

October 9, 2015

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Mr. Bheem Kothur, P.E. III Used Oil Permit Coordinator MS 4560 FDEP 2600 Blair Stone Road Tallahassee, FL 32399-2400

RE: Response to FDEP September 18, 2015 - Request for Additional Information Water Recovery, LLC Used Oil Operating Permit Renewal EPA ID No. FLR 000 069 062; Used Oil Permit No. 79677-HO-12

Dear Mr. Kothur,

Please find enclosed Water Recovery, LLC (WRI) response to FDEP letter dated September 18, 2015, Request for Additional Information regarding our application for Used Oil Permit renewal.

Per the directions in the above referenced letter, our response is being transmitted digitally directly to <u>Bheem.kothur@dep.state.fl.us</u>.

Once again, your assistance with this matter is greatly appreciated.

Kindest Regards, D. Keyrold

Gregory Reynolds <sup>/</sup> Vice President & General Manager Water Recovery, LLC

Cc: Mr. Jabe Breland FDEP Northeast District Office Response to FDEP September 18, 2015 - Request for Additional Information Water Recovery, LLC Used Oil Operating Permit Renewal EPA ID No. FLR 000 069 062; Used Oil Permit No. 79677-HO-12

#### Item #1. Copies of tank inspection reports are attached in files named:

- Above Ground Storage Tank Assessments
- Tank 1P
- Tank 2P
- Tank 3P
- Tank 4P
- Tank 5P
- Tank 6P
- Tank 7P
- Tank 8P
- Tank 9P
- Tank 10P
- Tank 1SW
- Invoice for Corrective Action
- Tank Inspection 1P and 9P
- Tank Inspection Summary (rev 2)

#### Item #2. Description of Solidification Activities

The incoming non-hazardous sludges and or liquid materials that are sent for processing to the solidification area, shown on Drawing No. 13-113A, are received at WRI under our Categorical Industrial User Discharge Permit #099. This permit issued by Jacksonville Electric Authority (JEA), regulating WRI as a Centralized Waste Treatment Facility is current, effective July 1, 2013 with and expiration date of June 30, 2018.

WRI manages the receipt of incoming materials consistent with the documentation previously provided in support of this permit application, identified as Management Procedure 4100, revision 4.

The volume of material received and processed in this area will vary significantly based on market conditions. On a weekly basis, this range could be zero through 140 tons of finished output. The solidification agents to be used may also vary depending on several factors. All of the agents considered must be non-hazardous as received, and are further evaluated via laboratory and field trial to result in a non-hazardous output from our process environment. A strong preference is given to absorbent materials that are by-products from local manufacturing operations, which can be diverted from current direct to landfill disposal.

The ultimate disposal location for the solidification area output is currently Chesser Island Landfill. Other properly permitted landfill disposal sites may be considered, as warranted by operational needs and or market conditions.

WRI manages the disposal solidification materials consistent with the documentation previously provided in support of this permit application, identified as Management Procedure 4300, revision 3.

#### Item #3. Attachment C.9 Closure Plan

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A revision has been made to the Used Oil Facility Closure Plan to address this item. Please remove attachment C.9 and replace with the attached file, identified as Revision 2 on the title page.

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# Summary of Inspections and NDT Testing of WRI Regulated Tanks Revision 2

	Tank		Mainten	ance Service I	Performed	
<u>Date</u>	<u>Number</u>	<u>Cleaning</u>	Visual Inspection	Report	<b>Pictures</b>	NDT Testing (4)
1/1/2001	1-P	yes	yes (4)	yes		yes
1/1/2001	2-P	yes	yes (4)	yes		yes
1/1/2001	3-P	yes	yes (4)	yes		yes
1/1/2001	4-P	yes	yes (4)	yes		yes
1/1/2001	5-P	yes	yes (4)	yes		yes
1/1/2001	6-P	yes	yes (4)	yes		yes
1/1/2001	7-P	yes	yes (4)	yes		yes
1/1/2001	8-P	yes	yes (4)	yes		yes
1/1/2001	9-P	yes	yes (4)	yes		yes
1/1/2001	10-P	yes	yes (4)	yes		yes
2/13/2009	4-P	yes	yes (5)	no		no
6/23/2010	1-P	yes	-	no		no
7/8/2010	9-P	yes	-	no		no
7/15/2010	1-P	yes	yes (1)	yes	yes	no
7/29/2010	1-P	yes	yes (4), (6)	yes	yes	yes (2)
7/29/2010	9-P	yes	yes (4)	yes	yes	yes (3)
1/23/2012	2-P	yes	yes	yes	yes	no
1/26/2012	4-P	yes	yes	yes	yes	no
1/31/2012	6-P	yes	yes	yes	yes	no
4/1/2014	2-P 3-P 5-P 7-P 8-P	yes	yes (7)	yes	yes	no

#### Notes:

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1	Tank kept out of service after cleaning of 6/23/2010, to allow Visual Inspection.
2	Tank kept out of service after cleaning of 6/23/2010, to allow NDT testing by GEIS
3	Tank kept out of service after cleaning of 7/8/2010, to allow NDT testing by GEIS
4	NDT Testing includes a visual inspection component
5	Removed internal wires from old float level gauge, which were tangled and not in use
6	Visual inspection also performed by WRI Maintenance personnel on (7/15/10)
7	Visual inspection performed by WRI Maintenance personnel on (4/3/14)

#### Summary Of Cleaning and/or NDT Testing of WRI Petroleum Storage Tanks

Revision (0) 8/21/2010

	Tank	Main	tenance Service P	erformed	
Date	<u>Number</u>	Cleaning	Visual Inspection	NDT Testing (4)	Notes:
1/1/2001	1-P	yes	yes (4)	yes	(1)
1/1/2001	2-P	yes	yes (4)	yes	(2)
1/1/2001	3-P	yes	yes (4)	yes	(3)
1/1/2001	4-P	yes	yes (4)	yes	(4)
1/1/2001	5-P	yes	yes (4)	yes	(5)
1/1/2001	6-P	yes	yes (4)	yes	(6)
1/1/2001	7-P	yes	yes (4)	yes	
1/1/2001	8-P	yes	yes (4)	yes	
1/1/2001	9-P	yes	yes (4)	yes	
1/1/2001	10-P	yes	yes (4)	yes	
2/13/2009	4-P	yes	yes (5)	-	
6/23/2010	1-P	yes	-	-	
7/8/2010	9-P	yes	-	-	
7/15/2010	1-P	-	yes (1)	-	
7/29/2010	1-P	-	yes (4), (6)	yes (2)	
7/29/2010	9-P	-	yes (4)	yes (3)	
			X		
					1

Water Recovery, LLC

1819 Albert Street Jacksonville, FL 32202

www.wrijax.com

Tank maintained out of service after cleaning of 6/23/2010, to allow Visual Inspection. Tank maintained out of service after cleaning of 6/23/2010, to allow NDT testing by GEIS Tank maintained out of service after cleaning of 7/8/2010, to allow NDT testing by GEIS NDT Testing includes a Visual Inspection component

Removed internal wires from old float type level gauge, which were tangled and not in use

Visual inspection also performed by WRI Maintenance personnel on (7/15/10)



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## **GE Inspection Services**

#### GEIS Job #: JXID0105

### API-653 Aboveground Storage Tank Examination Evaluation Summary

Company:	Water Recovery, LLC	Location:	Jacksonville, Florida
Equipment Title:	Oil Tank 1P	Equipment No.:	1P
Department:	Water/Oil Seperation	Service Component #:	N/A
Evaluation By:	J. Carr	Evaluation Date:	7/30/2010

#### **INSPECTION HISTORY** (Date of Examinations)

(Date of Current Examinations)				
Formal External Visual Examination :	7/29/2010	Internal Exa	amination :	7/29/2010
External UT Thickness Examination :	7/29/2010	-		
(Date of Previous Examinations)		-		
Formal External Visual Examination :	N/A			
External UT Thickness Examination :	N/A	Previous Shell Life:	N/A	Years
Internal Examination :	N/A	Previous Floor Life:	N/A	Years
Not	able Visu	al Examination Findings		

External Examination		
No issues.		
Internal Examination		
Shell has early stages of corrosion with mi	nimal metal loss.	
Floor has random areas of corrosion conce	entrated near floor to shell area. Cor	rosion is approximately 1" to 3"
in diameter with a maximum measured de	epth of 0.100"	• •

