1511353

MITTAUER
& ASSOCIATES, INC.
CONSULTING ENGINEERS &
PROJECT FUNDING SPECIALISTS

580-1 WELLS ROAD
ORANGE PARK, FL 32073
PHONE: (904) 278-0030
FAX: (904) 278-0840
WWW.MITTAUER.COM

February 19, 2015

Mr. Bheem Kothur, P.E., DEE
Division of Waste Management
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Used Oil Processing Facility Minor Permit Modification
Used Oil Processing Facility Permit No. 72815-HO-012 (Expires Nov. 20, 2017)
Duval County - Used Oil Processor
Liquid Environmental Solutions of Florida, LLC
Mittauer & Associates, Inc. Project No. 9122-38-1

Dear Mr. Kothur:

Enclosed you will find a DEP Used Oil Processing Facility Permit Application for a minor modification to the operating permit for Liquid Environmental Solutions of Florida, LLC's Jacksonville, Florida facility. This modification is for the installation of two 20,000 gallon Fat, Oil, and Grease (FOG) tanks. This application package includes the following:

1. Permit Application Fee: $50.00 made payable to the Florida Department of Environmental Protection.

2. One (1) set of DEP Application Form 62-710.901(6), "Used Oil Processing Facility Permit Application".

3. One (1) copy of FOG Process Description.

4. One (1) set of secondary containment calculations demonstrating more than the required capacity.

5. One (1) set of drawings, Sheets 1, 2, B-3c, and B-3d which show the revised site plan, piping, and tank schedule.

Thank you for processing this permit modification application, and please feel free to call with any questions.

Sincerely yours,
Mittauer & Associates, Inc.

Joseph A. Mittauer, P.E.
President

JAM/pj

Enclosures

cc/enc: Steve Sinaly., LES
Yuri Turovsky, LES.
Jabe Breland, FDEP Jacksonville District Office

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TO THE ORDER OF FL DEPT OF ENVIRONMENTAL PROTECTION

FROM: LIQUID ENVIRONMENTAL SOLUTIONS
RE: FLD981-928-484

John Hnatyszyn
Authorized Signature

USED OIL PROCESSING FACILITY PERMIT APPLICATION

Part I

TO BE COMPLETED BY ALL APPLICANTS (***Please type or print***)

A. General Information

1. New____ Renewal ____ Modification X___ **Date current permit expires** 11/20/2017

2. Revision number 1

3. NOTE: Used Oil Processors must also meet all applicable subparts, **(describe compliance in process description for applicable standards)** if they are:

____ Generators (Subpart C of Part 279)
X Transporters (Subpart E)
____ Burners of off-spec used oil (Subpart G)
X Marketers (Subpart H)
____ are disposing of used oil (Subpart I)

4. Date current operation began: 1986

5. Facility name: Liquid Environmental Solutions of Florida, LLC

6. EPA identification number: FLD-981-928-484

8. Facility mailing address:

1640 Talleyrand Avenue	Jacksonville	FL	32206
Street or P.O. Box	City	State	Zip Code

9. Contact person: Yuri Turovsky Telephone: (904) 438-2138

Title: Plant Manager Email yuri.turovsky@liquidenviro.com

Mailing Address:

1640 Talleyrand Avenue	Jacksonville	FL	32206
Street or P.O. Box	City	State	Zip Code

10. Operator's name: Yuri Turovsky Telephone: (904) 438-2138

Mailing Address:

1640 Talleyrand Avenue	Jacksonville	FL	32206
Street or P.O. Box	City	State	Zip Code

11. Facility owner's name: Liquid Environmental Solutions of Florida, LLC Telephone: (904) 438-2138

Mailing Address:

1640 Talleyrand Avenue	Jacksonville	FL	32206
Street or P.O. Box	City	State	Zip Code

12. Legal structure:

X Corporation (indicate state of incorporation) Florida
____ Individual (list name and address of each owner in spaces provided below)
____ Partnership (list name and address of each owner in spaces provided below)
____ Other, e.g., government (please specify) ____

If an individual, partnership, or business is operating under an assumed name, enter the county and state where the name is registered: County _____ State _____

Name: N/A
Mailing Address:

Street or P.O. Box | City | State | Zip Code

Name: _____
Mailing Address:

Street or P.O. Box | City | State | Zip Code

Name: _____
Mailing Address:

Street or P.O. Box | City | State | Zip Code

Name: _____
Mailing Address:

