



***USFilter***

CLOSURE COST ESTIMATE

USFILTER RECOVERY SERVICES MID-ATLANTIC  
POMPANO BEACH USED OIL PROCESSING FACILITY

SEPTEMBER 2002

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WEST PALM BEACH

CLOSURE COST ESTIMATE

USFILTER RECOVERY SERVICES MID-ATLANTIC  
POMPANO BEACH USED OIL PROCESSING FACILITY  
1280 NE 48<sup>TH</sup> STREET  
POMPANO BEACH, FLORIDA 33064

SEPTEMBER 2002

PREPARED BY:  
STEVE MCGUIRE  
LISA SENDEK

APPROVED BY:  
NORBERT LINDNER, P.E.

6109-03

**USFilter**

*Engineering & Construction  
Airside Business Park  
250 Airside Drive  
Moon Township, PA 15108  
412.809.6000 phone  
412.809.6075 fax*

DEP Form#	62-710.901(d)
Form Title	Used Oil Processing Facility Permit Application
Effective Date	December 23, 1996

## APPLICATION FORM FOR A USED OIL PROCESSING PERMIT

### PART II - CERTIFICATION

Form 62-710.901(d) P. E. Certification [Complete when required by Chapter 471, F.S. and Rules 62-4.050, 62-761, 62-762, 62-701 and 62-710, F.A.C.]

Use this form to certify to the Department of Environmental Protection for:

1. Certification of secondary containment adequacy (capacity), structural integrity (structural strength), and underground process piping for storage tanks, process tanks, and container storage.
2. Certification of leak detection.
3. Substantial construction modifications.
- X 4. Those elements of a closure plan requiring the expertise of an engineer.
5. Tank design for new or additional tanks.
6. Recertification of above items.

Please Print or Type

X \_\_\_\_\_ Initial Certification \_\_\_\_\_ Recertification

1. DEP Facility ID Number: **FLD984262410** 2. Tank Numbers: **Table 1 List**

3. Facility Name: **USFilter Recovery Services Mid Atlantic-Pompano Beach Facility**

4. Facility Address: **1280 NE 48th Street, Pompano Beach, FL 33064**

This is to certify that the engineering features of this used oil processing facility have been designed/examined by me and found to conform to engineering principles applicable to such facilities. In my professional judgment, this facility, when properly constructed, maintained and operated, or closed, will comply with all applicable statutes of the State of Florida and rules of the Department of Environmental Protection.

  
Signature **Norbert Joseph Lindner, P.E.**

Name (please type)

Florida Registration Number: **50903**

Mailing Address: **250 Airside Drive**

Street or P. O. Box  
**Moon Township, PA 15108**

City State Zip  
Date: \_\_\_\_\_ Telephone **(412) 809-6160**

[PLEASE AFFIX SEAL]

*Handwritten:* 9/9/02

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## **POMPANO BEACH USED OIL PROCESSING FACILITY CLOSURE PLAN AND CLOSURE COST ESTIMATE**

The USFilter Recovery Services Mid-Atlantic, Inc. (USFRSMA) Pompano Beach facility at 1280 Northeast 48<sup>th</sup> Street is designed, constructed, and operated to minimize any threat to the environment. The closure plan will be updated whenever significant operational changes occur or design changes are made. The closure plan will be maintained with records required under Rules 62-701 and 62-710, Florida Administrative Codes (FAC).

The Closure Plan is based upon a scheduled and orderly shutdown of the facility. USFRSMA will submit an updated and detailed closure plan to the Florida Department of Environmental Protection (FDEP) at least 60 days prior to the scheduled date of closing the facility. At this time, there is no scheduled closure date for the facility. The intent is to operate the facility for the indefinite future. Within 30 days after closing the facility, USFRSMA will submit a certification of closure completion to the FDEP, which demonstrates that the facility was closed in substantial compliance with the detailed closure plan.

### **CLOSURE PERFORMANCE STANDARD**

Should closure become necessary, USFRSMA will comply with the requirements of 40 CFR, Part 279.54(h) and Chapter 62-710, FAC. The intent is to decommission the facility to an environmentally safe and secure state such that:

- There will be no need for further facility maintenance;
- Used oil will not contaminate surface or groundwater;
- All tanks, piping, secondary containment and ancillary equipment will be emptied, cleaned and decontaminated, and all storage materials removed and managed; and
- All aboveground storage and process tanks will be closed pursuant to Rule 62-761.800(2)(c), FAC.