		Sum	mary			
In Com	pliance With	Code For Continue	ed Operation	Jnder Current C	onditions:	
Yes		🗌 No	🗌 Co	uld not be deter	mined	
	<b>F</b> 0.005		<b>_</b> · · · · ·			
Maximum Corrosion	NH 0.005	Estimated	Remaining Li	te: 5.0	Years	(FLOOR)
<b>公</b>	Next API	Inspection:	7/29/20	15		
The next f	ormal <u>extern</u>	<u>al</u> visual inspectio	n should be s	cheduled within	5.0	years.
The next <u>c</u>	<u>external</u> UT t	hickness inspectio	n should be s	cheduled within	15.0	years.
The next <u>i</u>	internal or <u>or</u>	n-stream inspectio	n should be s	cheduled within	5.0	years.
<b>Required Action Iter</b>	ns:			• • • • • • • • • • • • • • • • • • •		

None

**Recommended Action Items:** None

External Visual: 7/29/2015 External UT Thickness: 7/28/2025 Internal Visual: 7/29/2015

(36)	GE Ins	pection	Servi	ces		Thickne	ess Calculat	tions
TANK DATA:	and set of	1.4.1		A CARA A CARA		GEIS Job #:	JXID	0105
Equipment Title:			Oil Tank 1F	· Salar Salar	Inspection Date:		1/24/2006	
Equi	pment No.:	40	1P	AND ADDRESS	Max. L	iquid Level (ft):	27	
D	epartment:	Wate	r/Oil Seper	ation	and the state	oint Efficiency:	0.1	70
De	sian Code:		API 650		S	pecific Gravity:	0.9	90
Conten	ts/Product:		Oil		1.1.1.1.1	Shell Material:	Unkr	own
Outside Di	ameter (ft):		12	The second	I.	Date of Service:	01/0	1/85
	Inspector:	1	J. Carr	ACCESSION OF	E	valuation Date:	7/30/	2010
FORMULA'S	5)	t min (in) = 2	2.6D(H)G/	<u>SxE</u>	Ref API 6	53, Dec. 1995, 2.3.	3.1	
	Corrosion I Estin	Rate (in/yr) = ( nated RCA = (	"t" Nom "t" Meas	"t" Meas.) / Ye "t" Min.)	ars in Opera	ation (Estimated	)	
	Rema	ining Life =	RCA / Corr.	Rate				1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
STRESS CAL	<u>CS</u>	TENSILE	<u>k</u>	<u>S1</u>	YIELD	<u>k</u>	<u>S2</u>	<u>s</u>
1st & 2n	d COURSE	55000	0.429	23595	30000	0.80	24000	23595
ALL OTHER	COURSES	55000	0.472	25960	30000	0.88	26400	25960
NOTE: UTILIZI	E THE SMALL	ER OF THE TH	10 "S" VALU	ES FOR MINIMU	M WALL CAL	CULATIONS.	Sec. Constant	1
SHELL PLA	TES	Using Previo	us Shell U	Thickness?	NO	(YES or NO)		
				API T	Previous	Governing	Estimated	Estimated
Elevation (ft)	Course	Height	S	Minimum	T (in)	T (in)	Corr. Rate	RCA
0.25	1	26.75	23595	0.100	0.437	0.396	0.002	0.296
2.00	1	25.00	23595	0.100	0.437	0.389	0.002	0.289
4.00	1	23.00	23595	0.100	0.437	0.386	0.002	0.286
6.00	1	21.00	23595	0.100	0.437	0.392	0.002	0.292
8.00	1	19.00	23595	0.100	0.375	0.341	0.001	0.241
10.00	2	17.00	23595	0.100	0.250	0.214	0.001	0.114
12.00	2	15.00	23595	0.100	0.250	0.219	0.001	0.119
14.00	2	13.00	23595	0.100	0.250	0.229	0.001	0.129
16.00	2	11.00	23595	0.100	0.250	0.232	0.001	0.132
18.00	2	9.00	23595	0.100	0.250	0.231	0.001	0.131
20.00	3	7.00	25960	0.100	0.250	0.244	0.000	0.144
22.00	3	5.00	25960	0.100	0.250	0.249	0.000	0.149
24.00	3	3.00	25960	0.100	0.250	0.249	0.000	0.149
26.00	3	1.00	25960	0 100	0.250	0.249	0.000	0 149
27.00	3	0.00	25960	0.100	0.250	0.249	0.000	0.149
A Selection of the		the given	a state					
The lowe	st (governir	ng) remaining	corrosion	allowance for	the shell is:	0.114	in.	
		Anti	cipated ren	naining life of	the shell is:	81.0	yrs.	
ROOF PLAT	ES	UT Thickness	Readings ov	er 100 sq. in. grid	(or single low	est t over 0.090")		
		0.219	0.223	0.228	0.229	0.231		
	Roof	Nominal T =	0.250	in.				
A	verage thick	ness of grid:	0.226	in.				
Correspondi	ng RCA for	the roof is :	0.129	in.	Roof R	emaining Life =	106.5	yr(s).
LOOR PLA	TES	Doe	s tank design	provide means f	or detection an	nd containment of a	bottom leak?	NO
		200		Does tank incor	porate a reinfo	rced bottom lining	>0.05 in thick	NO
				Using Prev	ious Floor LIT	Thickness for nomi	nal thickness?	NO
			Minimu	n accentable	bottom nl	ate thickness	0 100	in.
Nominal to	0 250	in Lowestt-	0 125	in Com	rocion Bate	0 005	BCA -	0.025
	0.200	ID LOWEST T =		10 10	meinn Math -			0.023

