph.D.

1 INTRODUCTION

On March 4, 2025, a Resource Conservation and Recovery Act (RCRA) Compliance Evaluation Inspection (Inspection) was conducted at Oil Energy System, Inc. (the "Facility"), pursuant to Section 3007 of RCRA.

As part of the Inspection, an opening meeting, walkthrough, documents review and closing meeting were conducted to evaluate Facility's compliance with the requirements that govern hazardous waste generators, universal waste handlers and used oil generators, as applicable. Oil Energy System, Inc. is designated in the RCRAInfo[1] database as a Non-Generator of Hazardous Waste, but as a Used Oil Collector, Storage, Transporter, Oil Processor and Re-Refiner. The Facility was inspected as a multimedia effort to respond to numerous citizen complaints to EPA and gather information regarding toxic gases and odors (insecticides and/ or diesel) that were affecting various communities in the municipality of Arecibo (specifically Factor, Garrochales, Cercadillo, etc.). Residents reported that the odors are causing them nausea, vomiting, and dizziness, and they can barely breathe.

The Facility is located at Carretera PR-2, km 62.5, BO. Sabana Hoyos, Arecibo, Puerto Rico. Refer to *Figure 1* for the location and to *Figure 2* for an aerial photograph of the Facility, **ATTACHMENT I**.

According to EPA's Enforcement Compliance and History Online (ECHO), two Clean Water Act (Oil SPCC & FRP) inspections have been conducted and determined to have significant violations, and one RCRA inspection (Used Oil Refiners-Fuel Marketer) have been conducted at the Facility during the last 5-years. The March 4, 2025 was focused in the areas of general generator requirements, standards for used oil generators, standards for used oil transporter and transfer stations, used oil transportation, and standards for used oil processors and re-refiners were concerns were documented pursuant to 40 Code of Federal Regulations (CFR) Part § 279 – "Standards for the Management Of Used Oil." Oil Energy System has been inspected by the Fire Department, the Puerto Rico Department of Natural and Environmental Resources (DNER) in the areas of used oil management, and by the US Coast Guard in the areas of Spill Prevention Control and Countermeasures Plan, and Federal Response Plan (FRP), respectively.

[1] RCRA Info and ECHO, EPA's Enforcement Compliance and History Online system

2 OPENING MEETING

An opening meeting was held between Mr. Carlos Juarbe Toledo, Plant Manager, and Bárbara S. Ramos Processes Coordinator, both from Oil Energy System, Carlos Huertas EPA On-Scene Coordinator, Hector Rodríguez, EPA Contractor, Angel Luis Alicea, EPA Contactor, and I. I identified myself as EPA RCRA Enforcement Officer and told the Facility representatives that the purpose of my visit was to conduct a RCRA Inspection at the Facility to evaluate its hazardous waste/used oil management practices and compliance as a result of allegued hazardous emissions and/or used oil releases on premises as complained by residents claiming that toxic gases and odors could be coming from the facility. It was discussed that EPA activated its technical contractor on February 26, 2025, to provide air monitoring in the community and possibly pinpoint the source of the odors. Air monitoring was conducted using the MultiRAE Pro multi-gas monitor equipped with sensors for volatile organic compounds (VOCs), lower explosive limit (LEL), hydrogen sulfide (H_2S), carbon monoxide (CO), and oxygen (O_2). It was also discussed that air monitoring conducted at various locations across the communities demonstrated no detectable concentrations above background levels, nonetheless EPA learned that other episodes of strong hydrocarbon gases/odors have been detected on various occasions in the vicinity of the Facility.

Mr. Carlos Juarbe explained that Oil Energy System is dedicated to the collection of used oils from mainly mechanic shops in Puerto Rico including AutoZone, Pet Boys, and Advanced Auto Parts, among many other mechanic shops from municipalities, central government (i.e., AMA) and private sector. Used oils, diesel, and contaminated oil waters are also collected from seaports (i.e., boats, yachts) including the Coast Guard, tugboats, towboats and major cruise lines. He emphasized that every time a cargo truck is received from the collection of used petroleum derivates from cruise lines, these turn out to be very malodourous. Mr. Juarbe added that they also collect and store fuel, gasoline, diesel, kerosene, petroleum derivatives, oils (new and used), contact waters, spent used oil filters, oil impacted absorbent materials (i.e., pads), material contaminated with petroleum derivatives (i.e., soils) and process and re-refine used oils and petroleum derivatives from a recycling process, storage and transportation permit (i.e., DS-1, DS-2) issued by DNER on November 28, 2023 which is valid for a period of 5-years. He also explained that random characterization sampling of collected oils for recycling is conducted once a month by EQ Lab and Sanco Laboratories. According to Mr. Juarbe, some of the analysis includes total halogens, water content, used/diesel content, total solids, and sediments in samples. Refined oils are sent to Olein Recovery Corp. for further processing of lubricant oils for the market, and to other private clients used as supplemental fuel for industrial boilers. Process residues contaminated with used oil and/or diesel, which are collected from mechanic shops sumps, pits and basins, are disposed of with impacted pads, and contaminated materials that are collected by Waste Environmental Technology (WET Environmental) and disposed of at Ponce and Yauco Municipal Landfills.

It was also discussed that residual process waters from Facility's Industrial Oil/Water Treatment Plant are carried out by tanker trucks to the Puerto Rico Aqueduct and Sewer Authority (PRASA) Wastewater Treatment Plant (WWTP) located in Barceloneta. He added that the Facility has a PRASA Pre-Treatment Discharge Permit that allow them to transport up to three 10,000-gallon capacity tanker trucks per day. However, on many occasions residual waters mostly from the treatment of cruise lines oil/wastewaters are rejected for not complying with oil traces, strong odors of hydrocarbons, and colors (i.e., sheen layers). He indicated that rejected process water is fed into the oil/water treatment plant and re-

processed to meet permit analytical requirements of pH, color, oil traces content, and color. It was learned by the EPA Inspector, that this Facility was required to develop a Spill Prevention, Control, and Countermeasure (SPCC) and a Facility Response Plan (FRPs) since it has both a potential risk of "substantial harm" to the environment by discharging oil into or on navigable waters and a total oil storage capacity greater than or equal to 1 million gallons.

Mr. Juarbe stated that after he knew about the incident of toxic gases and odors releases and citizen complaints and conducted an internal audit of the Facility process areas and tanks farm, and identified two storage tanks, specifically Tank #3 (Oil/Water: 211,596-Gallons Capacity) and Tank #13 (Raw Water: 15,227-Gallon Capacity) that had broken hatch plates partially open to atmosphere. On the same week, both hatch plates were repaired by fixing them with nuts and bolts to the tank roof. Additionally, he discovered that in the wastewater treatment plant, there were three clarifiers for treated oil/waters (W-21: 3,000-gallon Capacity and W-22: 5,000-gallon Capacity) and a third tank, all "open" and were emitting strong odors of volatile petroleum hydrocarbons from the plant. After detection of odors emissions, Mr. Juarbe decided to shut down the treatment plant and proceeded to remove and clean all content (i.e., sediments, oil and grease, contact waters) from the tank and clarifiers. At the time of the EPA Inspection, the treatment plant was shut down and under repair and maintenance activities.

2.1 FACILITY PHYSICAL DESCRIPTION AND OPERATION

Oil Energy System is dedicated to the collection and cleaning of used motor oil, and provides collection, recovery, processing, recycling and final disposal services for lubricants with residues, water and particulates. They conduct the process and re-refining of used oils to transform it into a reusable oil product of high value and energy content. At the facility, they manage the installation of refining, separation, heating, purifying, mixing process of used oil and fuels (i.e., diesel, Kerosene), transfer pumps, storage tanks and distribution of refined oils and fuels.