The demolition of the facilities is not a part of the basic closure decommissioning process. If demolition becomes necessary to achieve the Closure Performance Standard, such demolition would be considered a contingency item. Demolition activities after achieving closure certification are a business item not within the scope of this Closure Plan.

### **VERIFICATION OF CLOSURE PERFORMANCE STANDARD**

The Florida regulations do not contain any specific guidelines for determining whether equipment, tanks, and containment have been successfully decontaminated. Although the facility does not process hazardous wastes, in most cases, the applicable decontamination standards are those identified in 40 CFR 268, Table 1 for the decontamination of material to a clean debris surface. The methods described in Table 1, Option A(1)(e) for high-pressure steam or water and Option A(2)(a) for water wash, including the use of additives to remove hazardous contaminants, are the most readily available. These performance standards do not require analytical confirmatory testing, as the objective standard is a visual inspection. QA/QC confirmatory tests using wipes or rinsates can be utilized if desired. Rinsates would be assessed for the presence of 40 CFR 261 hazardous characteristics.

### **CLOSURE OF TANK STORAGE**

Maximum tank storage is 372,000 gallons (356,000 gallons for used oil). A list of the storage tanks present at the Pompano Beach location is presented in Table 1.

**Table 1**  
**Aboveground Storage Tank Information**  
**Pompano Beach Facility**

<b>Tank Number</b>	<b>Volume (Gallons)</b>	<b>Material Stored in Tank</b>	<b>Installation Date</b>
187	10,000	Used Oil	6/1/93
188	10,000	Used Oil	6/1/93
189	10,000	Used Oil	6/1/93
190	10,000	Used Oil	6/1/93
191	10,000	Used Oil	6/1/93
192	10,000	Used Oil	6/1/93
193	10,000	Used Oil	6/1/93
194	10,000	Used Oil	6/1/93
195	10,000	Used Oil	6/1/93
196	10,000	Used Oil	6/1/93
197	10,000	Used Oil	6/1/93
198	10,000	Used Oil	6/1/93
199	25,000	Used Oil	6/1/93
200	25,000	Used Oil	6/1/93
201	25,000	Used Oil	6/1/93
202	12,000	Used Oil	6/1/93
203	15,000	Diesel	1/1/94
204	3,000	Used Oil	5/1/94
389	25,000	Used Oil	6/1/96
390	1,500	Diesel	6/1/96
952	15,000	Used Oil	6/1/99
953	25,000	Used Oil	6/1/99
954	15,000	Used Oil	6/1/99
955	25,000	Used Oil	6/1/99
956	15,000	Used Oil	6/1/99
957	25,000	Used Oil	6/1/99
<b>Total</b>	<b>371,500</b>		

Upon closure, all tanks will be emptied. Any inventory that meets or can be processed to meet marketing specifications for used oil will be processed and marketed as such. All material will be characterized in accordance with 40 CFR 279.54(h) and Part 261. Characterization will be based on process knowledge and chemical analysis for TCLP constituents. Upon closure of the tank system in accordance with 40 CFR Part 279, USFRSMA will remove or decontaminate used oil residues in tanks, contaminated secondary containment system components, and contaminated soils, structures, and equipment. USFRSMA will manage these materials as hazardous waste, unless the

materials are not hazardous waste as determined by chemical analysis. The wastes will be properly contained and shipped to a permitted disposal facility.

Liquid wastes will be removed via the tank piping system and handled as an oily waste. Material that cannot be removed via the piping system will be accessed via the tank manways or hatches. Confined space entry procedures will be followed. Residual liquid and sludge material at the bottom of each tank will be removed via pumping and handled as an oily sludge. Solid material at the bottom of the tank that cannot be removed as sludge will be removed and handled as an oily solid.

After the tanks are emptied, they will be first saturated with steam for up to 24 hours to loosen any hardened material. The steam condensate and generated solids will be handled as an oily sludge. Manual scraping will be performed to remove any further hardened material. The tanks will then be pressure washed until the visual inspection performance standard is achieved. Final rinsate samples will be collected as QA/QC confirmation of decontamination status.

As a contingent measure, if the tanks cannot be successfully decontaminated in place, the tanks will be cut up and further decontamination will be attempted. Upon achievement of the decontamination standard, the tanks would then be disposed as scrap. If decontamination cannot be successfully achieved, it would then be necessary to appropriately dispose of the tanks as a solid waste.

Ancillary piping within the tank farm will be decontaminated in a complementary manner.

As part of an orderly shutdown procedure, oily water will be processed through the facility treatment system. Oily sludges and solids will be placed in appropriate containers and shipped off-site for proper disposal.