CUSTOMER: WATER RECOVERY, LLC ADDRESS: JACKSONVILLE, FLORIDA DEPARTMENT: WATER / FUEL OIL SEPERATOR

SERVICE COMPONENT NO.: N/A TECHNICIAN: JOHN CARR, JOE FUNK, WILL BATTLES

and the second			VESS	SEL GEN	IERAL D	ATA				The shares
NUM	BER (EQUIPMENT NO.,	ETC.)	N	AME (VES	SEL TITLE	)		1. A. 1. A.	DATE	
	1P		1 1	USED O	IL TANK		7/29/2010			
			and the second		i had					
Sector Sector	- Contraction of the		TYPE AN	ND CONST	RUCTION	CODE				
	PRESSURE VESSEL			SME VIII		1		ASME X		
X	STORAGE TANK	Carles Starting	A	PI 620	1.1.1.1.1			UL 142	1.1	
	HEAT EXCHANGER	State of the local sector	XA	API 650		45.24	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	OTHER	P. S.	
Constant of the			N	NAME PLA	TE DATA	P THE PROPERTY			Service and the service of the servi	
1.8.3	PRESENT	X	ABSENT		aller an artista	OBSCURE	D	an and a state	OTHER	
MFR:	N/A	1000	1	Sector Press	DESIGN P	RESSURE:		ATOMSPHI	ERIC	
SERIAL N	IO.: N/A	1. 1. 1. 1. 1.		Salar Salar	DESIGN T	EMP:	19	N/A	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	
NAT. BD	NO.: N/A	1.1.1.1.1.1.1			CONTENT	S:		OIL		
YEAR BU	ILT: N/A		and the second		SPECIFIC	GRAVITY:		0.9	a la companya da companya d	
			DA	ATA PLAT	E STAMPS	5 7 7 8 9 V		S TO ASSA		
	U	W		R		S		RT-1		OTHER
	SHELL			#1 HEAD	D (TOP)			#2 HEA	D (BOTTOM)	
X	VERTICAL		A	ASME F&D	/ TORISPI	HERICAL		ASME F	&D / TORISPH	ERICAL
	HORIZONTAL		H	HEMISPHE	RICAL	A.		HEMISPI	HERICAL	1
	SKEWED	1 Astalla	X C	CONICAL		1 Shines	Section Section	CONICA	L	
and the	OTHER		E	LLIPTICA	L. M.			ELLIPTIC	CAL	
	CYLINDRICAL		T and the second second second second	ORICONIC	CAL			TORICO	NICAL	
	SPHERICAL		S	SEGMENT	ED DOME		X	FLAT	and the second se	
	RECTANGULAR		F	LAT	<u> </u>		1.	OTHER	1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 -	
1. 1. 1.	OTHER		F	LOATING	ROOF		and the	Sugar Ch		Sec. 3. 3.3
	SHELL JACKET			#1 HEAD	JACKET			#2 HE/	AD JACKET	
and the second	PLATE		P	PLATE			1. Con 160	PLATE		in the second
	DIMPLED	a de la compañía		DIMPLED				DIMPLE	<b>D</b>	Stor Sale
	COIL (FULL)	1.5.5.1.5.1.S.	C	COIL (FULL	_)		21	COIL (FL	JLL)	A state of the sta
	COIL (HALF)		C	COIL (HALF	F)	1.		COIL (H/	ALF)	La company
	OTHER			DTHER				OTHER		in the
X	NONE			NONE	DIAL		<u> </u>	INONE	1.	
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	SHELL	V	HEAU 1			HEAD 2			JACKEI	
X	CHBN STL	×	CHBN SIL	1000	X	CRBN SIL	,	-	CHBN STL	19
	SINESIL		SINESIL			SINLSIL	-	- ∢	SINLSIL	
	ALLOY		ALLOY	-		ALLOY		_ Ż	ALLOY	
	FBHGLASS		I PBRGLASS			FBRGLASS	<u>,</u>	-	FBRGLASS	1
		EVT	EDNAL COAT			LOCATION		CUIDD		DATION
V	INSULATION	EAI	INONE	ING	v	CROLIND	EVEL	SUPP	URIS/FOUN	DATION
	INUNE	×	DAINIT			I at LEVEL	EVEL		LEGS	
	FIDER CLASS	^	BITUMEN			IST LEVEL			EVIDTE	
	FIBER GLAGS	IN	TERNAL LINE	D		2rd LEVEL			SADDLES	
	ACRECTOS	I.	DAINIT	n		Ath LEVEL			JANGERS	
	BI ANKET		GLASS		Y	ABOVE			BRACKETS	
	OTHER	1	NONE		^	OTHER			SLAB	
States and	Pomen	The protect	DRES	SUBE DE	IEE DEVI	CES		Contraction of the	IOLID	
	SAFETY VALVE			RIPTURE	DISK			DATE OF	INSPECTION	
	BELIEF VALVE			THER	DION		In a strange of the state	INSPECT	ION AGENCY	
		VE		ET DDEO		0				1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
The State Cardinate	ISAFETT RELIEF VAL	VC.	3	TANK	ARELS	/	Contraction of the			C. C. S.
· v		T	FOLIPMENT	I NAME I	ADEL3		ARD	1	CONTENTS	3
A 1	LOUI WENT NO.		LOCH WENT			IN TATLAC	minu		00.112.110	

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GE Inspection Services 9655 Florida Mining Blvd. West Jacksonville, Florida 32257 (904) 292-1579

CUSTOMER: WATER RECOVERY, LLC ADDRESS: JACKSONVILLE, FLORIDA DEPARTMENT: WATER / FUEL OIL SEPERATOR SERVICE COMPONENT NO.: N/A TECHNICIAN: JOHN CARR, JOE FUNK, WILL BATTLES

		VES	SEL CON	<b>DITION CHECKLIST</b>	T ( EXT	ERNAL EXAMINA	FION )	
NUMBE	r (Equipme	ent no., e P	тс.)	NAME (VESSELT	USED	OIL TANK		EXTERNAL (DATE) 7/29/2010
			San La	EXTERNAL EX	AMINA	TION		
(ITEM 1)	LADDERS/S	TAIRWAYS	S (ITEM	2) GROUNDING & TTACHMENT	(ITE	M 3) INSULATION	(ITEM	4) SURFACE UNDER INSULATION
(ITEN X	GOOD DAMAGED CORROSI PITTING LOOSE BO CRACKING BROKEN 5) CONDITI SUPPORTS GOOD DAMAGED CORROSI PITTING	O ON DLTS 3 ON OF 0 ON	(ITE X	INTACT / GOOD BROKEN CORROSION NOT OBSERVED NONE OTHER <b>M 6) EXTERIOR</b> COATING GOOD CONDITION PEELING BLISTERING CHALKING DAMAGE	N/A ( X	INTACT / GOOD WATER ENTRY VEGETATION DETERIORATION STAINING OTHER ABSENT ITEM 7) SHELL PLATES GOOD CONDITION CORROSION PITTING DAMAGE	N/A (ITE) X	GOOD CONDITION BARE PAINTED CORROSION PITTING NOT OBSERVED OTHER M 8) SHELL WELDS GOOD CONDITION CORROSION UNDERCUT POROSITY
(I	CRACKING BROKEN TEM 9) #1 HE	G AD	(ITE	LIFTING M 10) #1 HEAD	(IT	PATCHES NICKS/GOUGES EM 11) #2 HEAD	(["	OVER REINFORCED UNDER FILLED CRACKING TEM 12) #2 HEAD
	GOOD CO CORROSI PITTING DAMAGE REPAIRS PATCHES NICKS/GO	NDITION ON	X	GOOD CONDITION CORROSION UNDERCUT POROSITY OVER REINFORCED UNDER FILLED CRACKING	X	GOOD CONDITION CORROSION PITTING DAMAGE REPAIRS PATCHES NICKS/GOUGES	X	GOOD CONDITION CORROSION UNDERCUT POROSITY OVER REINFORCED UNDER FILLED CRACKING
(IT	EM 13) NOZZ	LES	(ITEM 1	4) NOZZLE WELDS	(ITE	M 15) EXTERNAL	N	FPA PLACARD
X	GOOD CO CORROSI PITTING DAMAGE REPAIRS PATCHES NICKS/GO	NDITION ON	X	GOOD CONDITION CORROSION UNDERCUT POROSITY OVER REINFORCED UNDERFILL CRACKING	X	GOOD CONDITION CORROSION PITTING DAMAGE UNDERCUT CRACKING NICKS/GOUGES	<	$\langle \rangle$
x	VISUAL	X	UT THICK	MT	TIONS	PT	RT	OTHER

NOTE: SEE ATTACHED VESSEL CONDITION COMMENTS PAGE FOR EXAMINATION COMMENTS



# CUSTOMER: WATER RECOVERY, LLC ADDRESS: JACKSONVILLE, FLORIDA DEPARTMENT: WATER / FUEL OIL SEPERATOR SERVICE COMPONENT NO.: N/A TECHNICIAN: JOHN CARR, JOE FUNK, WILL BATTLES

	VES	SEL COM	IDITION C	HECKLIS	T ( INT	ERNAL EXAMINATI	ON)	
NUMBER	R (EQUIPMENT NO., E	TC.)	NAME	(VESSEL T	ITLE)			INTERNAL (DATE)
	1P				USED	OIL TANK		7/29/2010
的人的		the second	INTI	ERNAL EX	AMINA	TION		
(П	TEM 16) LININGS	- Andrew		and the second	(ITEN	17) SHELL PLATES	(ITE	18) SHELL WELDS
	GOOD CONDITION		a Janasa an			GOOD CONDITION	X	GOOD CONDITION
	PEELING	Sec. Sec. Sec.		S. 199	X	CORROSION	111	CORROSION
	BLISTERING	3 K 20 ST 109	C. C. M. C. M. C. M.		X	PITTING	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	UNDERCUT
N/A	CHALKING	a strange state		192		DAMAGE		POROSITY
	DAMAGE		B GET THERE N	1. Sale 1. Sale 1.		REPAIRS	127 P.553	OVER REINFORCED
	LIFTING	Section 1				PATCHES		UNDER FILLED
				See Section 19		NICKS/GOUGES	1000000	CRACKING
(IT	EM 19) # 1 HEAD	(ITEM 2	0) # 1 HEAD	WELDS	(11)	EM 21) # 2 HEAD	(ITEM	22) # 2 HEAD WELDS
v		a state of the second					v	
^	COPPOSION	en relative statements and	COPPOSI		v	GOOD CONDITION	^	COPPOSION
	DITTING	- Sale will	LINDERCU	T	v	DITTING	100 CH 100	
	PITTING	- N/A	POPOSITY	1	~	PHING		DODOSITY
	DAMAGE		PURUSITY	IFODOFD	4	DAMAGE		PURUSITY
i and	REPAIRS	-	OVER REI	VFORCED	phan the set	REPAIRS		OVER REINFORGED
	PATCHES	- Wester	UNDER FIL	LED	1	PAICHES	1	UNDER FILLED
and the second second	NICKS/GOUGES		CHACKING	2		NICKS/GOUGES	C	CRACKING
(11)	EM 23) NOZZLES	(ITEM:	24) NOZZLE	WELDS	(11	EM 25) INTERNAL ATTACHMENTS	11) TTA	EM 26) INTERNAL
X	GOOD CONDITION	X	GOOD CO	NDITION	X	GOOD CONDITION	X	GOOD CONDITION
1.	CORROSION	-	CORROSK	ON	Sec. 19	CORROSION		CORROSION
1	PITTING		UNDERCU	Т		PITTING	10	UNDERCUT
	DAMAGE	Contraction of the	POROSITY		1	DAMAGE	1. 1. 1. 1.	POROSITY
5 16-6	BEPAIRS		OVER REI	NFORCED	1000	BEPAIRS	212.7	OVER BEINFORCED
	PATCHES	1	UNDER FIL	LED	elty-	PATCHES		UNDER FILLED
1.127	NICKS/GOUGES	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	CRACKING	3	877 Ber	NICKS/GOUGES		CRACKING
	(ITEM 27) MECH	IANICAL DE	VICES					
		GOOD	DAMAGE	N/A				7****
	SHAFT				N.S.		-	
	DIP TUBES		A DESCRIPTION	1.2.2.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	6 <sup>9</sup>	,		
	DOWN COMERS	Contraction of the second		ALC: THE	Q. 1			
	THEBMO WELLS	10011000		1. S. S. S.				
	BAFFLE PLATES	1			No.			
X	LEVEL GAUGE	X						
~				EXAMINA	TIONS			
Y		LUT THICK	1 29 11	MT I		PT	BT	* OTHER
^	IVISUAL A	DOTTION						OTTER