Street or P.O. Box | City | State | Zip Code

13. Site ownership status: [☐] owned [☐] to be purchased [☐] to be leased ____ years
[■] presently leased; the expiration date of the lease is: 12/31/2030

If leased, indicate: Land owner's name: A. Thomas Dudley, Sr.
Mailing Address:
1010 E. Adams Street | Jacksonville | FL | 32203
Street or P.O. Box | City | State | Zip Code

14. Name of professional engineer Joseph A. Mittauer Registration No. 23111
Mailing Address:
580-1 Wells Road | Orange Park | FL | 32073
Street or P.O. Box | City | State | Zip Code
Associated with: Mittauer & Associates, Inc.

B. SITE INFORMATION

1. Facility location:
County: Duval
Nearest community: Jacksonville
Latitude: 30°20'36"N Longitude: 81°37'46"W
Section: 8 Township: 2S Range: 27E
UTM # 17 / 439460E / 33568 / 50N

2. Facility size (area in acres): 1.6

3. Attach a topographic map of the facility area and a scale drawing and photographs of the facility showing the location of all past, present and future material and waste receiving, storage and processing areas, including size and location of tanks, containers, pipelines and equipment. Also show incoming and outgoing material and waste traffic pattern including estimated volume and controls.

The facility's detailed process description is labeled as Attachment B-3c, Rev. 7 & B-3d, Rev.8

C. OPERATING INFORMATION

1. Hazardous waste generator status (SQG, LQG, Etc.) CESQG

2. List applicable EPA hazardous waste codes:

D001, D002,D006, D007, D009, F003, D011
All hazardous waste is generated from Laboratory Activities; clor-d-tect kits, xylene and COD test waste.

3. Attach a brief description of the facility operation, nature of the business, and activities that it intends to conduct, and the anticipated number of employees. No proprietary information need be included in this narrative.

No change from April 17, 2013 permit.

4. A detailed description of the process flow should be included. This description should discuss the overall scope of the operation including analysis, treatment, storage and other processing, beginning with the arrival of an incoming shipment to the departure of an outgoing shipment. Include items such as size and location of tanks, containers, etc. A detailed site map, drawn to scale, should be attached to this description. [See item four (4), page four (4) of the instructions.]

No change from April 17, 2013 permit.

5. The following parts of the facility's operating plan should be included as attachments to the permit application. [See item five (5), page four (4) of the instructions.]

   a. An analysis plan which must include:
   (i) a sampling plan, including methods and frequency of sampling and analyses;
   (ii) a description of the fingerprint analysis on incoming shipments, as appropriate; and
   (iii) an analysis plan for each outgoing shipment (one batch/lot can equal a shipment provided the lots are discreet units) to include: metals and halogen content

No change from April 17, 2013 permit.

   b. A description of the management of sludges, residues and byproducts. This must include the characterization analysis as well as the frequency of sludge removal.

No change from April 17, 2013 permit.

   c. A tracking plan which must include the name, address and EPA identification number of the transporter, origin, destination, quantities and dates of all incoming and outgoing shipments of used oil.

No change from April 17, 2013 permit.

6. Attach a copy of the facility's preparedness and prevention plan. This requirement may be satisfied by modifying or expounding upon an existing SPCC plan. Describe how the facility is maintained and operated to minimize the possibility of a fire, explosion or any unplanned releases of used oil to air, soil, surface water or groundwater which could threaten human health or the environment. [See item six (6), page five (5) of the instructions.]

The SPCC plan was updated on October 18, 2013 and is on file at the Department.

7. Attach a copy of the facility's Contingency Plan. This requirement should describe emergency management personnel and procedures and may be met using a modifying or expounding on an existing SPCC plan or should contain the items listed in the Specific Instructions. [See item seven (7), page five (5) of the instructions.]

The SPCC Plan was updated on October 28, 2013 and is on file at the Department.

8. Attach a description of the facility's unit management for tanks and containers holding used oil. This attachment must describe secondary containment specifications, inspection and monitoring schedules and corrective actions. This attachment must also provide evidence that all used oil process and storage tanks meet the requirements described in item 8b on page 6 of the specific instructions, and should be certified by a professional engineer, as applicable.

No change from April 17, 2013 permit.

9. Attach a copy of the facility's Closure plan and schedule. This plan may be generic in nature and will be modified to address site specific closure standards at the time of closure. [See item nine (9), page six (6) of the instructions.]