#### **CLOSURE OF TANK FARM CONTAINMENT**

Once tanks within the tank farm have been successfully decontaminated, the containment area will be addressed. Manual scraping will be performed to remove any hardened material. The containment area will then be pressure washed until the visual inspection performance standard is achieved. Final rinsate samples will be collected as QA/QC confirmation of decontamination status to ensure that all hazardous compounds have been removed.

#### **CLOSURE OF CONTAINER STORAGE AREA**

Maximum container storage: non-hazardous drums:	1,000
hazardous drums:	60
30-yard roll-off boxes:	1
20-yard roll-off boxes:	5

Upon closure, any container in storage will be tested as necessary to confirm hazardous waste classification status, removed, and shipped to a proper disposal facility. Once all containers are removed, decontamination of the container storage will take place. Manual scraping will be performed to remove any hardened material. The containment area will then be pressure washed until the visual inspection performance standard is achieved. Final rinsate samples will be collected as QA/QC confirmation of decontamination status to ensure that all hazardous compounds have been removed.

All materials used in the decontamination will be either processed through the facility waste treatment system, or contained and shipped off-site to the proper disposal facility.

### **DECONTAMINATION OF WASTE TREATMENT SYSTEM**

Once wastewater generated by the decontamination of the tanks and containment areas has been processed, the waste treatment system will be decontaminated. Tanks will be decontaminated in a manner similar to the storage tanks. Manual scraping will be performed to remove any hardened material. The waste treatment equipment and associated containment areas will then be pressure washed until the visual inspection performance standard is achieved. Final rinsate samples will be collected as QA/QC confirmation of decontamination status to ensure that all hazardous compounds have been removed.

### **VISUALLY CONTAMINATED SOILS**

The facility is designed to prevent the contamination of surrounding soils. At the time of the closure, any surficial soils exhibiting obvious contamination will be excavated and tested prior to appropriate disposal.

### **CLOSURE ASSESSMENT**

Rule 761.800(4) requires the completion of a Closure Assessment. The closure assessment may be implemented either in parallel with or at the conclusion of the general decontamination of the facility. Waste material generated through investigation will be managed to the maximum possible extent through the facility waste management and treatment systems. Otherwise, investigative wastes will be separately managed, tested, and appropriately disposed.

The Closure Assessment is based upon a reconnaissance-level soil and groundwater investigation to determine whether the facility has impacted soils and groundwater. As such, the initial Closure Assessment will not provide a complete horizontal and vertical characterization of any discovered contamination. The comprehensive development of a Site Conceptual Model and Site Characterization would be addressed as a contingent item.

A specific investigation plan will be developed at the time of closure. A Site Specific Health and Safety Plan will be developed in accordance with OSHA 1910.120. The Florida One-Call utility notification procedure will be followed. Requirements for the use of Florida registered Professional Engineers, Geologists, and Certified Laboratories will be addressed. The intent will be to generate information that will meet the Florida Brownfields Program information requirements.

The reconnaissance Closure Assessment investigative procedure is based on the use of Geoprobe techniques where groundwater is above the soil/bedrock interface. If groundwater is below the soil/bedrock, other drilling techniques appropriate to the site geology will be required.

Soil sampling will be accomplished by either grab samples from Geoprobe liners or samples from auger split-spoon sampling. Soils samples will be selected for testing based upon visual and field meter evidence of contamination status. Samples will be obtained from the 0 to 2 foot Direct Contact interaction zone. If obvious contamination extends to the soil/bedrock interface, samples will be obtained at the interface. Intervening samples at depth will also be collected based on observed site conditions.

Groundwater status will be determined by installing temporary monitoring wells in the Geoprobe or auger test borings. Test borings will not be completed as permanent monitoring wells unless site-specific conditions observed during the investigation warrant.

Petroleum product contaminants of concern are defined in Table A of 62-770 FAC. Soil and groundwater samples will be tested for the specified constituents using the specified or any proposed alternative analytical methods. The regulations at 40CFR279.54(h)(1)(i) require facility decontamination and management of wastes. For the purposes of this closure plan, a determination of whether soil and/or groundwater contamination is present will be made by reference to Florida Clean-up Target Levels as defined at 62-777-170 FAC. Additional samples may be analyzed for a broader range of constituents to evaluate the site status with respect to Soil Clean-up Target Levels under both the residential and commercial/industrial land use scenarios. The exact number of samples will be determined at the time of closure activities. Sufficient samples will be collected to ensure statistical significance. Additional TCLP analysis may be required for the D-listed constituents, as per 40 CFR Part 261.