VACUUM BOX INSPECTION OF BOTTOM FLOOR WELD SEAM.

NOTE: SEE ATTACHED VESSEL CONDITION COMMENTS PAGE FOR EXAMINATION COMMENTS



#### CUSTOMER: WATER RECOVERY, LLC ADDRESS: JACKSONVILLE, FLORIDA DEPARTMENT: WATER / FUEL OIL SEPERATOR SERVICE COMPONENT NO.: N/A TECHNICIAN: JOHN CARR, JOE FUNK, WILL BATTLES

		VESSEL CONDITION COMME	ENTS
IUMBER (I	EQUIPMENT NO., ETC.)	NAME (VESSEL TITLE)	DATE
	1P	USED OIL TAN	NK 7/29/2010
ITEM NUMBER		COMMENTS	
17	Shell has early stages of o	corrosion with minimal metal loss.	
21	Floor has random areas o in diameter with a maximu	f corrosion concentrated near floor to sh im measured depth of 0.100"	ell area. Corrosion is approximately 1" to 3"
	in the second second		
			,



LOCATION:

CUSTOMER: WATER RECOVERY, LLC ADDRESS: JACKSONVILLE, FLORIDA DEPARTMENT: WATER / FUEL OIL SEPERATOR SERVICE COMPONENT NO.: N/A TECHNICIAN: JOHN CARR, JOE FUNK, WILL BATTLES

ULTRASONIC THICKNESS									
MBER (EQUIPME	NT NO., ET	C.)	NAME (VE	ESSEL TIT	LE)			DATE	
			7/20/2010						
en Production	IF	al second	in section.	036				1/29	1
ELEVATION	0º	45°	90º	135°	180º	225º	270º	315°	Location
+2*	0.242	0.242	0.365	0.363	0.352	0.356	0.373	0.238	FLOOR
+2'	0.251	COMPACT R	0.362	1.1.1.1	0.367	-	0.362		FLOOR
+4'	0.248		0.359	and the second	0.366		0.361		FLOOR
+6' CENTER	0.364			1000					FLOOR
+2*	0.228		0.229		0.227		0.229		ROOF
+2'	0.225	200	0.223		0.230	A. Second	0.231		ROOF
+4'	0.225	1	0.224		0.229		0.228		ROOF
+6' CENTER	0.219							-2017-02	ROOF
	1 and and	the water	2	-	-				
<u> </u>	1.61	6 Suda Martin							
	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	Section 2	1. Al						in the second
- Arriver		Sector St.					See Char		
	The started		-						
	-	and the second						-	100 100
		1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -							6.22
						2			
1.		and the second							
	1	No. 1				,			
					/		-	A. 102-54	1.000
		11. 11. 11. 11. 11. 11. 11. 11. 11. 11.							1000
	1							1.1.1.1.1.1.1	
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1 × 2 × 10								1.000	
								1.11.12	
							a serie		1990



Page 6 of 9





CUSTOMER:	WATER RECOVERY, LLC
ADDRESS:	JACKSONVILLE, FLORIDA
VESSEL TITLE:	USED OIL TANK
EQUIPMENT NO .:	1P
DEPARTMENT:	WATER / OIL SEPERATOR
SERVICE COMPONANT NO .:	N/A
TECHNICIAN:	JOHN CARR, JOE FUNK, WILL BATTLES
DATE:	7/29/2010



1P Tank - External Shell Photo



1P Tank - External Roof Photo

Page 8 of 9















Clipping and Moving Average Functions have been applied to this scan.