No change from April 17, 2013 permit.

10. Attach a copy of facility's employee training for used oil management. This attachment should describe the methods or materials, frequency, and documentation of the training of employees in familiarity with state and federal rules and regulations as well as personal safety and emergency response equipment and procedures. [See item ten (10), page seven (7) of the instructions.]

No change from April 17, 2013 permit.

APPLICATION FORM FOR A USED OIL PROCESSING PERMIT

PART II - CERTIFICATION

TO BE COMPLETED BY ALL APPLICANTS

Form 62-710.901(6) Operator Certification

Facility Name: Liquid Environmental Solutions of Florida, LLC EPA ID# FLD-981-928-484

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment or knowing violations. Further, I agree to comply with the provisions of Chapter 403, Florida Statutes, Chapters 62701 and 62-710, F.A.C., and all rules and regulations of the Department of Environmental Protection

Signature of the Operator or Authorized Representative*
Liquid Environmental Solutions of Florida, LLC

Yuri Turovsky, Plant Manager
Name and Title (Please type or print)

Date: 2/18/15 Telephone: (904) 438-2138

* If authorized representative, attach letter of authorization.

APPLICATION FROM FOR A USED OIL PROCESSING PERMIT

PART II - CERTIFICATION

Form 62-710.901(6) Facility Owner Certification

Facility Name: Liquid Environmental Solutions of Florida, LLC EPA ID# FLD-981-928-484

This is to certify that I understand this application is submitted for the purpose of obtaining a permit to construct, or operate a used oil processing facility. As the facility owner, I understand fully that the facility operator and I are jointly responsible for compliance with the provisions of Chapter 403, Florida Statutes, Chapters 62-701 and 62-710, F.A.C., and all rules and regulations of the Department of Environmental Protection.

Signature of the Operator or Authorized Representative*
Liquid Environmental Solutions of Florida, LLC

Steve Sinaly, Division Manager
Name and Title (Please type or print)

Date: 2-17-2015 Telephone: (904) 463-4358

* If authorized representative, attach letter of authorization.

APPLICATION FROM FOR A USED OIL PROCESSING PERMIT

PART II - CERTIFICATION

Form 62-710.901(6) Land Owner Certification

Facility Name: Liquid Environmental Solutions of Florida, LLC EPA ID# FLD-981-928-484

This is to certify that I, as land owner, understand that this application is submitted for the purpose of obtaining a permit to construct, or operate a used oil processing facility on the property as described.

Signature of the Operator or Authorized Representative*
Liquid Environmental Solutions of Florida, LLC

A. Thomas Dudley, Sr.

A. Thomas Dudley, Sr.
Name and Title (Please type or print)

Date: 2/17/15 Telephone: (904) 438-2138

* If authorized representative, attach letter of authorization.

APPLICATION FORM FOR A USED OIL PROCESSING PERMIT

PART II - CERTIFICATION

Form 62-710.901(6) 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.
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

_____ Initial Certification __X__ Recertification

1. DEP Facility ID Number: FLD-981-928-484 2. Tank Numbers: See Listing on Topographic Map

3. Facility Name: Liquid Environmental Solutions of Florida, LLC

4. Facility Address: 1640 Talleyrand Avenue, Jacksonville, FL 32206

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

Joseph A. Mittauer, P.E.
Name (please type)

Florida Registration Number: 23111

Mailing Address: 580-1 Wells Road
Street or P. O. Box

Orange Park	Florida	32073
City	State	Zip

Date: FEB 13 2015 Telephone (904) 278-0030

JOSEPH A. MITTAUER LICENSE No. 23111 STATE OF FLORIDA PROFESSIONAL ENGINEER

[PLEASE AFFIX SEAL]

LES Jacksonville

FOG Process Description

The proposed FOG processing unit includes (2) 20,000-gal tanks and piping designed to handle up to 40,000 gallons per day of restaurant grease trap waste. The FOG collected from generators in the Jacksonville service area is offloaded into one of the FOG receiving tanks by reverse action of the truck vacuum pump. The material is allowed to settle. The separated water is transferred to one of the existing wastewater tanks and commingled with industrial wastewater to be processed under the facility's industrial pretreatment permit. The concentrated grease and solids are periodically transported to an offsite FOG recycling facility.