If soil and/or groundwater are determined to be contaminated by the reconnaissance Closure Assessment, it will be necessary to implement a more comprehensive Site Characterization and Groundwater Quality Assessment Plan as required by 40 CFR 265.93 utilizing the administrative procedures of the Florida Brownfields Program. A Site Investigation Plan to establish the horizontal and vertical extent of contamination will be prepared and submitted to FDEP for approval. The Groundwater Quality Assessment Plan will include the number, location, and depth of wells; sampling

and analytical methods for those hazardous wastes or hazardous waste constituents in the facility; evaluation procedures, including any use of previously-gathered groundwater quality information; and a schedule of implementation. The resulting Site Characterization Report will include, at a minimum, the calculated or measured rate of migration of hazardous waste or hazardous waste constituents in the groundwater. If necessary, a Corrective Action Program will be proposed and implemented to achieve the soil and groundwater Clean-up Target Levels. If it proves to be impractical to satisfactorily decontaminate the site, then the Closure and Post-Closure Care requirements of 40 CFR 265.310 apply. These include requirements for any long-term soil and groundwater monitoring.

If groundwater is monitored, USFRSMA will keep records throughout the closure and post-closure period. In addition, USFRSMA will annually submit to the Regional Administrator a report containing the results of the groundwater assessment and/or monitoring program that will include, at a minimum, the calculated or measured rate of migration of hazardous waste or hazardous waste constituents in the groundwater during the reporting period. This information will be submitted no later than March 1 following each calendar year.

Facility closure will be performed in a timely fashion. All accumulated materials will be characterized for proper disposal. Material shipments will take place within 10 working days of final characterization. Tanks and equipment will be decontaminated within 60 calendar days.

### **CLOSURE COST ESTIMATE**

The Closure Plan is based on an orderly planned shutdown of the facility by USFRSMA. FDEP requires, however, that the Closure Cost estimate be based on a worst-case scenario. That scenario is generally considered to be an unplanned situation in which the State will be responsible for implementing site closure using contractors hired by the State. It assumes that all tanks are full of material and that all contents of all tanks must be characterized to determine hazardous waste classification status. It also assumes that the on-site treatment processing equipment is not operational and that all materials must be transported off site for processing and appropriate disposal. The demolition of facilities is not considered to be a requirement for decontamination.

The Closure Cost Estimate is presented as Table 2 at the end of this document. The cost estimate utilizes Year 2001 Florida Prevailing Wage Rates with typical Contractor Billing Rate Multipliers. The Cost Estimate includes the Closure Assessment reconnaissance soil and groundwater investigation. A cost allowance is included for the clean-up of areas of surficially stained soil as part of the basic site decontamination. The cost estimate includes a Contingency of 15 percent and an Administrative Cost of 10 percent. Should contamination be discovered, the Cost Estimate does not include any

costs for a more comprehensive Site Characterization, Groundwater Assessment, Corrective Action, or long-term monitoring.

The total closure Decontamination Cost Estimate for the USFRSMA Pompano Beach facility is \$568,818

**USFILTER RECOVERY SERVICES MID-ATLANTIC  
POMPAÑO BEACH, FLORIDA FACILITY**

**TABLE 2  
CLOSURE DECONTAMINATION COST ESTIMATE**

**Unit Transportation and Disposal Costs**

Oily water	\$0.16	\$/Gal
Oily Sludge Liquid	\$1.44	\$/Gal
Oily Solids (Non-Haz)	\$42.00	\$/Ton
Oily liquids (Haz)	\$1.25	\$/Gal
Oily Solids (Haz)	\$350.00	\$/Ton
Virgin vehicle fuels	\$0.00	\$/Gal (may assume zero cost with salvage value)