The site includes an office building, a maintenance shop, a tanker truck loading rack and unloading area, and product storage and handling areas. Petroleum products are stored within the main bulk storage area, and inside the maintenance areas. According to Mr. Carlos Juarbe, Oil Energy Systems divides its businesses into two main operation services as provided below.

Used Oil Collection & Refining

Generator Collection: Oil Energy Systems provides training to the generator on the topics of storage and treatment of used oils such as not mixing used oil with materials such as gasoline, solvents, cleaning agents, water or any other material which would turn the oil into a hazardous material. They also provide consulting services to help educate used oil generators and/or any equipment such as pump or tanks to ensure proper handling of used oil.

Transportation Services: Oil Energy Systems ensures that the documentation provided by the transporter is complete and correct, including required manifests by the DNER, that provide information on the generator, permits under state and federal regulations, and quantity of used oil received. They also ensure that the transporter performs a field analytical test of the oils before being transported to verify

that the used oils follow federal and state standards. These tests are used to determine compliance with concentration of total halogens (< 1,000 ppm) using portable electronic systems for its detection. During the stage of the process leading to the collection of used oil, the first step is filtering of the product. The trucks are equipped with filters to remove materials foreign to the product of sizes greater than 500 microns. All Oil Energy System teams comply with federal and state requirements and the corresponding insurance to cover environmental damage. All manifests processed by Oil Energy Systems are treated according to the regulations of DNER, where the accompanying copies are delivered or sent to their respective recipients. In additon, manifest copies are main in files for a minimum of three years in accordance with EPA regulations.

Final Disposition & Refining: After validating the product documentation and the results of the field tests, the product is received in Oil Energy System tanks. The process of receiving the product in the tanks begins with the oil passing through the filtration system, which allows them to protect the storage tank from impurities or particles that could distort the final product process. At this stage the process would reach a filtration of 40 microns. After filtration, the oil is stored and begins the process of decantation and sedimentation. This process generates the separation of water and oil that, until that time, has been a heterogeneous mixture. In the decanting process, the oil is heated using a heat exchanger system. This process helps expanding the hydrocarbon molecules allowing the removal of particulate matter in the mixture through the filtration process at high temperatures. With the injection of specialized chemicals (ECO 224 - Flammable), used to separate the water from the oil, therefore completing the decantation and sedimentation process and converting the used oil into raw oil products (i.e., lubricants, fuel oil) analyzed for product specifications.

Contact Water with Hydrocarbons such as Dirty Ballast Water, Oily Bilge Water, Sludge and Tank Cleaning SLOPS

The contact water obtained from the separation process is stored in a tank, then through a chemical process (using coagulants and flocculants “Floccin”) the remaining hydrocarbons are eliminated through the precipitation of suspended solids. This process occurs in clarifiers where 99% of the suspended solids are separated. Later in the process, the treated water is injected into a nano-filtration system, using membranes for the removal of 98% of metals and dissolved solids. The final steps of water treatment process include filtration through reverse osmosis membranes for the total removal of metals and dissolved solids, to then be processed by an activated carbon filter which removes the color of the treated water and some additional dissolved solids.

Evaporation: The treated water is finally processed by an evaporator. This consists of a storage and heating tank or cylinder, a burner driven by burning of diesel fuel, where hot air is circulated using a fan and several pumps with their systems of control. Each evaporator (two units) has the capacity to evaporate approximately 1,000 gallons per hour.

Used Oil Filters Collection

Generator Filter Collection: Oil Energy System provides training to the generator of oil filters in the storage issues of the different waste, with the aim that the filter is stored separately from other products

and contaminants. It also provides free consultation to help educate waste generators non-hazardous solids to ensure good handling.

Transportation Services: The transporter generates the manifest of the filters to be transported and classifies them as non-hazardous materials. The filters are accumulated in drones at the Oil Energy System facilities where the content of the filters is drained for a minimum period of 48 hours, as stipulated by DNER regulations.

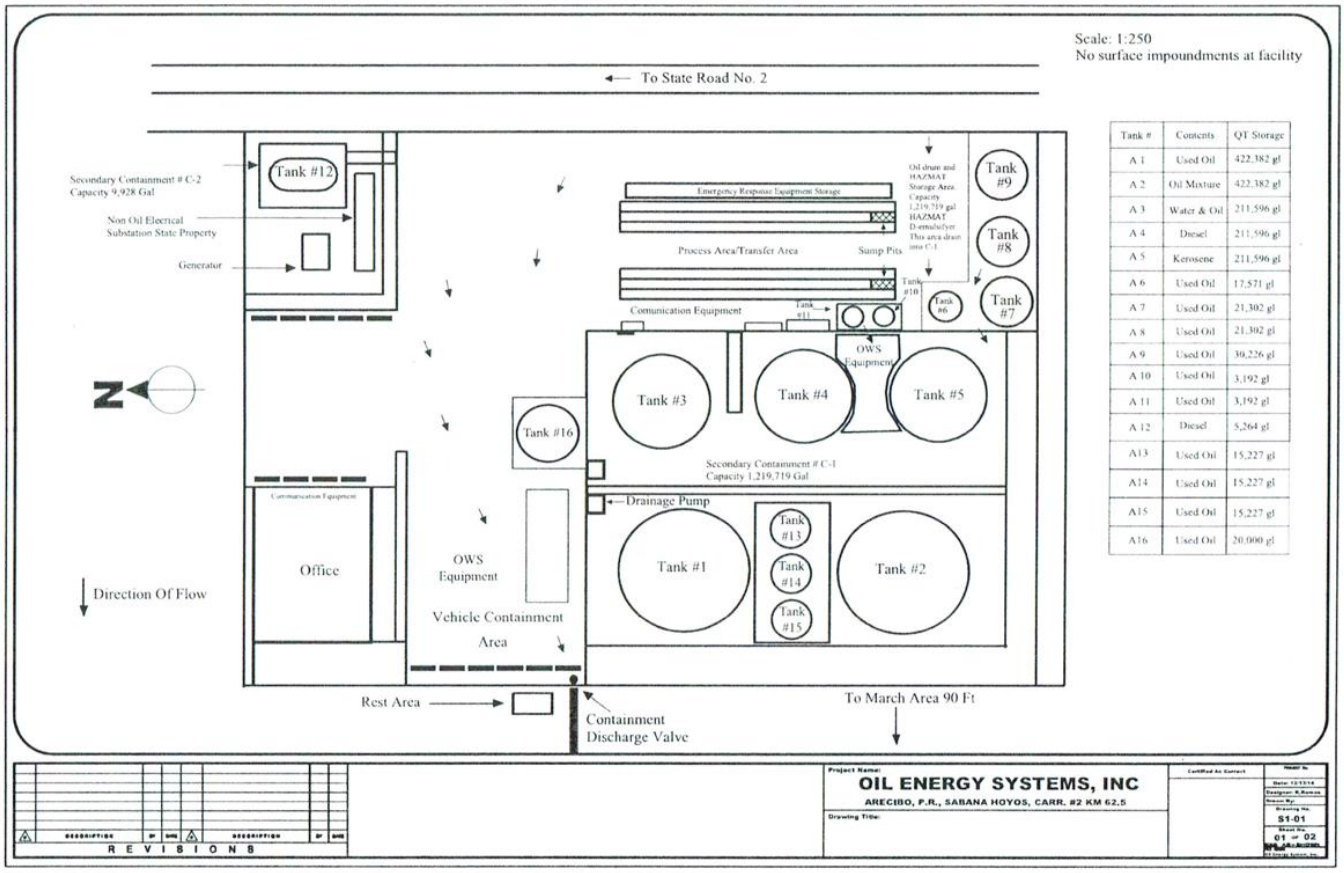
Oil Removal Process: After the filters have been drained in the drums by a period of 48 hours, these are transported and poured into a filter compaction machine ("Kroncher") to remove the oil that remains impregnated in the filtration membrane, while the steel of the filters is compacted to reduce their size and improve their disposal. After the filters are compacted, they are drained and stored in metal drones again until its final disposal. The oil that drains from the compaction process of filters are pumped to the used oil receiving tank for further process.