SECONDARY CONTAINMENT CALCULATIONS
MINOR PERMIT MODIFICATION
USED OIL PROCESSING FACILITY

for

Liquid Environmental Solutions of Florida, LLC
EPA ID No. FLD-981-928-484
1640 Talleyrand Avenue
Jacksonville, FL 32206

Joseph A. Mittauer, P.E.
PE Registration No. 20311
February 13, 2015

JOSEPH A. MITTAUER
LICENSE
No. 23111
STATE OF FLORIDA
PROFESSIONAL ENGINEER

MITTAUER
& ASSOCIATES, INC.
CONSULTING ENGINEERS &
PROJECT FUNDING SPECIALISTS
CERTIFICATE OF AUTHORIZATION NO. 6569

MITTAUER & ASSOCIATES, INC.
CONSULTING ENGINEERS

580-1 Wells Road Phone: (904) 278-0030
Orange Park, FL 32073 Fax: (904) 278-0840

Subject: Updated Secondary Containment Vol.
Project: Used Oil Facility
Client: Liquid Env. Solutions (prev. IWS)
Job No.: 9122-381 Sheet No.: 1 of 4
Designed By: JAM Date: 2-7-15

HISTORICAL INFORMATION

Reference Updated Secondary Containment Volume Calculations Dated 3-26-01, Revised 11-1-02, sheets 1-10, as attached. These are the original containment calcs made for the prior (original) owner Industrial Waste Services, Inc. (IWS) Since the 11-1-02 calcs were prepared, several tank replacements were made along w/ 1 increase in the containment area which is part of this permit modification.

CHANGES IN CONTAINMENT CAPACITY - SUMMARY

NO	DATE	BY	REVISION DESCRIPTION
7	9/13/12	JZ	REMOVED TANKS 3A, 3B, 4A, 4B ADDED TANKS 102-109
6	10/05/07	WF	REMOVED TANK 48, NEW TANKS 17 & 35A
5	10/17/05	JZ	REMOVED TANKS 45 & 46, NEW TANK 45
4	7/9/04	JZ	REVISED TANK 5, 11, 13, 15, 16, 17, 18a, 20, 28,
3	4/1/03	JZ	REVISED SECOND TANK 11 AS TANK 101
2	12/27/02	JZ	RELABELED TANKS 6, 38, 39, 81 & 82, DELETED TANK 29
1	11/1/02	JZ	REMOVED TANKS 12, 13, 14, 15, 16, 17, 18 & 20 ADDED TANKS 11, 12, 13, 14, 15, 16, 17, 18, 18a 20, 28 & 29

CHANGES IN CONTAINMENT #1 & 2

Tank 11 was included 1-10-02 calcs on the 1-8-02 set, pg. 9 of 10. Tanks 12, 13, 14, 15, 16, 17, 18 & 20 were replacements with less capacity tanks. The diameters were the same but they were not as tall. Because they were taller than the containment wall, there was no change in containment volume. Tanks 18a, 28 & 29 were added, but later removed.

- No Net Change -

CHANGES IN CONTAINMENT #3 & 4

This was further relabeling of tanks w/ - No Net Change -

MITTAUER & ASSOCIATES, INC.
CONSULTING ENGINEERS

580-1 Wells Road Phone: (904) 278-0030
Orange Park, FL 32073 Fax: (904) 278-0840

Subject: Updated Secondary Containment Vol.
Project: Used Oil Facility
Client: Liquid Environmental Solutions
Job No.: 9122.381 Sheet No.: 2 of 4
Designed By: JTM Date: 2-7-15

CHANGES IN CONTAINMENT #5

This was the removal & replacement of the DAF unit, Tank 45 & 45A. Also removal of the Centrifuge, Tk 46. Generally, these are elevated units & the changes are minimal, with a slight gain in containment available which will be ignored.

— No Net Change —

CHANGES IN CONTAINMENT #6

Remove Tank 48 - Sludge Dryer, Scrubber & Hyd. Unit

29'x6' 4'x6' x 3x3' = 207 SF area

General Finish Floor Elev = 8.3

Increase in Volume available: (10'-8.3') x 207 SF = + 352 cf

Add Tank 17

This is a 1,300 gallon Tank 8' ø at FF Elev of 9.5'

Loss of available Volume: (10.0'-9.5') $(\pi(\frac{8}{2})^2)$ = - 25 cf

Add Tank 35A

This is an 11,650 gallon Tank 8' ø at FF Elev of 6.3'

Loss of available Volume: (10'-6.3') $(\pi(\frac{8}{2})^2)$ = - 186 cf

Net change = + 141 cf 9a... of cont.