GE Inspe	ection Services	1. Se 19 1. 18	GEIS Job #	JXIDO
API-653 Abov	eground Storage Tanl	k Examination Evaluation	Summa	ry
Company:	Water Recovery LLC	Location:	Jackson	ville, Flori
Equipment Title:	Oil Tank 9P	Equipment No.:	1	9P
Department:	Water/Oil Seperation	Service Component #:	1	N/A
Evaluation By:	J. Carr	Evaluation Date:	7/3	0/2010
II	SPECTION HISTORY	(Date of Examinations)		
(Date of Current Examination	ons)			3
Formal External Visual Exam	mination : 7/29/2010	Internal E	Examination	: 7/29/2
External UT Thickness Exar	mination : 7/29/2010			
(Date of Previous Examinat	ions)			
Formal External Visual Exam	mination : N/A			
External UT Thickness Exam	mination : N/A	Previous Shell Life:	N/A	Years
Internal Exam	mination : N/A	Previous Floor Life:	N/A	Years
	Notable Visual Exa	mination Findings		
External Examination	A management	the second se		in the second
No issues		and the state of the		1
No issues.				4
No issues.				
No issues.				
No issues.	Sum	mary		
In Compliance	Sum	mary d Operation Under Current Co	nditions:	
In Compliance	Sum ce With Code For Continue	mary d Operation Under Current Co	nditions: nined	
In Compliance In Compliance Yes Maximum Corrosion R	Sum ce With Code For Continue No 0.002 Estimated	mary d Operation Under Current Co Could not be detern Remaining Life: >50	nditions: nined Years	(SHELI
In Compliand ✓ Yes Maximum Corrosion R ( ✓ Ne	Sum ce With Code For Continue No 0.002 Estimated ext API Inspection:	mary d Operation Under Current Co Could not be detern Remaining Life: >50 7/29/2015	nditions: nined Years	(SHELI
In Compliance In Compliance Ves Maximum Corrosion R Ne The next formal	Sum ce With Code For Continue No 0.002 Estimated ext API Inspection:	mary d Operation Under Current Co Could not be detern Remaining Life: >50 <u>7/29/2015</u> n should be scheduled within	nditions: nined Years 25.0	(SHEL)
In Compliance In Compliance ✓ Yes Maximum Corrosion R ✓ Ne The next formal The next extern	Sum ce With Code For Continue No 0.002 Estimated ext API Inspection: <u>external</u> visual inspection al UT thickness inspection	mary d Operation Under Current Co Could not be detern Remaining Life: >50 7/29/2015 n should be scheduled within n should be scheduled within	nditions: nined Years 5.0 15.0	(SHELI _years. _years.
In Compliance In Compliance ✓ Yes Maximum Corrosion R The next formal The next formal The next <u>extern</u> The next <u>interna</u>	Sum ce With Code For Continue No 0.002 Estimated ext API Inspection: <u>external</u> visual inspection al UT thickness inspection al or on-stream inspection	mary d Operation Under Current Co Could not be detern Remaining Life: >50 7/29/2015 n should be scheduled within n should be scheduled within n should be scheduled within	nditions: nined Years 5.0 15.0 20.0	(SHEL years. years. years.
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In Compliance In Compliance ✓ Yes Maximum Corrosion R Maximum Corro	Sum ce With Code For Continue No 0.002 Estimated ext API Inspection: <u>external</u> visual inspection al UT thickness inspection al or <u>on-stream</u> inspection	mary d Operation Under Current Co Could not be detern Remaining Life: >50 7/29/2015 n should be scheduled within n should be scheduled within n should be scheduled within	nditions: nined Years 5.0 15.0 20.0	(SHEL years. years. years. years.
In Compliand In Compliand ☑ Yes Maximum Corrosion R ☑ Yes Maximum Corrosion R ☑ Ne The next formal The next formal The next <u>extern</u> The next <u>interna</u> Required Action Items: None	Sum ce With Code For Continue No 0.002 Estimated ext API Inspection: <u>external</u> visual inspection al UT thickness inspection al or <u>on-stream</u> inspection	mary d Operation Under Current Co Could not be detern Remaining Life: >50 7/29/2015 n should be scheduled within n should be scheduled within n should be scheduled within	nditions: nined Years 5.0 15.0 20.0	(SHEL _years. _years. _years. _years.
In Compliand In Compliand ☑ Yes Maximum Corrosion R ☑ Ne The next formal The next formal The next <u>extern</u> The next <u>interna</u> Required Action Items: None	Sum ce With Code For Continue No 0.002 Estimated ext API Inspection: <u>external</u> visual inspection al UT thickness inspection al or on-stream inspection	mary d Operation Under Current Co Could not be detern Remaining Life: >50 7/29/2015 n should be scheduled within n should be scheduled within n should be scheduled within	nditions: nined Years 5.0 15.0 20.0	(SHEL _years. _years. _years.
In Compliance In Compliance ✓ Yes Maximum Corrosion R ✓ Ne The next formal The next extern The next internal The next internal Required Action Items: None Recommended Action Iter	Sum ce With Code For Continue No 0.002 Estimated ext API Inspection: <u>external</u> visual inspection al or on-stream inspection ms:	mary d Operation Under Current Co Could not be detern Remaining Life: >50 7/29/2015 n should be scheduled within n should be scheduled within n should be scheduled within	nditions: nined Years 5.0 15.0 20.0	(SHEL _years. _years. _years.
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In Compliand In Compliand ✓ Yes Maximum Corrosion R ✓ Ne The next formal The next extern The next internal The next internal Required Action Items: None Recommended Action Iter None	Sum ce With Code For Continue No 0.002 Estimated ext API Inspection: external visual inspection al UT thickness inspection al or on-stream inspection	mary d Operation Under Current Co Could not be detern Remaining Life: >50 7/29/2015 n should be scheduled within n should be scheduled within n should be scheduled within	nditions: nined Years 5.0 15.0 20.0	(SHEL _years. _years. years.
In Compliance In Compliance Yes Maximum Corrosion R Maximum Corrosion R Ne The next formal The next formal The next extern The next internal Required Action Items: None Recommended Action Iter None	Sum ce With Code For Continue No 0.002 Estimated ext API Inspection: <u>external</u> visual inspection al UT thickness inspection al or <u>on-stream</u> inspection	mary d Operation Under Current Co Could not be detern Remaining Life: >50 7/29/2015 n should be scheduled within n should be scheduled within n should be scheduled within	nditions: nined Years 5.0 15.0 20.0	(SHEL years. years. years.
In Compliance In Compliance Yes Maximum Corrosion R Maximum Corrosion R Ne The next formal The next formal The next formal The next internal Required Action Items: None Recommended Action Iter None External Visual: 7	Sum ce With Code For Continue No 0.002 Estimated ext API Inspection: <u>external</u> visual inspection al UT thickness inspection al or <u>on-stream</u> inspection ms:	mary d Operation Under Current Co Could not be detern Remaining Life: >50 7/29/2015 n should be scheduled within n should be scheduled within n should be scheduled within	nditions: nined Years 5.0 15.0 20.0	(SHEL _years. _years. years.

External UT Thickness: 7/28/2025 Internal Visual: 7/28/2030

(06)	<u>GE Ins</u>	pection	Servi	<u>ces</u>		Thickne	ess Calcula	tions	
TANK DATA	:				n congrego men a la 1980 nel classica en catalog	GEIS Job #:	JXID	0105	
Equi	pment Title:	Oil Tank 9P			l. I	nspection Date:	1/24/2006		
Equ	ipment No.:	1.94	9P Max. Liquid Level (ft):			3	32		
1	Department:	Wate	r/Oil Seper	ration	Joint Efficiency:		0.	70	
De	esign Code:	- K	API 650		5	specific Gravity:	0.	0	
Conter	nts/Product:		Oil	entrally Share		Shell Material:	Unkr	nown	
Outside D	iameter (ft):		10.3	Land Contract	12.20	Date of Service:	01/0	1/85	
1. K	Inspector:		J. Carr		E	valuation Date:	ation Date: 7/30/2010		
FORMULA'	<u>S)</u> Corrosion F Estim Rema	t min (in) = ; Rate (in/yr) = ( nated RCA = ( ining Life = 1	2.6D(H)G/ ("t" Nom ("t" Meas RCA / Corr.	<u>SxE</u> "t" Meas.) / Ye · "t" Min.) . Rate	Ref API ( ears in Operation	653, Dec. 1995, 2.3 ation (Estimated	.3.1 )		
STRESS CA	LCS	TENSILE	k	S1	YIELD	k	S2	S	
1st & 2	nd COURSE	55000	0.429	23595	30000	0.80	24000	23595	
ALL OTHER	COURSES	55000	0.472	25960	30000	0.88	26400	25960	
NOTE: UTILIZ	E THE SMALL	ER OF THE TH	O "S" VALU	ES FOR MINIMU	JM WALL CAL	CULATIONS.			
SHELL PLA	TES	Using Previo	us Shell U	T Thickness?	NO	(YES or NO)		-10 - 10 - 10 - 10 - 10 - 10 - 10 - 10	
Charles and the second second	Carlo Carlo	-		APIT	Previous	Governing	Estimated	Estimated	
Elevation (ft)	Course	Height	S	Minimum	T (in)	T (in)	Corr. Rate	RCA	
0.25	1	31.75	23595	0.100	0.312	0.280	0.001	0.180	
2.00	1	30.00	23595	0.100	0.312	0.272	0.002	0.172	
4.00	1	28.00	23595	0.100	0.312	0.276	0.001	0.176	
6.00	1	26.00	23595	0.100	0.312	0.269	0.002	0.169	
8.00	2	24.00	23595	0.100	0.312	0.265	0.002	0.165	
10.00	2	22.00	23595	0.100	0.312	0.267	0.002	0.167	
12.00	2	20.00	23595	0.100	0.312	0.265	0.002	0.165	
14.00	2	18.00	23595	0.100	0.312	0.272	0.002	0.172	
16.00	3	16.00	25960	0.100	0.312	0.267	0.002	0.167	
18.00	3	14.00	25960	0.100	0.312	0.268	0.002	0.168	
20.00	3	12.00	25960	0.100	0.312	0.277	0.001	0.177	
22.00	3	10.00	25960	0.100	0.312	0.271	0.002	0.171	
24.00	4	8.00	25960	0.100	0.312	0.273	0.002	0.173	
26.00	4	6.00	25960	0.100	0.312	0.279	0.001	0.179	
28.00	4	4.00	25960	0.100	0.312	0.279	0.001	0.179	
30.00	4	2.00	25960	0.100	0.312	0.282	0.001	0.182	
31.00	4	1.00	25960	0.100	0.312	0.294	0.001	0.194	
The lowe	st (governin	q) remaining	corrosion	allowance for	the shell is:	0.165	in.		
	10	Anti	cipated ren	naining life of	the shell is:	89.8	yrs.		
ROOF PLAT	TES	UT Thickness	Readings ov	er 100 sq. in. grid	d (or single low	rest t over 0.090")			
		0.227	0.227	0.229	0.233	0.233			
	Roof	Nominal T =	0.250	_in.					
1	Average thick	ness of grid:	0.230	_in.					
Correspond	ing RCA for	the roof is :	0.137	in.	Roof R	emaining Life =	152.4	yr(s).	
LOOR PLA	ATES	Does	s tank design	provide means t	or detection a	nd containment of a	bottom leak?	NO	
	San Sha Wester			Does tank inco	porate a reinfo	orced bottom lining,	>0.05 in. thick	NO	
				Using Prev	vious Floor UT	Thickness for nomi	nal thickness?	NO	
			Minimu	m acceptable	bottom pl	ate thickness:	0.100	in.	
Nominal t =	0.270	in Lowestt =	0.260	in Cor	rosion Rate =	0.000	RCA =	0.160	
Nominal t = _	0.270 Anticip	in Lowestt= pated remaini	0.260 ing life of fi	in Cor loor plate is :	rosion Rate = 409.4	0.000 yr(s).	RCA =		