Final Filter Disposal: Final filter disposal occurs when compacted filter drones are transported and disposed of with metal recycling and exporting companies in Puerto Rico (Omega Recycling and JJW Metal). The second option of final disposal is the delivery of compacted and drained filters to landfills duly authorized to handle non-hazardous solid waste.

Tank Farm Storage

Oil Energy System owns a tank farm for the storage of oils and fuels consisting of 23 Aboveground Storage Tanks (AST) tanks. In addition, the facility stores a varying stock of oil drums inside the various buildings and the drum fill area.

The Site Plan and Facility Diagram is included in Appendix 1 and show the location and layout of the facility. The Facility Diagram shows the location of oil containers, buildings, loading/unloading and transfer areas, and critical spill control structures. A partial diagram depicting the main process area is presented below.



The Site Plan and Facility Diagram

2.2 SOLID AND HAZARDOUS WASTE GENERATION

Typically, solid waste is generated from the reprocessing and refining of used oil including oily sludge and sediment residues from tank draining, tank washings and other oily mixtures separation processes. Wastewater treatment sludges from the treatment of oil waste separators from the coagulation, flocculation and clarification of the oily waters. Tank slops which are the oily residue and water mixture collected from cleaning cargo tanks on vessels and cruise ships. Their solid waste is collected by Waste Environmental Technology (WET Environmental) and disposed of as non-hazardous waste at Ponce and Yauco Municipal Landfills.

According to RCRA Info database, Oil Energy System is designated as a Used Oil Refining Processor and Transporter. Other solid wastes generated at the Facility included discarded plastic, cardboards, wood pallets and other debris from plant maintenance and cleaning activities, and packaging materials, paper and other waste from Administrative Offices.

3 FACILITY WALKTHROUGH

Mr. Carlos Juarbe and EPA Emergency Team accompanied me during the Facility walkthrough. During the facility walkthrough the Use Oil Processing and Refining Areas (CEAs), Above ground tanks farms, and supporting units were inspected as described below. Refer to Appendix 1 for pictures taken during the inspection.

3.1 USED OIL FILTERS PROCESSING AREA

Mr. Juarbe escorted me to initially inspect the Used Oil Filters Processing Area where all filters, once drained in the drums for a period of 48 hours, are placed into a filter compaction machine to remove the oil that remains impregnated in the filtration membrane. The EPA Inspector observed the following at this Used Oil Filters Processing Area:

i. Two (2) 3-cubic yard (cy) metal containers with compacted filters and residual used oil liquids not labeled or marked clearly with the words, "Used Oil," since there was not a claim for scrap metal exclusion) (see **Pictures 1** and **2**). I explained to Mr. Juarbe, that hot-drained terne-plated (lead-plated) filters might be regulated as a hazardous waste if they are not recycled as scrap metal. Therefore, it was his responsibility to make a hazardous waste determination on lead-plated filters whenever this waste stream is repeated or changed for its final disposition.

ii. Five (5) 55-gallon blue and yellow plastic drums with absorbent rags, gloves, used oil filters, and plastics impacted with used oil, not labeled or marked clearly with the words, "Used Oil," (see **Picture No. 3**).

iii. Two (2) 55-gallon blue plastic drums with absorbent rags, papel, and used oil filters impacted with used oil which were in the on-going crushing processes and not labeled or marked clearly with the words, "Used Oil," (see **Picture No. 4**).

iv. There was one (1) 200-gallon square underneath collection tank with used oil from the filter crusher machine that was open and not labeled or marked clearly with the words, "Used Oil," (see **Picture No. 5**).

v. There was one (1) 1,000-gallon doble steel tank with used oil not labeled or marked clearly with the words, "Used Oil," (see **Picture No. 6**).

3.2 WASTEWATER TREATMENT PLANT

We proceeded to inspect the Wastewater Treatment Plant which mainly consist of separating remnant oil and sediments from the contact water obtained from the decantation tank. The first step of the oil/water separation process is stored in a decantation tank used to separate oils and suspended solids from contact water by allowing density segregation and solids to settle to the bottom of the tank. Then the contact water is treated through a chemical process (using coagulants and flocculants "Floccin") in three sequenced clarifiers where 99% of the suspended solids are separated. The remaining hydrocarbons are eliminated through the precipitation of suspended solids. The treated water is injected into a nano-filtration process, using membranes for the removal of 98% of metals and dissolved solids. The final steps of water treatment process include filtration through reverse osmosis membranes for the total removal of metals and dissolved solids, to then be processed by an activated carbon filter

which removes the color (see **Picture No. 7**). At the time of the Inspection the treatment was shut down for cleaning, repairs and maintenance. The EPA Inspector observed the following at this Wastewater Pre-Treatment Plant Area:

i. There were (3) three settling clarifiers where 99% of the suspended solids are separated with contact water and oils emitting strong hydrocarbons odors (see **Picture No. 8**).
ii. Two (2) 55-gallon blue plastic drums with absorbent rags, papel, and tyveks impacted with used oil not labeled or marked clearly with the words, "Used Oil," (see **Picture No. 9**).

3.3 USED OIL FILLING PROCESSING AREA

We proceeded to inspect the Used Oil Filling Processing Area. After collection and transportation and validating the used oil documentation and the results of the field tests, the used oil is received in Oil Energy System from tanker trucks. The process of receiving the used oils commences with transferring the product into filling discharge tanks. In the tanks begins the filtration of the oil by passing it through the filtration system, which allows them to protect the storage tank from impurities or particles that could distort the final product process (see **Picture No. 10**). The EPA Inspector observed the following at this Used Oil Filling Processing Area:

i. There were many observations of releases of used oil on the floor and potentially moving toward the environment outside of the secondary containment area and drain systems (see **Picture No. 11**). It was indicated to Mr. Juarbe that a generator of used oil must stop the releases; contain the released used oil, clean up and manage properly the released used oil and other materials, and prevent future releases.
ii. Four (4) 55-gallon blue steel drums with used oil fully stained with oils films not labeled or marked clearly with the words, "Used Oil," (see **Picture No.12**).
iii. Twenty-four (24) 55-gallon blue/black plastic/steel drums with used oils, some had absorbent rags impacted with used oil, others were empty sitting on releases of used oil on the floor that were not labeled or marked clearly with the words, "Used Oil," (see **Picture No. 13**).
iv. Two (2) 55-gallon yellow plastic drums with absorbent rags, impacted oily sediments, and used oil filters not labeled or marked clearly with the words, "Used Oil," (see **Picture No. 14**).

3.4 TANK # 6 DECANTING PROCESS STORAGE AREA

We proceeded to inspect Tank #6 Decanting Process Storage Area with a storage capacity of 17,571-gallons. In this tank used oil is heated up 160^{o}F with a heat exchanger operated by a resistance system. Then, an injection of chemical additive of ECO 224 is added to the tank which is used to separate the water from the oil, thus completing the decantation and sedimentation process converting the product into raw lubricant oil. The EPA Inspector observed the following at this Tank #6 Decanting Process Area:

i. One (1) aboveground Tank #6 with storage capacity of 17,571-gallons used to store and process used oil at the generator facility was not labeled or marked clearly with the words "Used Oil," (see **Picture No. 15**).