CHANGES IN CONTAINMENT #7

Remove Tanks 3, 3A, 4 & 4A (note this yet to be done)

(47'x16' x2) (Elev 10.0 - 9.0') : Increase in Vol. available = + 940 cf

Add Tanks 102-109

8 Tanks @ $(\pi(\frac{8}{2})^2)$ x (Elev 10.0 - 8.5') = Loss of Vol available = - 603 cf

Net Change = + 337 cf = 9a...

MITTAUER & ASSOCIATES, INC.
CONSULTING ENGINEERS

580-1 Wells Road Phone: (904) 278-0030
Orange Park, FL 32073 Fax: (904) 278-0840

Subject: Updated Secondary Containment Vol.
Project: Used Oil Facility
Client: Liquid Environmental Solutions
Job No.: 9122.38.1 Sheet No.: 3 of 4
Designed By: JH Date: 2-8-15

CHANGES IN CONTAINMENT #8 (Current Modification)

Add FOG Tanks 110 & 111, Also add additional containment area.

Add Containment Area

Min 33' × 18' = (Elev. 10.0 - 10.88)

Note Finish Floor is above Top of Containment Wall at lower end, therefore added area provides no additional storage volume. Likewise, the two new 12'ϕ tanks do not displace any of the containment volume because they are above the 10.0' wall ht at the lower end of the plant.

– No Net Change –

Changes In Containment - Tank #5

Note Tank No. 5 was removed after the 3-26-01 & 11-1-02 Calcs & revisions. This had been the largest Oil Tank at 210,000 gallons. Now Tank 53, w/a capacity of 85,000 gallons has the largest capacity as a regulated tank.

Remove Tank 5

36'ϕ, Avg. FF Elev = 8.5'

Increase in Containment Vol Cap: $\pi\left(\frac{36}{2}\right)^2(10.0-8.5) =$ + 1527 CF

NEW CONTAINMENT CAPACITY BASED ON TANK CHANGES

Containment Capacity per Calcs revised 11-1-02 (pg. Dall?)	34,543 CF
Change in Capacity due to Change #1-5	– No Change –
Change in Capacity due to Change # 6	+ 141 CF
Change in Capacity due to Change #7	+ 337 CF
Change in Capacity due to Change #8	– No Change –
Change in Capacity due to Elimination of Tank #5	+ 1,527 CF
Total Provided Containment	36,548 CF
	OR 273,380 gallons

MITTAUER & ASSOCIATES, INC.
CONSULTING ENGINEERS

580-1 Wells Road Phone: (904) 278-0030
Orange Park, FL 32073 Fax: (904) 278-0840

Subject: Updated Secondary Containment Vol.
Project: Used Oil Facility
Client: Liquid Environmental Solutions
Job No.: 9122-38-1 Sheet No.: 4 of 4
Designed By: JAM Date: 2-8-15

REQUIRED CONTAINMENT CAPACITY

Note Tank No. 5 (210,000 gallons) is no longer at the facility. The largest capacity regulated tank is No. 53 w/a capacity of 85,000 gallons.

40CFR, part 279, Subpart E - Standards for Used Oil Processors and Re-Refiners, requires secondary containment based on these specifics. A standard in the industry is to provide 110% of the largest tank.

Req'd capacity = 110% * 85,000 gallons: 93,500 gallons or 12,500 CF

Available Capacity 273,580 gallons >> 93,500 gallons

∴ OK as is.

MITTAUER & ASSOCIATES, INC.
CONSULTING ENGINEERS
4611-4 U.S. Highway 17
Orange Park, FL 32073
Tel: (904) 278-0030
Fax: (904) 278-0840

Subject: Updated Secondary Containment
Project: Used Oil Facility
Client: Industrial Water Services
Job No.: 9122-15-1 Sheet No.: 1 of 10
Calculated By: JAM Date: 3-26-01
Revised 11-1-02

HISTORICAL INFORMATION

Reference 7-31-97 "Secondary Containment Volume" calculations by M&A Job No. 9122-15-1 sheets 1-4 } sheets 1-10
(& M&A Job No. 9122-21-1)

The required containment Volume is 110% of the largest Tank
Tank #5 = 210,000 gallons

Reqd. Vol. = 110% × 210,000 gallons

= 231,000 gallons or 30,900 CF

Vol. Provided = 270,000 gallons or 36,090 CF

The top of the containment wall is Elev. 10.0'
Any additional tanks or equipment in the containment area that is below elev. 10.0 will reduce the available containment volume as provided in the 7-31-97 calculations.