Page 2 of 2

Oil Tank 9P Evaluation 2010.xls



CUSTOMER: WATER RECOVERY, LLC ADDRESS: JACKSONVILLE, FLORIDA DEPARTMENT: WATER / FUEL OIL SEPERATOR SERVICE COMPONENT NO.: N/A

TECHNICIAN: JOHN CARR, JOE FUNK, WILL BATTLES

			VESSEL	GENERAL	DATA	a martin far	Car Williams			
NUM	MBER (EQUIPMENT NO	., ETC.)	NAME	(VESSEL TITI	_E)			DATE		
1.	and the second states of		Section 1							
	9P		USE	D OIL TAN	к	7/29/2010				
the sale	and the second second		di ta	State and a state of the	and service by	125.11	In Soldier			
			TYPE AND C	ONSTRUCTIO	ON CODE					
1	PRESSURE VESSE	L	ASME VIII				ASME X			
X	STORAGE TANK		API 6	20			UL 142			
	HEAT EXCHANGER		X API 6	50			OTHER			
			NAM	E PLATE DAT	A	and the second				
Antonia	PRESENT	X	ABSENT		OBSCURE	D	a com	OTHER		
MFR:	METAL EQUIPM	ENT CO.		DESIGN	PRESSURE:		ATOMSPHE	ERIC		
SERIAL	NO.: N/A	S		DESIGN	TEMP:		N/A			
NAT. BD	NO.: N/A	Ser.	A Contraction of the second	CONTEN	NTS:		OIL	the standard and the st		
YEAR BU	ILT: N/A	Sec. Sec.	Same and the second	SPECIFI	C GRAVITY:		0.9	. L		
12/12/2012	CE-CONTRACTOR OF THE OWNER	-	DATA	PLATE STAM	PS					
and the second	0	W	H H		S	-	RI-1	OTHER		
	SHELL	Competence and	#1	HEAD (TOP)		ESCIPERATOR SUP	#2 HEAL	D (BOTTOM)		
X	VERTICAL	and the second	ASME	F&D / TORIS	PHERICAL	<u></u>	ASME F8	AD / TORISPHERICAL		
	HORIZONTAL		HEMI	SPHERICAL		and the second	HEMISPI	HERICAL		
-	SKEWED		CONI	CONICAL			CONICA			
and and	OTHER		ELLIP	TICAL			ELLIPTIC	CAL		
X	CYLINDRICAL		TORIC	TORICONICAL				TORICONICAL		
1	SPHERICAL		SEGMENTED DOME				FLAT			
	RECTANGULAR		X FLAT		1		OTHER			
	OTHER		FLOA	TING ROOF	116		A Section Section			
	SHELL JACKET		#1 H	IEAD JACKET			#2 HE/	AD JACKET		
	PLATE		PLAT							
	DIMPLED	- Aller and a second	DIMP	LED	4.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1		DIMPLED	)		
	COIL (FULL)		COIL	(FULL)	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		COIL (FL	JLL)		
1	COIL (HALF)		COIL	(HALF)	1.81		COIL (HA	ALF)		
	OTHER		OTHE	R			OTHER			
X	INONE		X NONE		And the second second	X	NONE			
				MATERIAL						
A State of the second	SHELL		HEAD 1	Contraction of the	HEAD 2			JACKET		
X	CRBN STL	X	CRBN STL	X	CRBN STL	1	- 100	CRBN STL		
	SINESIL		SINESIL		SINLSIL		- 4	SINESIL		
1	ALLOY		ALLOY		ALLØY		Ż	ALLOY		
	FBRGLASS		FBRGLASS		FBRGLASS	<u>,</u>	-	FBRGLASS		
	INCUL ATION	EVT	EDNAL COATING		IOTHER		CUIDD	OBTE / FOUNDATION		
v	NONE	EXI	INONE	V	LOCATION	EVE	SUPP	LEGS		
X		v	DAINT	X	GROUNDL	EVEL		LEGS		
	FIRED CLASS	×			ISI LEVEL	1999 - 1999 		SKIRTS		
1	KAOON	IN	TEDNAL LINED	10000000	2nd LEVEL			SADDLES		
-	ACDECTOC	IN	DAINT	S. A.L.	3rd LEVEL		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	HANGERS		
-	ASBESTUS	-	CLASS		ABOULE			BRACKETS		
	OTHER	v	NONE	×	ABOVE			SLAB		
		<u> </u>	DECOUD	E DELICE DEL	UICES	Contraction of the	Contraction Par	JOLAD		
Contraction of the	CAFETY VALVE		PRESSUR	LIDE DICK	VICES		DATE OF	INSPECTION		
-	DELICEVALVE		RUPI	DIE DISK			INSPECT	ION AGENCY		
	ALLEF VALVE	LUE .			0.11	1 M 1 M 1	INDELOT			
	SAFETY RELIEF VA	LVE	I SETF	RESSURE (P	SI)	Salar and the second				
No.	FOUIDMENTNO			NK LABELS				CONTENTS		
X	EQUIPMENT NO.		EQUIPMENT NA	VIE	INFPA PLAC	JARD	A SALE SALES	CONTENTS		

CUSTOMER: WATER RECOVERY, LLC ADDRESS: JACKSONVILLE, FLORIDA DEPARTMENT: WATER / FUEL OIL SEPERATOR

SERVICE COMPONENT NO .: N/A TECHNICIAN: JOHN CARR, JOE FUNK, WILL BATTLES

Gelaka	VESS	SEL CON	<b>IDITION CHECKLIS</b>	T ( EXT	ERNAL EXAMINATIO	ON)	
NUMBE	R (EQUIPMENT NO., ET) <b>9P</b>	C.)	NAME (VESSEL T	USED	OIL TANK	EXTERNAL (DATE) 7/29/2010	
an adaption	And the second	and a start	EXTERNAL EX	AMINA	ΓΙΟΝ		
(ITEM 1)	ITEM 1) LADDERS/ STAIRWAYS (ITEM 2		2) GROUNDING &	(ITE	M 3) INSULATION	(ITEM	4) SURFACE UNDER
	& PLATFORMS	4	TTACHMENT			Cantor Carto	INSULATION
X	GOOD		INTACT / GOOD		INTACT / GOOD		GOOD CONDITION
	DAMAGED		BROKEN		WATER ENTRY	1. 2000	BARE
AN A SHE	CORROSION		CORROSION		VEGETATION		PAINTED
1.	PITTING		NOT OBSERVED	N/A	DETERIORATION	N/A	CORROSION
	LOOSE BOLTS	Statistics.	NONE		STAINING	the second	PITTING
The set of the	CRACKING		OTHER		OTHER		NOT OBSERVED
	BROKEN				ABSENT	19- A.	OTHER
(ITE	M 5) CONDITION OF	(ITE	M 6) EXTERIOR	(	ITEM 7) SHELL	(ITEN	( 8) SHELL WELDS
Surge Astronog	SUPPORTS		COATING		PLATES	A STATE OF THE STATE	
X	GOOD	X	GOOD CONDITION	X	GOOD CONDITION	X	GOOD CONDITION
	DAMAGED	Constanting and the	PEELING	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	COBBOSION	1.1	COBBOSION
F 2471.37	CORROSION	Sec. 2	BLISTERING	6	PITTING		UNDEBCUT
The second	PITTING	Ser Section of	CHALKING	R: C	DAMAGE	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	POBOSITY
	SPALLING		DAMAGE	<u> </u>	BEPAIRS	Contraction of the second	OVER BEINFORCED
10000	CBACKING		LIFTING		PATCHES		LINDER FILLED
	BROKEN				NICKS/GOLIGES		CRACKING
(1	TEM 9) #1 HEAD	(111)	EM 10) #1 HEAD WELDS	(ITEM 11) #2 HEAD		(ITEM 12) #2 HEAD WELDS	
X	GOOD CONDITION	X	GOOD CONDITION		GOOD CONDITION	X	GOOD CONDITION
1.1.1.1.1.1.1	CORROSION		CORROSION		COBBOSION		COBBOSION
1000	PITTING	and the second	UNDERCUT		PITTING		UNDEBCUT
1.2020	DAMAGE	Section 1	POROSITY	N/A	DAMAGE	-	POBOSITY
F	BEPAIRS	199	OVER BEINFORCED		BEPAIRS		OVER BEINEOBCED
	PATCHES		UNDER FILLED		PATCHES		
49. 1999 1.209	NICKS/GOUGES	Charles No.	CRACKING		NICKS/GOLIGES	11.27 Sec. 19	CBACKING
///	EM 13) NOZZI ES	(ITEM 1	4) NOZZI E WELDS	//TE	M 15) EXTERNAL		ormoraria
			1, 1101111 111100		TTACHMENTS	NF	PA PLACARD
X	GOOD CONDITION	X	GOOD CONDITION	X	GOOD CONDITION		^
Contraction of	CORROSION		CORROSION		CORROSION	1.1.1	$\land$
1000	PITTING	State of the	UNDERCUT		PITTING		$\land$ $\land$
1.000 - 1.00	DAMAGE	11000	POROSITY		DAMAGE	<	$\times$
1.1.1.1.1	BEPAIRS	A. 197 2	OVER REINFORCED		UNDEBCUT		$\checkmark$
-	PATCHES		UNDERFILI		CRACKING		
	NICKS/GOUGES		CRACKING		NICKS/GOLIGES	1	$\checkmark$
A CONTRACTOR OF			EXAMINA	TIONS			
X	VISUAL X	UT THICK	I IMT I		I PT I	BT	I OTHER
	and the second se	A REAL PROPERTY AND INCOME.				and the second se	