3.5 TANK # 7 AND TANK #8 DECANTING PROCESS STORAGE AREA

We proceeded to inspect Tanks #7 and #8 Decanting Process Storage Area both with a storage capacity of 21,302-gallons. Once used oils are collected and validated by tanker trucks, used oils are transferred to these tanks. The process of receiving the used oils in the tanks begins with the oil passing through the filtration system, which allows to protect the storage tank from impurities or particles that could alter the final product process. At this stage the process would reach a filtration of 40 microns. After filtration, the oil is stored in these tanks and begins the process of decantation and sedimentation. This process generates the separation of water and oil, until that time, these have been a heterogeneous mixture. The EPA Inspector observed the following at these Tank #7 and #8 Decanting Process Storage Area:

i. Two (2) aboveground Tank #7 and Tank #8 both with storage capacity of 21,302-gallons used to store and process used oil at the generator facility were not labeled or marked clearly with the words "Used Oil," (see **Picture No. 16**).

3.6 TANK # 13, TANK #14 AND TANK #15 PROCESS TREATED WATER STORAGE AREA

We proceeded to inspect Tanks #13, #14 and #15 Process Treated Water Storage Area. Each tank has storage capacity of 15,227-gallons. Tank #13 is used to stored raw contact water contaminated with hydrocarbons collected from dirty ballast, oily bilge, sludge and tank cleaning "SLOPS." At the time of the Inspection Tank #13 was storing the water returned from the Puerto Rico Aqueducts and Sewers Authority (PRASA) since it was generating strong hydrocarbons odors and did not meet color parameters. Once the contact water goes through a separation process it is then stored in this Tank #13. Then through a chemical process (using coagulants and flocculants "Floccin") the remaining hydrocarbons are eliminated through the precipitation of suspended solids. This process occurs in clarifiers where 99% of the suspended solids are separated. Later in the process, the treated water is injected into a nano-filtration process, using membranes for the removal of 98% of metals and dissolved solids. The final steps of water treatment process include filtration through reverse osmosis membranes for the total removal of metals and dissolved solids, to then be processed by an activated carbon filter which removes the color of the treated water and some additional dissolved solids. Tanks # 14 and #15 are used to stored treated water for further treatment. The EPA Inspector observed the following at these Tanks #13, #14 and #15 Process Treated Water Area:

i. One (1) aboveground Tank #13 with storage capacity of 15,227-gallons used to store raw contact water contaminated with hydrocarbons collected from dirty ballast, oily bilge, sludge and tank cleaning "SLOPS". The Tank #13 was not labeled or marked clearly with the words "Used Oil," (see **Picture No. 17**).

3.7 TANK # 2 DECANTING FUEL OILS STORAGE AREA

We proceeded to inspect Tank #1 Decanting Fuel Oils Storage Area with a storage capacity of 422,382-gallons. In this tank, fuel oils mixed with used oil are decanted for 48 hours to separate oils phase from contact waters. Fuel oils are further processed for recovery and refining as raw products and contact

waters are treated for final disposition at a PRASA WWTP. The EPA Inspector observed the following at this Tank #2 Decanting Fuel Oils Storage Area:

i. One (1) aboveground Tank #2 with storage capacity of 422,382-gallons used to store and fuel oils mixed with used oils not labeled or marked clearly with the words "Used Oil," (see **Picture No. 18**).

3.8 TANK # 1 DECANTING FUEL OILS STORAGE AREA

We proceeded to inspect Tank #1 Decanting Fuel Oils Storage Area with a storage capacity of 422,382-gallons. In this tank fuel oils mixed with used oil are decanted for 48 hours to separate oils phase from contact waters. Fuel oils are further processed for recovery and refining as raw products and contact waters are treated for final disposition at a PRASA WWTP. The EPA Inspector observed the following at this Tank #2 Decanting Fuel Oils Storage Area:

i. One (1) aboveground Tank #1 with storage capacity of 422,382-gallons used to store fuel oils mixed with used oils not labeled or marked clearly with the words "Used Oil," (see **Picture No. 19**).

3.9 TANK # 5 USED OIL/WATER STORAGE AREA

We proceeded to inspect Tank #5 Used Oil/Water Storage Area with a storage capacity of 211,596-gallons. In this tank used oils mixed with contact waters are allowed to decant for 48 hours to separate oils phase from contact waters up to 50/50 percent separation. This process generates the separation of water and used oils that, until that time,have been a heterogeneous mixture. Use oils are further processed in Tank #6 for recovery and refining as new lubricants and contact waters are treated for final disposition at a PRASA WWTP. The EPA Inspector observed the following at this Tank #5 Used Oil/Water Storage Area:

i. One (1) aboveground Tank #5 with storage capacity of 211,596-gallons used to store used oils/water mixture, not labeled or marked clearly with the words "Used Oil," (see **Picture No. 20**).

3.10 TANK # 3 USED OIL/WATER STORAGE AREA

We proceeded to inspect Tank #3 Used Oil/Water Storage Area with a storage capacity of 211,596-gallons. In this tank used oils mixed with contact waters are allowed to decant for 48 hours to separate oils phase from contact waters up to 50/50 percent separation. This process generates the separation of water and used oils that, until that time, have been a heterogeneous mixture. Use oils are further processed in Tank #6 for recovery and refining as new lubricants and contact waters are treated for final disposition at a PRASA WWTP. The EPA Inspector observed the following at this Tank #5 Used Oil/Water Storage Area:

i. One (1) aboveground Tank #3 with storage capacity of 211,596-gallons used to store used oils/water mixture, not labeled or marked clearly with the words "Used Oil," (see **Picture No. 21**).

3.11 TANK # 4 DIESEL STORAGE AREA

We proceeded to inspect Tank #4 Diesel Storage Area with a storage capacity of 211,596-gallons. In this tank diesel product is stored as a rental for Trans-Fuel Company. Trans-Fuel Company is an affiliate company of Oil Energy Systems and oversees transporting and distributing diesel products to clients. The EPA Inspector observed the following at this Tank #4 Used Oil/Water Storage Area:

i. One (1) aboveground Tank #4 with storage capacity of 211,596-gallons used to store Diesel product that belongs to Trans-Fuel Company (see **Picture No. 22**). Observations at this area rendered no concerns regarding the generation or management of hazardous wastes and/or used oil.

3.12 TANK # 9 DECANTING PROCESS STORAGE AREA

We proceeded to inspect Tanks #9 Decanting Process Storage Area with a storage capacity of 30,226-gallons. Once used oils are collected and validated by tanker trucks, specifically from AutoZone, Pep Boys, Advance Auto Parts and other major mechanic shops, used oils are transferred to this tank. After filtration, the used oils are stored in this tank and begins the process of decantation and sedimentation. This process generates the separation of water and oil until that time they have been in a heterogeneous mixture. The EPA Inspector observed the following at this Tank #9 Decanting Process Storage Area:

i. One (1) aboveground Tank #9 with storage capacity of 30,226-gallons used to store and process used oil, not labeled or marked clearly with the words "Used Oil," (see **Picture No. 23**).

3.13 SIDE YARD AREA

We proceeded to inspect the Side Yard Area of the facility. The EPA Inspector observed the following at this Side Yard Area:

i. One (1) 20-cubic yard (yd^3) dumpster containing soil contaminated with used oil and fuel oil, collected by Water & Environmental Technology, from an oil spill that occurred at the Metropolitan Bus Authority (MBA) Central Facility. The 20- yd^3 dumpster with soils impacted with used oil was not labeled or marked clearly with the words "Used Oil," nor hazardous waste determination of the contents of the container was available (see **Picture No. 24**).