CHANGES IN CONTAINMENT CAPACITY

1 May 3, 1999 M&A letter to DEP

Modify Tank No. 27 (add to height), relocate tank No. 44,
Add Tank Nos. 30, 47, 51, 52, 53, 54, 60, 61, 62.

2 March 13, 2000 M&A letter to DEP

Remove Tank Nos. 8, 10, 11, 28, 40, 82B
Add Tank Nos. 10, 54, 55, 70, 71 & 72

3 February 14, 2001 M&A letter to DEP

Remove Tank No. 9, Add Tank Nos. 7, 8, 9 & 56

MITTAUER & ASSOCIATES, INC.
CONSULTING ENGINEERS
4611-4 U.S. Highway 17
Orange Park, FL 32073
Tel: (904) 278-0030
Fax: (904) 278-0840

Subject: Update of Secondary Containment
Project: Used Oil Facility
Client: JWS
Job No.: 9122-15-1 Sheet No.: 2 of 10
Calculated By: JAM Date: 1-8-02

CHANGES IN CONTAINMENT CAPACITY (CONTINUED)

4 January 10, 2002 M&A letter to DEP
Add Tank No. 11

5 November 6, 2002 M&A letter to DEP
Remove Tanks 12, 13, 14, 15, 16, 17, 18, 20
Add New Tanks 11, 12, 13, 14, 15, 16, 17, 18, 20, 28, 29

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CONSULTING ENGINEERS
4611-4 U.S. Highway 17
Orange Park, FL 32073
Tel: (904) 278-0030
Fax: (904) 278-0840

Subject: Updated Secondary Containment Vol. Calcs.
Project: Closed O.I Facility
Client: I.W.S.
Job No.: 9122-151 Sheet No.: 3 of 10
Calculated By: JAM Date: 3-26-01

1 MAY 3, 1999 TANK CHANGES

Modify Tank No. 27

The capacity of the tank was increased by raising and adding on to the top of the tank. No changes occured below elevation 10.0'
Change in Tank Displacement = -0-

Relocate Tank No. 44

This tank is an elevated oil-water seperator
No changes were made in the volume of displacement below elevation 10.0
Change in Tank Displacement = -0-

Add Tank No. 30

This is a 500 gallon tank which is elevated on legs. The body of the tank is above elev. 10.0'
Change in Displacement = -0-

Add Tank No. 47

This is an 8'-0"ϕ, 4,200 gallon DAF clarifier which is elevated on legs. The body of the tank is above elev. 10.0'
Change in Displacement -0-

Add Tank No. 51

This is a 10'-0"ϕ, 15,000 gallon tank with a finish floor elev. of ± 10.65'. The body of the tank is above elev. 10.0'.
Change in Displacement -0-

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Subject: Updated Secondary Containment
Project: Used Oil Facility
Client: IWS
Job No.: 9122-15-1 Sheet No.: 4 of 10
Calculated By: JAM Date: 3-26-01

Add Tank No. 52

This is a 10'-0" ϕ, 15,000 gallon tank with a finish floor elev. of ≈ 10.65' (same as #51). The body of the tank is above Elev. 10.0'

Change in displacement -0-

Add Tank No. 53

This is a 22'-0" ϕ 85,000 gallon tank with a finish floor elevation of ≈ 10.75'. The body of the tank is above elev. 10.0'

Change in displacement -0-

Add Tank No. 54

This is an elevated, horizontal cylindrical type heat exchanger. The body of the tank is above elev. 10.0'.

Change in displacement -0-

Add Tank No. 60

This is a 10'-6" ϕ, 12,000 gallon vertical tank with a finish floor elev. ≈ 7.2'

Area of tank = 86.59 SF Depth = 10.0 - 7.2 = 2.8'

Volume of displacement = 86.59 SF × 2.8' = -242.5 CF

(Loss of containment vol. capac.)