NOTE: SEE ATTACHED VESSEL CONDITION COMMENTS PAGE FOR EXAMINATION COMMENTS

CUSTOMER: WATER RECOVERY, LLC ADDRESS: JACKSONVILLE, FLORIDA DEPARTMENT: WATER / FUEL OIL SEPERATOR SERVICE COMPONENT NO.: N/A TECHNICIAN: JOHN CARR, JOE FUNK, WILL BATTLES

	VES	SEL CON	<b>IDITION</b> C	HECKLIS	T ( INT	ERNAL EXAMINAT	ION)	
NUMBER	R (EQUIPMENT NO., E	TC.)	NAME	(VESSEL T	ITLE)			INTERNAL (DATE)
	9P		All the star		USED	OIL TANK		7/29/2010
			INT	ERNAL EX	AMINA	TION		
(П	TEM 16) LININGS			and the second second	(ITEN	17) SHELL PLATES	18) SHELL WELDS	
1 2000	GOOD CONDITION				X	GOOD CONDITION	X	GOOD CONDITION
	PEELING		a salara data a	S. 47. 47.8	5	CORROSION	1.1.1.	CORROSION
	BLISTERING	Non all and a	C. S. S. S. S.	121537	Par and	PITTING	1	UNDERCUT
N/A	CHALKING		Caller La	PERCENT.		DAMAGE		POROSITY
	DAMAGE	1 1 1 1 1 1 1	C. C. States	1		REPAIRS	1	OVER REINFORCED
	LIFTING		The second second	Street Mrs	ē.	PATCHES	-	UNDER FILLED
1. N. N.		Callen and	The second	And the second	19.000	NICKS/GOUGES		CRACKING
(IT	EM 19) # 1 HEAD	(ITEM 2	0) # 1 HEAD	WELDS	(IT	EM 21) # 2 HEAD	(ITEM	22) # 2 HEAD WELDS
v		×		NDITION	v		~	
X	GOOD CONDITION		GOOD CO	NUTION	X	GOOD CONDITION	×	GOOD CONDITION
11.11	CORROSION		CORROSI	JN	Const.	CORHOSION		CORROSION
Contraction (Contraction)	PITTING		UNDERCU	,	and the second	PITTING	-	UNDERCUT
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5-960	REPAIRS		OVER REI	NFORCED		REPAIRS	Sec.	OVER REINFORCED
	PATCHES	a second second	UNDER FI	LLED		PATCHES	a la	UNDER FILLED
and the based	NICKS/GOUGES		GRACKING	i i	_	INICKS/GOUGES	a sa	CRACKING
(П	EM 23) NOZZLES	(ITEM 2	4) NOZZLE	WELDS	(П	EM 25) INTERNAL		EM 26) INTERNAL
X	GOOD CONDITION	X	GOOD CO	NDITION	X	GOOD CONDITION	X	GOOD CONDITION
	CORROSION	San States	CORROSK	NC		CORROSION		CORROSION
	PITTING	C. C	UNDERCU	T		PITTING	-	UNDERCUT
1	DAMAGE	12324	POROSITY	,		DAMAGE	-	POBOSITY
	REPAIRS	CONTRACTOR OF	OVER REI	NEORCED		BEPAIRS		OVER BEINFORCED
	PATCHES	1	UNDER FI	LED		PATCHES		LINDER FILLED
1.5	NICKS/GOUGES	Constant of the	CRACKING	3		NICKS/GOLIGES		CRACKING
	(ITEM 27) MECH	IANICAL DE	VICES			THENERGOODE		
		0000	DAMAGE	NZA				
And a reader	SHAFT	GOOD	DAMAGE	N/A			-	
		0.00				,		1 9 15 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	DOWN COMERS	10000000	1		/			TELLY A ARY PA
	THERMO WELLS	1 2000		-		/	-	
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NOTE: SEE ATTACHED VESSEL CONDITION COMMENTS PAGE FOR EXAMINATION COMMENTS



CUSTOMER: WATER RECOVERY, LLC ADDRESS: JACKSONVILLE, FLORIDA DEPARTMENT: WATER / FUEL OIL SEPERATOR SERVICE COMPONENT NO.: N/A TECHNICIAN: JOHN CARR, JOE FUNK, WILL BATTLES

and the second second	VESSEL CONDITION COMMENTS								
NUMBER (I	EQUIPMENT NO., ETC.)	NAME (VESSE	L TITLE)	ſ	DATE				
	QP		USED OIL TANK		7/29/2010				
ITEM					1/20/2010				
NUMBER			COMMENTS						
	NO ISSUES NOTED.								
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Contract				the second					



LOCATION: FLOOR AND ROOF CUSTOMER: WATER RECOVERY, LLC ADDRESS: JACKSONVILLE, FLORIDA DEPARTMENT: WATER / FUEL OIL SEPERATOR SERVICE COMPONENT NO.: N/A TECHNICIAN: JOHN CARR, JOE FUNK, WILL BATTLES

The second second	ULTRASONIC THICKNESS									
NUMBER (EQUIPME	NT NO., ET	C.)	NAME (VI	ESSEL TIT	LE)			DATE		
	9P		a.	USI	7/29/2010					
ELEVATION	02	45º	90º	135º	180º	225º	270º	315º	Location	
-2'	0.261	0.265	0.263	0.267	0.260	0.263	0.278	0.270	FLOOR	
+2*	0.277	0.273	0.266	0.268	0.276	0.269	0.265	0.274	FLOOR	
+2'	0.276		0.270	N	0.277		0.273		FLOOR	
+4'	0.276		0.271	Sec. 1	0.275		0.275		FLOOR	
+5' CENTER	0.274								FLOOR	
+2"	0.231		0.230		0.233		0.233	-	ROOF	
+2'	0.230		0.229		0.230		0.229		ROOF	
+4'	0.229		0.231		0.229	i din	0.228		ROOF	
+5' CENTER	0.227								ROOF	
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Page 5 of 9





Page 6 of 9



Page 7 of 9



WATER RECOVERY, LLC
JACKSONVILLE, FLORIDA
USED OIL TANK
9P
WATER / OIL SEPERATOR
N/A
JOHN CARR, JOE FUNK, WILL BATTLES
7/29/2010



9P Tank - External Shell Photo



9P Tank - Additional External Shell Photo

Page 8 of 9



CUSTOMER:	WATER RECOVERY, LLC
ADDRESS:	JACKSONVILLE, FLORIDA
VESSEL TITLE:	USED OIL TANK
EQUIPMENT NO .:	9P
DEPARTMENT:	WATER / OIL SEPERATOR
SERVICE COMPONANT NO .:	N/A
TECHNICIAN:	JOHN CARR, JOE FUNK, WILL BATTLES
DATE:	7/29/2010
DATE	7/29/2010
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9P Tank - External Roof Photo



9P Tank - Internal Floor Patch Plate Photo

Oil Tank 9P Examination 2010.xls

Page 9 of 9



GE Inspection Services 5859 Stuart Ave. Jacksonville, FL. 32254 (904) 783-0013

Description W Customer W Location Ja Inspection Date 7/ Inspection Method S

ScanTech Instruments Water Recovery LLC Oil Tanks Water Recovery LLC Jacksonville, FL Plant 7/29/2010 Scan Tech Ultrasonic



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#### Clipping, Moving Average and Coating Offset Functions have been applied to this scan.