**NOTE:  
ALL COSTS REPRESENT COMMERCIAL  
THIRD PARTY COSTS FOR SITE AT  
FULL CAPACITY**

**Site Safety and Operations Plan**

10000

Lump Sum

**\$10,000****TANKS - DISPOSAL OF INVENTORY AND DECONTAMINATION**

Total Number of Tanks

26

\$/Sample

Tank Content Characterization TCLP+PCB

1 \$1,200

**\$31,200****Maximum Inventory****Tank Liquids**

Total Number of Tanks

26

% vol. Pumpable Pump volume

\$/Gal

Total

Disposal cost  
as oily water

Total tank volume, gal

356000

90

320400

\$0.16

**\$51,264**

vehicle diesel, gal

16500

95

15675

\$0.00

**\$0****Liquid/sludge by Vac Truck**

Total Number of Tanks

26

% vol. Vac Truck Vac volume

\$/Gal

Total

Disposal cost  
as oily sludge

Total tank volume, gal

356000

3

10680

\$1.44

**\$15,379**

vehicle diesel, gal

16500

5

825

\$1.44

**\$1,188**

**Note: Confined Space Procedures for Tank Entry-PPE Level C if Required**

**Solids Removal**

Total Number of Tanks

26

% vol. Solids

Tons

\$/Ton

Total

Disposal cost

Total tank volume, gal

356000

7

122.108

\$42.00

**\$5,129**

vehicle diesel, gal

16500

0

0

\$42.00

**\$0****Initial Tank Cleaning for 24 Hours with  
Steam Condensate (as % tank volume)**

Total Number of Tanks

26

% vol. Vac Truck Vac Volume

Gal

\$/Gal

Total

Disposal cost  
as oily sludge

Total tank volume, gal

356000

2

7120

\$1.44

**\$10,253**

vehicle diesel, gal

16500

0

0

\$1.44

**\$0****High Pres. Steam Clean (as % tank volume)**

Total Number of Tanks

26

% vol. Vac Truck Vac Volume

Gal

\$/Gal

Total

Disposal cost  
as oily water

Total tank volume, gal

356000

3

10680

\$0.16

**\$1,709**

vehicle diesel, gal

16500

2

330

\$0.16

**\$53**

(includes associated piping, appurtenances, etc)

**Containment Steam Clean (as % tank volume)**

Total Number of Tanks

26

% vol. Vac Truck Vac Volume

Gal

\$/Gal

Total

Disposal cost  
as oily water

Total tank volume, gal

356000

2

7120

\$0.16

**\$1,139**

vehicle diesel, gal

16500

0

0

\$0.16

**\$0**

Container Storage Areas	Number Units	Gal or Tons total volume	Gal or Tons \$/Unit T&D)	
Non-Haz Drums, solids	750	195	\$42.00	\$8,190
Non-Haz Drums, liquids	250	13750	\$0.16	\$2,200
Haz Drums, Liquids	30	1650	\$1.25	\$2,063
Haz Drums, solids	30	7.8	\$350.00	\$2,730
Roll-off boxes (@20cy/box)	5	130	\$42.00	\$5,460
Surficial stained soil boxes	2	52	\$42.00	\$2,184
General cleanup				
<b>Container Characterization - 10% of Drums + rolloff boxes</b>		<b>TCLP cost</b>		
Number analytical samples	113		\$1,200.00	\$135,600

**Inventory & Decontamination Manpower Costs**

Classification	Florida 2001 Prevailing Wage Rate	Contractor Billing Rate Multiplier	Total Cost for 8-hr day
Engineer, Manager	33.76	3.5	945.28
Project Engineer	21.46	3.5	600.88
Haz Waste Laborer	13.35	3.2	341.76

Assume 40 Work Days for Disposal of Material Inventory and  
Labor Crew Size 5 Decontamination of Tanks and Site Equipment

Classification	Man-days	Daily Cost	Total Cost
Engineer, Mgr @33%time	13	945.28	\$12,478
Project Engineer, Site Supervisor	40	600.88	\$24,035
Haz Waste Laborer	200	341.76	\$68,352
			\$104,865
			\$104,865

**Summary Report of Decontamination Activities**

Lump Cost \$10,000 \$10,000

	Number days	Cost	
Equipment Rental Costs, Supplies, Safety, Etc.	40	\$500	Per day \$20,000
Cleanup Verification Samples (#tanks + 30%)	34	\$250	Per sample \$8,450

**Soil and Groundwater Site Assessment**

	Lump Costs	(Initial Phase II Reconnaissance Level)
Drilling (Geoprobe)	\$5,000	(includes investigative material disposal)
Analytical (20 samples)	\$9,000	(PPE at Level D)
Geoscience Labor	\$12,000	
Total	\$26,000	\$26,000

Total Decommissioning Cost	\$455,055
Contingency % 15	\$68,258
Administrative % 10	\$45,505
<b>TOTAL CLOSURE DECONTAMINATION COST ESTIMATE</b>	<b>\$568,818</b>

NOTE: Cost Estimate is based upon removal of inventory and the decontamination of the facility to a safe clean condition suitable for further ordinary business usage of the facility or disposition of the facility through ordinary bankruptcy proceedings. The Cost Estimate does not include demolition of any tanks or structures to a greenfield condition.