3.14 TANK FARM STORAGE AREA

We proceeded to inspect the Tank Farm Storage Area. In this area oils and fuels are stored in various tanks as final products for transportation and distribution to clients by Oil Energy Systems or its affiliate Trans-Fuel Company. The EPA Inspector observed the following at this Tank Farm Storage Area:

i. One (1) aboveground green-yellow Tank #28 with storage capacity of 100,000-gallons used to store Diesel product (see **Picture No. 25**).
ii. One (1) aboveground green-yellow Tank #27 with storage capacity of 100,000-gallons used to store Diesel product (see **Picture No. 25**).

iii. One (1) aboveground green-yellow Tank #26 with storage capacity of 200,000-gallons used to store Diesel product (see **Picture No. 25**).
iv. One (1) aboveground green-yellow Tank #25 with storage capacity of 400,000-gallons used to store Diesel product (see **Picture No. 25**).
v. One (1) aboveground steel Tank #29 with storage capacity of 12,000-gallons used to store Process Water (see **Picture No. 25**).
vi. One (1) aboveground steel Tank #30 with storage capacity of 25,000-gallons used to store Process Water (see **Picture No. 25**).

Observations at this area rendered no concerns regarding the generation or management of hazardous wastes and/or used oil.

3.15 PYROLYSIS PLANT AREA

We proceeded to inspect the Pyrolysis Plant Area. In this area Oil Energy Systems is launching a pilot plastic pyrolysis plant that uses thermal decomposition (pyrolysis) to convert waste plastics into valuable products like oil, gas, and carbon black, offering a sustainable solution for plastic waste management and energy production by producing fuel oils. The EPA Inspector observed the following at this Pyrolysis Plant Area:

i. One (1) aboveground reactor chamber connected to casing, oil tank, air blow, gas control, fuel condenser and air emission equipment among other auxiliary equipment used to run trial burns tests (see **Picture No. 26**).

Observations at this area rendered no concerns regarding the generation or management of hazardous wastes and/or used oil.

3.16 BACKYARD DUMPSTERS AREA

We proceeded to inspect the Backyard Dumpster Area of the facility. The EPA Inspector observed the following at this Backyard Dumpster Area:

i. One (1) 20-cubic yard (yd^3) green dumpster containing oily impacted rags, absorbent pads contaminated with used oil and fuel oil, oily motor crank, spent tires, and used oil filters ready for disposal by Oil Energy Systems. The 20-yd^3 with oily impacted rags, absorbent pads used oil and fuel oil was not labeled or marked clearly with the words "Used Oil," nor hazardous waste determination of the contents of the container was available (see **Picture No. 27**).
ii. One (1) 5-cubic yard (yd^3) blue dumpster containing oily impacted rags, absorbent pads contaminated with used oil and fuel oil wrapped in plastic bags mixed with domestic garbage collected and further disposal by EC Waste. The 5-yd^3 with oily impacted rags, absorbent pads used oil and fuel oil mixed with domestic garbage was not labeled or marked clearly with the words "Used Oil," nor hazardous waste determination of the contents of the container was available (see **Picture No. 28**).

3.17 SIDEWALK AREA

We proceeded to inspect the Sidewalk Area between the receiving area and the main access road to the facility. The EPA Inspector observed the following at this Sidewalk Area:

i. Two (2) 5-gallon grey and blue plastic containers with oily waste and/or used oil. One of the containers was open to weather conditions and not labeled or marked clearly with the words, "Used Oil," (see **Picture No. 29**).
ii. Eight (8) discarded spent acid-lead batteries and one (1) discarded fire extinguisher along with brake pads, oily tools, and mechanical parts on a wood pallet in which a hazardous waste determination had not been made on the discarded batteries and fire extinguisher (see **Picture No. 30**).
iii. One (1) steel metal Part Washer abandoned with oily impacted rags, absorbent pads contaminated with used oil and fuel oil and other oily tools open to weather conditions not labeled or marked clearly with the words, "Used Oil," nor a hazardous waste determination of the content of the part washer was available (see **Picture No. 31**).
iv. Along the sidewalk curb there was an oil spill running toward a rainwater sewage system, (see **Picture No. 32**).

3.18 MECHANIC SHOP AREA

We proceeded to inspect the Mechanic Shop Area of the facility. Light mechanic repairs and preventive maintenance to trucks vehicles fleet is performed at this Mechanic Shop. Services at this Mechanic Shop mainly include used oil and spent oil filter changes, coolant, batteries' replacement, brake pads, tire repairs among other mechanic jobs. Oil and filter changes are part of the truck's preventive maintenance program. Used oil is placed into 55-gallon drums and disposed of at the Used Oil Filling Processing Area. Mr. Carlos Juarbe informed that the quantity of used oil generated at the facility is relatively small and depends on the numbers of units in service. Used Oil impacted materials are disposed of as domestic garbage. Mr. Juarbe indicated that the quantity of used oil impacted materials (i.e., rags, absorbent material) generated at the facility was unknown. No hazardous waste determination has been made on the used oil impacted materials before disposal of and mixed with their domestic garbage. The EPA Inspector observed the following at this Mechanic Shop Area:

i. Various 5-gallon containers with oily waste and/or used oil some not labeled or marked clearly with the words, "Used Oil."
ii. There were observations of releases of used oil on the floor and potentially moving toward the environment outside of the mechanic floor area and drain systems. It was emphasized to Mr. Juarbe that a generator of used oil must stop the releases; contain the released used oil, clean up and manage properly the released used oil and other materials, and prevent future releases.

4 DOCUMENTS REVIEW

The following documents were reviewed as required by the RCRA Program after the walkthrough inspection and later received via e-mail next day. Mr. Carlos Juarbe e-mailed the electronic documents and was available on his phone to answer any questions.

4.1 USED OIL NON-HAZARDOUS WASTE MANIFEST RECORDS

Used oil manifests records associated with for all incoming and outgoing transportation shipments for the last year were reviewed in electronic format. Most of the used oil manifests are mainly from collection at client sites including Con Waste Biomedical, PUMA Energy, LUMA Energy, Caribbean Fleet Corp., Goya Puerto Rico, Cataño Municipality, Gomera La Diferencia (OLEIN), HMS Ferries, Auto Zone, and among many other clients. Other manifest record delivery of specification lubricant oils and fuel oils. None of the collection manifest shipments reported used oil sampling quality and/or specification pursuant to 40 CFR §279.11 – Used Oil Specification requirements and/or 40 CFR § 279.44 - Rebuttable Presumption for Used Oil to ensure that used oil is not a hazardous waste by confirming whether the total halogen content of used oil being transported or stored at a transfer facility is above or below 1,000 ppm.

4.2 SPILL PREVENTION, CONTROL, AND COUNTERMEASURE (SPCC) PLAN

There was a Spill Prevention, Control, and Countermeasure (SPCC) Plan, dated February 2025, which outlines the procedures and activities required for the prevention of, and response to, oils releases at the Facility located in Arecibo. Oil storage at the facility consists of 23 Aboveground Storage Tanks (AST) fixed on concrete and provided with secondary containments. In addition, the facility stores a varying stock of oil drums inside the various building and the drum fill area. The facility also owns various delivery truck used in transportation-related activities outside the confines of the facility and generally return to the facility empty for parking overnight, but there are situations where full tank trucks are store in the facility dike areas. It has been determined by EPA that the facility does pose a risk of substantial harm pursuant to 40 CFR Part § 112, and therefore, the SPCC must be revised as per recent changes and construction of new ASTs at the facility.

4.3 FACILITY RESPONSE PLAN (FRP)

There was a Facility Response Plan, dated December 26, 2024, which was required under 40 CFR §112.20. The purpose of the FRP is to describe the procedures and activities required for the prevention of, and response to, oils releases at the Facility located in Arecibo. It has been determined by EPA that the facility could reasonably cause a "substantial harm" to the environment by discharging oil into or on navigable waters, and therefore, it is deemed advisable to keep updating the FRP as per recent changes and construction of new ASTs at the facility.