Add Tank No. 61

This is an 11' × 23' rectangular tank, 8,000 gallon cap. with a finish floor elev. ≈ 7.4'

Area of Tank = 11' × 23' = 253 SF, Depth = 10.0 - 7.4 = 2.6'

Volume of displacement = 253 SF × 2.6' = -657.8 CF

MITTAUER & ASSOCIATES, INC.
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4611-4 U.S. Highway 17
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Tel: (904) 278-0030
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Subject: Updated Secondary Containment
Project: Used Oil Facility
Client: IWS
Job No.: 9122-15-1 Sheet No.: 5 of 10
Calculated By: JAM Date: 3-26-01

Add Tank No. 62

This also is an 11'x23' rectangular tank 8000 gallon cap. with a finish floor elev. = 7.5'

Area of tank = 11'x23' = 253 SF Depth: 10.0 - 7.5 = 2.5'

Volume of Displacement: 253 CF x 2.5' = -632.5 CF

TOTAL LOSS OF CONTAINMENT CAPACITY

-242.5 - 657.8 - 632.5 CF = -1,532.8 CF loss

2 MARCH 13, 2000 TANK CHANGES

Remove Tank No. 8

This is an 9'-0" ϕ tank which is laying horizontal and is 43' long. It is an 11,000 gallon tank with a finish floor elev. = 9.0'

Area based on 1' depth = 3.62 SF, length = 43'

Volume of displacement: 3.62 SF x 43' = +155.7 CF

Remove Tank No. 10

This is an 8'-0" ϕ, 6,000 gallon tank with a finish floor elev = 7.9

Area of tank 50.27 SF, Depth = 10.0 - 7.9' = 2.1'

Volume of Displacement = 50.27 SF x 2.1' = +105.6 CF

Remove Tank No. 11

This is an 8'-0" ϕ, 6,000 gallon tank with a finish floor elev = 7.92'

Area of tank = 50.27 SF Depth = 10.0 - 7.92 = 2.08'

Volume of Displacement = 50.27 CF x 2.08' = +104.6 CF

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Subject: Update of Secondary Containment
Project: Used Oil Fac. I.f.
Client: IWS
Job No.: 9122-15-1 Sheet No.: 6 of 10
Calculated By: JAM Date: 3-27-01

Remove Tank No. 28

This is a 3'x8' rectangular 360 gallon tank with a finish floor elev. = 10.0'. The bottom of the tank is above elev. 10.0'.

Change in displacement = -0-

Remove Tank No. 40

This is an 8'-0" ϕ tank with a finish floor elev. of ≈ 8.1'

Area of tank = 50.27 SF Depth = 10.0 - 8.1 = 1.9'

Volume of displacement = 50.27 SF x 1.9' = + 95.5 CF

Remove Tank No. 82B

This is an 8'-0" ϕ, 1,000 gallon tank with a finish floor elev. ≈ 8.0'.

Area of tank = 50.27 SF, Depth = 10.0 - 8.0' = 2.0'

Volume of displacement = 50.27 x 2.0' = + 100.5 CF

Add Tank No. 10 (New tank #10)

This is a rectangular tank 8'x18', 4800 gallon with a finish floor elev. = 7.9'

Area of tank = 144 SF, Depth = 10.0 - 7.9' = 2.1'

Volume of displacement = 144 SF x 2.1' = - 302.4 CF

Add Tank No. 54

This is a 10'-0" ϕ, 19,000 gal. Tank with a finish floor elev = 10.9'. The bottom of the tank is above elev. 10.0'

Change in Displacement -0-

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Subject: Updated Secondary Containment
Project: Usco 01 Facility
Client: IWS
Job No.: 9122-151 Sheet No.: 7 of 10
Calculated By: JAM Date: 1-27-01

Add Tank No. 55

This is an 8'-0" ϕ, 10,000 gallon tank w/a finish floor elev. = 10.9'. The bod of the tank is above elev. 10.0'.

Change in Displacement: -0-

Add Tank No. 70

This is a 10'-0" ϕ, 9,500 gallon tank w/a finish floor elev = 7.78'

Area of Tank = 78.54 SF, Depth = (10.0 - 7.78) = 2.22

Volume of Displacement = 78.54 SF × 2.22' = -174.4 CF

Add Tank No. 71

This is a 10'-0" ϕ, 6,500 gallon tank with a finish floor elev. = 8.02'. This is a cone bottom tank where the bod of the tank is above elev. 10.0'

Change in Displacement -0-

Add Tank No. 72

This is also a 10'-0" ϕ, 6,500 gallon tank that is a cone bottom tank where the bod of the tank is above elev. 10.0'

Change in Displacement -0-

TOTAL GAIN OF CONTAINMENT CAPACITY

+155.7 +105.6 +104.6 +95.5 +100.5 -302.4 -174.4 CF

= +85.1 CF gain.