5 CLOSING MEETING

After completion of the walkthrough and document review, I met with Mr. Carlos Juarbe Toledo, Plant Manager, and Bárbara S. Ramos, Processes Coordinator, both from Oil Energy System, Carlos Huertas EPA On-Scene Coordinator, Hector Rodriguez, EPA Contractor, Angel Luis Alicea, EPA Contactor, to conduct a closing meeting. I indicated that the purpose of the closing meeting was to inform the Facility's representatives about the RCRA observations. I indicated to Mr. Juarbe that I wanted to discuss some EPA's observations before I can reach a full compliance determination of the RCRA program. Based on EPA Inspection findings, I discussed the following topics that needed Facility consideration:

i. EPA Inspector identified some solid waste stored, discarded, abandoned at the Facility without a proper hazardous waste determination or characterized, as "Hazardous Waste," or "Non-Hazardous Waste."
ii. EPA Inspector identified numerous containers, drums, tanks, and connecting pipelines with Used Oil that were not properly labelled with the words, "Used Oils," some were open, and needed to comply with used oil filter requirements.
iii. I was indicated that hot-drained terne-plated (lead-plated) used oil filters might be regulated as a hazardous waste if they are not recycled as scrap metal. Therefore, it was facility's responsibility to make a hazardous waste determination on lead-plated used oil filters whenever this waste stream is repeated or changed for its final disposition.
iv. It was observed at the facility that there were numerous observations of releases of used oil on the floor and potentially moving toward the environment outside of the secondary containment areas and drain systems. It was emphasized that a generator of used oil must stop the releases; contain the released used oil, clean up and manage properly the released used oil and other materials, and prevent future releases.
v. It was indicated that during the Inspection, it was difficult for the EPA Inspector to determine whether a hazardous waste has been mixed with the used oil from clients' collection sites by facility transporters. Therefore, it was discussed that the RCRA Rebuttable Presumption pursuant to 40 CFR § 279.10(b)(1)(ii) states that if used oil contains more than 1,000-ppm total halogens, it is presumed to have been mixed with listed spent solvents (i.e., degreaser, mineral spirits, brake wash, lacquer thinner, brake and carburetor cleaners, parts washers, brake fluids, sludges from your sump or oil/water separator, transmission fluid, etc.) it is presumed to be hazardous waste under the mixture rule. Therefore, it was imperative to have documenting testing data to evaluate if used oil mixtures collected by the transporter meet the definition of RCRA rebuttable presumption.
vi. It was discussed that absorbent materials (e.g., absorbents, rags and wipers, scrap metal) observed at the facility and were contaminated with used oil must be disposed as solid wastes, and the generator must determine whether or not they are hazardous. Because used oil is not listed (at the federal level), the only way these used oil-contaminated solid wastes could be hazardous is if they exhibit a characteristic or if they were mixed with listed hazardous waste.
vii. It was indicated that used oil-contaminated wastewater that does not meet the "de minimis amounts" of oil in wastewater it is regulated as "used oil" and is subject to 40 CFR Part § 279 standards including the residues or sludges resulting from CWA pre-treatment of wastewater containing used oil.

viii. EPA Inspector finally discussed that Oil Energy System is considered an "Used Oil Processor and Re-Refiner" under 40 CFR Part § 279 Subpart Fand therefore there were numerous requirements that the facility must comply with and would be requested by EPA.

6 COMPLIANCE ASSISTANCE

The EPA inspector discussed with Oil Energy Systems' representatives the specific RCRA program regulations and used oil requirements that apply to the Facility, and how to stay in compliance in case they decide to minimize or recover waste streams and implement waste minimization/pollution prevention procedures as required by RCRA.

7 CONCLUSION & FOLLOW-UP ACTIONS

Based on EPA's observations of the Inspection of regulated areas and completion of a document review session, EPA has determined that the hazardous waste management and/or used oil program at Oil Energy Systems was not satisfactory as required by the RCRA program, and many concerns on the applicable hazardous waste regulations were found.

8 ATTACHMENTS

I. Figure 1- Facility Location Map and Figure -2 Aerial Photograph
II. Appendix 1 - Oil Energy Systems, Inc. Tank and Plant Diagram
III. Photolog and Camera Roll (include all pictures taken during the inspection)

Title: **Figure 1: Oil Energy Systems, Inc., Arecibo, Puerto Rico - Location Map**	
EPA ID: **PRR000023820**	Project: **CEPD-RCRA-25-0001**

Title:

Figure 2: Oil Energy Systems, Inc. Arecibo, Puerto Rico - Aerial Photo

EPA ID: **PRR000023820**

Project: **CEPD-RCRA-25-0001**

1.4 HAZARD EVALUATION

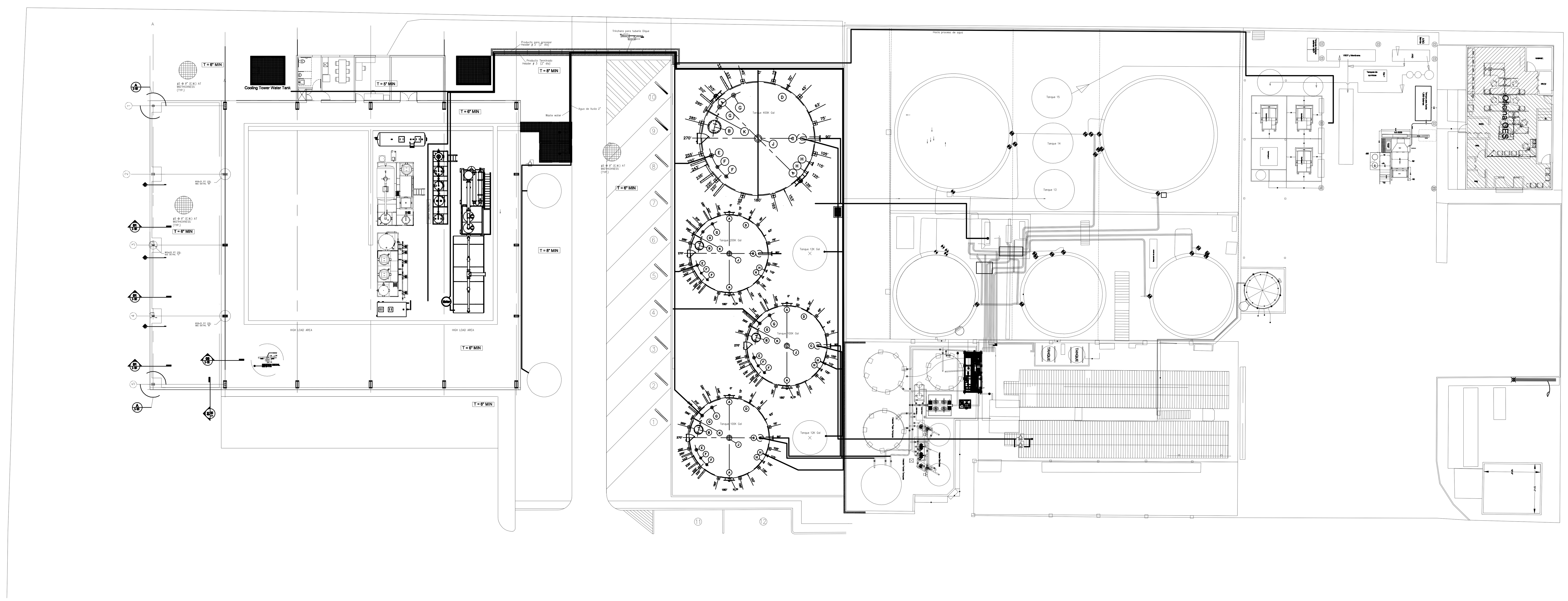
Last Update September 13, 2024

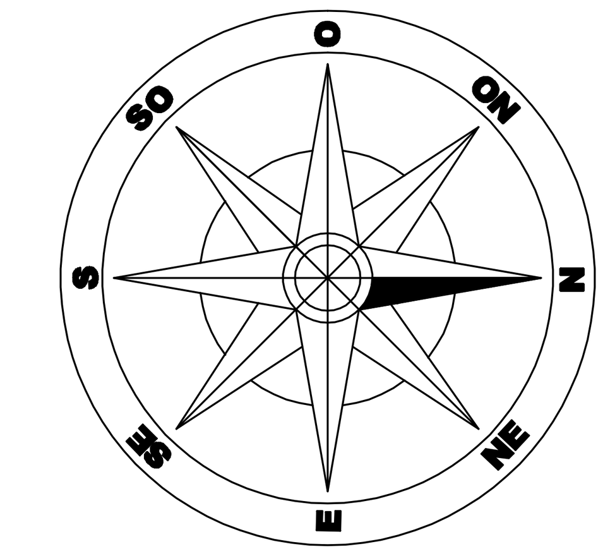
1.4.1 Hazard Identification Tanks

Tank#	Contents	QT Stored (Gls)	Type/Year	Capacity (Gls)	Past Failure
A1	Fuel Oil	422,382	Hold/2005	422,382	None to Date
A2	Fuel Oil	422,382	Hold/2005	422,382	None to Date
A3	Oil / Water	211,596	Hold/ 2005	211,596	None to Date
A4	Diesel	211,596	Hold/2005	211,596	None to Date
A5	Oil / Water	211,596	Hold/2005	211,596	None to Date
A6	Used Oil in Process	17,571	Hold/UNK	17,571	None to Date
A7	Used Oil in Process	21,302	Hold/1989	21,302	None to Date
A8	Used Oil in Process	21,302	Hold/1989	21,302	None to Date
A9	Used Oil in Process	30,226	Hold/1991	30,226	None to Date
A10	Used Oil in Process	3,192	Hold/2007	3,192	None to Date
A11	Used Oil in Process	3,192	Hold/2007	3,192	None to Date
A12	Diesel	5,264	Hold/2007	5,264	None to Date
A13	Raw Water	15,227	Hold/1980	15,227	None to Date
A14	Treated Water	15,227	Hold/1980	15,227	None to Date
A15	Treated Water	15,227	Hold/1980	15,227	None to Date
A16	Processed Oil	20,000	Hold/2005	20,000	None to Date
T-300	Limonene	472	Hold/UNK	472	None to Date
T-400	Kerosene	472	Hold/UNK	472	None to Date
T-500	Limonene	468	Hold/UNK	468	None to Date
T-130-A	Processed Oil	639	Hold/UNK	639	None to Date
T-140-A	Processed Oil	1,616	Hold/UNK	1,616	None to Date
T-17	Used Oil in Process	5,000	Hold/UNK	5,000	None to Date
T-18	Used Oil in Process	5,000	Hold/UNK	5,000	None to Date
T-19	Gasoline	2,000	Hold/2021	2,000	None to Date
T-20	Used Oil	1,000	Hold/2021	1,000	None to Date
W-21	Treated Water (not Oil)	3,000	Hold/UNK	3,000	None to Date
W-22	Treated Water (Not Oil)	5,000	Hold/UNK	5,000	None to Date

T-23	Used Oil	250	Hold/2023	250	None to Date
T-24	Used Oil	250	Hold/2023	250	None to Date
T-25	Diesel	400,000	Hold/2024	400,000	None to Date
T-26	Diesel	200,000	Hold/2024	200,000	None to Date
T-27	Diesel	100,000	Hold/2024	100,000	None to Date
T-28	Diesel	100,000	Hold/2024	100,000	None to Date
T-29	Waste Water	12,000	Hold/2023	12,000	None to Date
T-30	Waste Water	25,000	Hold/2023	25,000	None to Date
T-31	Rain Water	12,000	Hold/2023	12,000	None to Date
T-32	Rain Water	12,000	Hold/2023	12,000	None to Date
T-33	Waste Water	8,542	Hold/2022	8,542	None to Date
T-34	Cooling Tower Water Tank	7,675	Hold/2022	7,675	None to Date
T-35	G/W Separation Column	238	Hold/2022	238	None to Date
T-36	G/O Separation Column	238	Hold/2022	238	None to Date
T-37	1st Gas Scrubber	264	Hold/2022	264	None to Date
T-38	2nd Gas Scrubber	238	Hold/2022	238	None to Date
T-39	Over Pressure Control Column	317	Hold/2022	317	None to Date
T-40	Gas Separation Column	211	Hold/2022	211	None to Date
T-41	Produce Oil Water Separation Tank	1,981	Hold/2022	1,981	None to Date
T-42	Light Oil Separation Tank	2,351	Hold/2022	2,351	None to Date
T-43	Light Oil Tank	449	Hold/2022	449	None to Date
T-44	Vaccum Tank	198	Hold/2022	198	None to Date
T-45	Activated Carbon Tank	528	Hold/2022	528	None to Date
T-46	Clay Filtration Tank	766	Hold/2022	766	None to Date
T-47	Gum Separation Tank	1,506	Hold/2022	1,506	None to Date
T-48	1st Clay Filtration Tank	766	Hold/2022	766	None to Date
T-49	2nd Clay Filtration Tank	766	Hold/2022	766	None to Date
T-50	Gum Tank	317	Hold/2022	317	None to Date
T-51	Finish Oil Tank	1,849	Hold/2022	1,849	None to Date

Total Capacity 2,562,649 Gallons





NOTA:

Sección 5.3.6 Firmas en los Planos

Yo Ricardo Ramos De Juan. núm. de Licencia 19717, certifico que soy el profesional que diseño estos planos y las especificaciones complementarias. También certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicion. Reconozco que cualquier declaración falsa o falsificación de los hechos que se haya producido sin conocimiento o por negligencia ya sea por mi, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cuarquier acción judicial y disciplinaria por la OGPe.

REVISIONS

DESIGNER:

ING. RICARDO RAMOS, P.E.

LICENSE NUMBER: 19717

TEL: 787-905-0282

http://r2dj.weebly.com

PROJECT NAME:

OIL ENERGY SYSTEMS, INC

ARECIBO, P.R., SABANA HOYOS, CARR. #2 KM 62.5

DRAWING TITLE :

SPCC Site Plan

CERTIFIED AS CORRECT

PROJECT No.

DATE: December/ 19 /2024

DESIGNER:

DRAWN BY:

S1-01

SHEET NO: 01 OF 01

SCALE: AS-SHOWN

FILE NAME: OIL ENERGY SYSTEMS, INC

Picture 1 - OIL ENERGY SYSTEMS- At the Used Oil Filters Processing Area there were two (2) 3-cubic yard (cy) metal containers with compacted filters and residual used oil liquids not labeled or marked clearly with the words, "Used Oil."

Picture 2 - OIL ENERGY SYSTEMS- At the Used Oil Filters Processing Area was indicated that hot-drained terne-plated (lead -plated) filters might be regulated as a hazardous waste if they are not recycled as scrap metal.

Picture 3 - OIL ENERGY SYSTEMS- At the Used Oil Filters Processing Area there were five (5) 55-gallon blue and yellow plastic drums with absorbent rags, gloves, used oil filters, and plastics impacted with used oil not labeled or marked clearly with the words, "Used Oil."

Picture 4 - OIL ENERGY SYSTEMS- At the Used Oil Filters Processing Area there were two (2) 55-gallon blue plastic drums with absorbent rags, papel, and used oil filters impacted with used oil which were on-going crushing processes and not labeled or marked clearly with the words, "Used Oil."