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Subject: Updated Secondary Containment
Project: USGI 0.1 Facility
Client: IWS
Job No.: 9122.15-1 Sheet No.: 8 of 10
Calculated By: JAM Date: 3.22.01

3 FEBRUARY 14, 2001 TANK CHANGES

Remove Tank No. 9

This is an 11'6" x 61' rectangular 40,000 gallon tank with a finish floor elev. of 7.0'
Area of tank = 701.5 SF, Depth = 10.0 - 7.0 = 3.0'
Volume of Displacement = 701.5 SF x 3.0' = +2,104.5 CF

Add Tank No. 7

This is a 13'0" ϕ, 23,000 gallon tank with a finish floor elev. = 7.0'
Area of tank = 132.73 SF Depth = 10.0' - 7.0' = 3.0'
Volume of Displacement = 132.73 SF x 3.0' = -398.2 CF

Add Tank No. 8

This is a 10'6" ϕ, 23,000 gallon tank with a finish floor elev. of = 7.0'
Area of tank = 86.59 SF, Depth = 10.0 7.0 = 3.0'
Volume of Displacement = 86.59 SF x 3.0' = -259.8 CF

Add Tank No. 9

This is a 10'0" ϕ, 23,000 gallon tank with a finish floor elev of = 7.0'
Area of tank = 78.54 SF, Depth = 10.0 - 7.0' = 3.0'
Volume of Displacement = 78.54 SF x 3.0' = -235.6 CF

Add Tank No. 56

This is a 8'0" ϕ, 6,000 gallon tank with a finish floor elev of = 10.68'. The body of the tank is above elev. 10.0'
Change in Displacement -0-

TOTAL GAIN OF CONTAINMENT CAPACITY

+2,104.5 + 398.2 - 259.8 - 235.6 CF = 1,210.9 CF Gain

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Subject: Updated Secondary Containment
Project: Used 0:1 Foc: 1.4
Client: IWS
Job No.: 9122-151 Sheet No.: 9 of 10
Calculated By: JAM Date: 1-8-02

4 JANUARY 10, 2002 TANK CHANGES

Add Tank No. 11

This is an 8'-0" ϕ tank, 6,000 gallon tank with a finish floor elevation of ± 9.0
Area of tank = 50.3 sf Depth = 10.0 - 9.0 = 1.0
Volume of Displacement = 50.3 sf × 1.0' = -50.3 cf

5 November 1, 2002 TANK CHANGES

IWS will be filling in the entire wood oil tank pit. In the original calcs. we used a volume of 1,260 cf for this area, since we will fill up to the surrounding elev. which is an avg. elev. of 9.80, we will ignore the minimal storage between elev. 10.00 & 9.80, which would have been reduced by the tank footprint anyway. Thus the loss of containment volume is 1,260 cf

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Subject: Updated Secondary Containment Calcs.
Project: Used Oil Facility
Client: IWS
Job No.: 9122-15-1 Sheet No.: 10 of 10
Calculated By: JAM Date: 3-27-01

NEW CONTAINMENT CAPACITY BASED ON TANK CHANGES

Initial Containment Volume Capacity as of 7-31-97	36,090 CF
Loss of Capacity due to May 3, 1999 Tank Changes	- 1,533 CF
Gain in Capacity due to March 13, 2000 Tank Changes	+ 85 CF
Gain in Capacity due to Feb. 14, 2001 Tank Changes	+ 1,211 CF
Loss in Capacity due to Jan 10, 2002 Tank Changes	- 50 CF
Loss in Capacity due to Nov. 1, 2002 Containment Changes	- 1,260
New Containment Capacity	= 34,543 CF
	OR 258,400 gallons

REQUIRED CONTAINMENT CAPACITY

Tank No. 5 is still the largest tank (ow) or (o) at the facility. Tank 5 has a capacity of 210,000 gallons

Required Secondary Capacity = 110% = 210,000 gallons

= 231,000 gallons

OR 30,900 CF

Available Capacity = 258,400 gallons > Req'd Cap. = 231,000 gallons

Therefore Secondary Containment Capacity is adequate.

LARGE NUMBER

OF MAP(S)

SCANNED

SEPARATELY