EPA United States Environmental Protection Agency	Title: **Oil Energy Systems, Inc. Arecibo, Puerto Rico**	Pictures taken by: **Eduardo Gonzalez** **March 4, 2025**
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Picture 5 - OIL ENERGY SYSTEMS- At the Used Oil Filters Processing Area there was one (1) 200-gallon square underneath collection tank with used oil from the filter crusher machine that was open and not labeled or marked clearly with the words, "Used Oil,."

Picture 6 - OIL ENERGY SYSTEMS- At the Used Oil Filters Processing Area there was one (1) 1,000-gallon doble steel tank with used oil not labeled or marked clearly with the words, "Used Oil."
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Picture 7 - OIL ENERGY SYSTEMS- At the Wastewater Treatment Plant the process consists of separating remnant oil and sediments from the contact water obtained from the decantation tank.

Picture 8 - OIL ENERGY SYSTEMS— At the Wastewater Treatment Plant there were (3) three settling clarifiers where 99% of the suspended solids are separated with contact water and oils emitting strong odors of hydrocarbons.

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Picture 9 - OIL ENERGY SYSTEMS- At the Wastewater Treatment Plant there were two (2) 55-gallon blue plastic drums with absorbent rags, papel, and tyveks impacted with used oil not labeled or marked clearly with the words, “Used Oil,.

Picture 10 - OIL ENERGY SYSTEMS– EPA Inspector inspected the Used Oil Filling Processing Area. The process of receiving the used oils commenced with transferring the product into filling discharge tanks.

Picture 11 - OIL ENERGY SYSTEMS- At the Used Oil Filling Processing Area there were many detections of a release of used oil on the floor and potentially moving toward the environment outside of the secondary containment area and drain systems .

Picture 12 - OIL ENERGY SYSTEMS- At the Used Oil Filling Processing Area there were four (4) 55-gallon blue steel drums with used oil fully stained with oils films not labeled or marked clearly with the words, “Used Oil.”

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Picture 13– OIL ENERGY SYSTEMS— At the Used Oil Filling Processing Area there were twenty-four (24) 55-gallon blue/black plastic/steel drums with used oils, some had absorbent rags impacted with used oil, others were empty sitting on releases of used oil on the floor that were not labeled or marked clearly with the words, “Used Oil,.

Picture 14 - OIL ENERGY SYSTEMS- At the Used Oil Filling Processing Area there were two (2) 55-gallon yellow plastic drums with absorbent rags, impacted oily sedimenta, and used oil filters not labeled or marked clearly with the words, “Used Oil,.

Picture 15-OIL ENERGY SYSTEMS- At the Tank #6 Decanting Process Area there was ne (1) aboveground Tank #6 with storage capacity of 17,571-gallons used to store and process used oil at the generator facility was not labeled or marked clearly with the words “Used Oil,”

Picture 16 - OIL ENERGY SYSTEMS- At the Tank #7 and Tank #8 Decanting Process Area there were two (2) aboveground Tank #7 and Tank #8 both with storage capacity of 21,302-gallons used to store and process used oil at the generator facility were not labeled or marked clearly with the words “Used Oil.”

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Picture 17– OIL ENERGY SYSTEMS— At the Tanks #13, # 14 and #15 Decanting Process Storage Area there was one (1) aboveground Tank #13 with storage capacity of 15,227-gallons used to store raw contact water contaminated with hydrocarbons collected from dirty ballast, oily bilge, sludge and tank cleaning "SLOPS," not labeled with the words, "Used Oil."

Picture 18 - OIL ENERGY SYSTEMS- At the Tank #2 Decanting Fuel Oils Storage Area there was one (1) aboveground Tank #2 with storage capacity of 422,382-gallons used to store and fuel oils mixed with used oil at the generator facility was not labeled or marked clearly with the words "Used Oil."

Picture 19-OIL ENERGY SYSTEMS- At the Tank #1 Decanting Fuel Oils Storage Area there was one (1) aboveground Tank #1 with storage capacity of 422,382-gallons used to store fuel oils mixed with used oil at the generator facility was not labeled or marked clearly with the words "Used Oil."

Picture 20 - OIL ENERGY SYSTEMS- At the Used Oil/ Waster Storage Area there was one (1) aboveground Tank #5 with storage capacity of 211,596-gallons used to store used oils/ water mixture at the generator facility was not labeled or marked clearly with the words "Used Oil."

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Picture 21– OIL ENERGY SYSTEMS— At the Used Oil/ Water Storage Area there was one (1) aboveground Tank #5 with storage capacity of 211,596-gallons used to store used oils/water mixture at the generator facility was not labeled or marked clearly with the words "Used Oil."

Picture 22 - OIL ENERGY SYSTEMS- At the Tank #4 Diesel Storage Area there was one (1) aboveground Tank #4 with storage capacity of 211,596-gallons used to store Diesel product fthat belongs to Trans-Fuel Company.

Picture 23-OIL ENERGY SYSTEMS- At the Tank #9 Decanting Process Storage Area there was one (1) aboveground Tank #9 with storage capacity of 30,226-gallons used to store and process used oil at the generator facility were not labeled or marked clearly with the words "Used Oil."

Picture 20 - OIL ENERGY SYSTEMS- At the Side Yard Area there was one (1) 20-cy dumpster containing impacted soil contaminated with used oil and fuel oil facility was not labeled or marked clearly with the words "Used Oil," nor hazardous waste determination of the contents of the container.

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Picture 25– OIL ENERGY SYSTEMS— At the Tank Farm Area oils and fuels are stored in various tanks as final products for transportation and distribution to clients by Oil Energy Systems or its affiliate Trans-Fuel Company.

Picture 26 - OIL ENERGY SYSTEMS- At the Pyrolysis Plant there was one (1) aboveground reactor chamber connected to casing, oil tank, air blow, gas control, fuel condenser and air emission equipment among other auxiliary equipment running trial burns tests .

Picture 27-OIL ENERGY SYSTEMS- At the Backyard Dumpster Area there was one (1) 20-yd^3 with oily impacted rags, absorbent pads used oil and fuel oil at the at the generator facility was not labeled or marked clearly with the words “Used Oil,” nor hazardous waste determination of the contents of the container.

Picture 28 - OIL ENERGY SYSTEMS- At the Backyard Dumpster Area there was one (1) 5-yd3 with oily impacted rags, absorbent pads used oil and fuel oil mixed with domestic garbage at the at the generator facility was not labeled or marked clearly with the words “Used Oil,” nor hazardous waste determination of the contents of the container.

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	EPA ID: **PRR000023820** Project: **CEPD-RCRA-25-0001**	

Picture 29 – OIL ENERGY SYSTEMS— At the Sidewalk Area there were (2) 5-gallon grey and blue plastic containers oily waste and/or used oil one open to weather conditions not labeled or marked clearly with the words, “Used Oil,.

Picture 30 - OIL ENERGY SYSTEMS- At the Sidewalk Area there was eight (8) discarded spent acid-lead batteries and (1) discarded fire extinguisher along with brake pads, oily tools, and mechanical parts on a wood pallet in which no hazardous waste determination has been made on the discarded batteries and extinguisher ready for disposal.

Picture 31-OIL ENERGY SYSTEMS- At the Sidewalk Area there was one (1) steel metal Part Washer abandoned with oily impacted rags, absorbent pads contaminated with used oil and fuel oil not labeled or marked clearly with the words, “Used Oil,” nor hazardous waste determination of the content,

Picture 32 - OIL ENERGY SYSTEMS- At the Sidewalk Area there was an oil spill running toward a rainwater sewage system,

EPA United States Environmental Protection Agency	Title: **Oil Energy Systems, Inc. Arecibo, Puerto Rico**	Pictures taken by: **Eduardo Gonzalez** **March 4, 2025**
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