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3' O PLUG

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3' O N3

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NOTES DRAWING NOT TO SCALE. NOZZLES HAVE NO INSIDE DIAMETER

.212

.211

.330

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24"

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1. 2.

WELDING. SEE ATTACHED NOZZLE SHEET FOR NOZZLE З. UT READINGS.

INSPECTED/DATE: JC/MG/BS/AN-JAN 01

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#### TANK 3P MANWAY/NOZZLE UT READINGS WATER RECOVERY, INC.

LAW Project Number: 40563-1-0225

LAWGIBB Group Member

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٠.,

Law Engineering and Environmental Services 1000 Business Center Drive, Suite 90 Savannah, Georgia 31405

Date: JAN-01 Technicians: MG/JC/BS/AN





#### SHELL VIEW

#### NECK VIEW

NOZZLES	SIZE	SHI	SHELL PLATE THICKNESS				NOZZLE PIPE THICKNESS			
NOLLES	SIZE	A	B	C	D	A	B	C	D	THICKNESS
NI	3'	NA	NA	NA	.357	NA	NA	NA	.159	NA
N2	3"	NA	NA	NA	.351	NA	NA	NA	.220	NA
N3	3"	NA	NA	NA	.353	NA	NA	NA	.170	NA
N4	3"	NA	NA	NA	.355	ТС	тс	ТС	TC	NA
MW	24"	.351	NA	.356	.350	.253	.250	.248	.249	NA

#### NOTES:

- 1. Readings are in inches.
- 2. NA = Not Applicable.
- 3. TC = Threaded Coupling

# LAW

LAWGIBB Group Member

	EXTER	RNAL	VISUAL-INS	SPECT	ION CHECKLI	ST		- •		
CLIENT NAME: WATER R INSPECTORS: MG/JC DATE OF INSPECTION:	RECOVERY, IN 7/BS/AN JAN-01	<u>C.</u>	CLIENT LAW PF	' REFI ROJE(	ERENCE NO.: CT NO.:	TANK 3 40563-	3P 1-0225			
FOUNDATION										
CONCRETE PAD ANCHOR BOLTS HOUSE KEEPING FOUNDATION GROUNDING STRAP CATHODIC PROTECTION BOTTOM-TO-FOUNDATION S DIKE CONDITION FOUNDATION DRAINAGE	Cracking Loose Trash Cracking		Spalling Distortion Vegetation Settlement Loose Damage Leakage Damage Poor (1)		Deterioration Corrosion Inflammables Erosion Missing Operational Deterioration Deterioration Adequate		Good Good Good Attached Good Good Good Good		N/A N/A N/A N/A N/A N/A N/A N/A	
STRUCTURAL AND WELD CONDITIONS										
STAIRS AND WALKWAYS CATWALK / PLATFORMS LADDERS HANDRAILS SHELL WELDS CONDITION FLOOR WELDS CONDITION ROOF WELDS CONDITION	<ul> <li>Corrosion</li> <li>Corrosion</li> <li>Corrosion</li> <li>Corrosion</li> <li>Undercut</li> <li>Undercut</li> <li>Undercut</li> </ul>		Damage Damage Damage Damage Pinholes Pinholes Pinholes		Deterioration Deterioration Deterioration Deterioration Corrosion Corrosion Corrosion	XXXX XXX	Good Good Good Good Good Good Good		N/A N/A N/A N/A N/A N/A	
·····	SHI	ELL,	ROOF AND A	APPUI	RTENANCES					
FLANGE CONNECTIONS NOZZLES & MANWAYS SURFACE COATING INSULATION SHELL ROOF BOTTOM EXTERNAL LIP FLOOR SAMPLE HATCH AUTOGAUGE ROOF SUPPORTS CONSERVATION VENT GOOSE NECK VENT FLAME ARRESTER MIXER & MOTORS MANWAY DAVIT ARM	Loose Dimpling Flaking Loose Pitting Pitting Pitting Pitting Pitting Operational Missing Damage Leakage		Leakage Leakage Blistering Leakage Buckling Buckling Damage Damage Damage Damage Damage Deterioration Damage Damage Damage		Damage Damage Deterioration Damage Out-of-Roundness Deterioration Deterioration Deterioration Deterioration Deterioration Deterioration Operational Clogging Operational Deterioration		Good Good Good Good Good Good Good Good		N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	

NOTES:

1. SUMP NOT WORKING.

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#### INTERNAL VISUAL INSPECTION CHECKLIST

CLIENT NAME: WATER RECOVERY, INC. INSPECTORS: MG/JC/BS/AN DATE OF INSPECTION:

CLIENT REFERENCE NO.: TANK 3P

LAW PROJECT NO.: 40563-1-0225

**JAN-01** 

STRUCTURAL AND WELD CONDITIONS										
LADDERS BAFFLE PLATES SHELL WELDS CONDITION FLOOR WELDS CONDITION ROOF WELDS CONDITION FLOOR-TO-SHELL SEAM		Corrosion Corrosion Undercut Undercut Undercut Undercut		Damage Damage Pinholes Pinholes Pinholes Pinholes		Deterioration Deterioration Corrosion Corrosion Corrosion Corrosion		Good Good Good Good Good Good		N/A N/A N/A (1) N/A N/A N/A
SHELL, ROOF AND APPURTENANCES										
NOZZLE PROTRUSIONS SURFACE COATING LINER SHELL ROOF FLOOR ROOF SUPPORTS BUDIOG SUPPORTS		Dimpling Flaking Tearing Pitting Pitting Missing Missing		Leakage Blistering Leakage Buckling Buckling Damage Damage		Damage Deterioration Damage Out-of-Roundness Deterioration Deterioration Deterioration		Good (2) Good Good Good Good Good Good		N/A N/A N/A N/A N/A N/A
AGITATOR SHAFT/BLADES DOWNCOMERS COILS/HEATERS SUMP		Broken Corrosion Corrosion Pitting		Damage Damage Leakage Damage		Deterioration Deterioration Damage Deterioration		Good Good Good Good	<u>a</u> man	N/A N/A N/A N/A

#### NOTES:

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1. SOME PARTS OF SHELL WAS COVERED IN RESIDUAL PRODUCT.

2. NOZZLES WERE NOT WELDED ON INNER DIAMETER.

## TMIN CALCULATIONS PER API 653 - TANK 3P

HEIGHT, H	26.8333 FEET	CORROSION ALLOWANCE:	0.000 INCHES
DIAMETER, D	12 FEET	YIELD STRENGTH:	30000 PSI
SPECIFIC GRAVITY, G	1	TENSILE STRENGTH:	55000 PSI
JOINT EFFICIENCY, E	70 %		
# COURSES	3		

. . .

COURSE	Н	S	TMIN (CALC)	TMIN	CA	TORIG	TFLAG
ROOF		25960	0.090	0.090	0.000	UNK	0.090
1	26.8333	23595	0.051	0.100	0.000	UNK	0.100
2	17.6667	23595	0.033	0.100	0.000	UNK	0.100
3	8.8333	25960	0.015	0.100	0.000	UNK	0.100
FLOOR		25960	0.100	0.100	0.000	UNK	0.100

.

NOTES:

1. 1ST AND 2ND COURSE, ALLOWABLE STRESS LESSER OF 80% YIELD OR 42.9% TENSILE

2. REMAINING COURSES, ALLOWABLE STRESS LESSER OF 88% YIELD OR 47.2% TENSILE

	4	INC' MAI • T	R INDUST	RIES	32206	
	(95, io. e - 91)4 2	1999-1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1992 - 1 1992 - 199 - 1992 -	904) 356-6028 • WWV	v.indmarind	ustries.com	
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ATECHANICA SHOP	SERVICES SIGNAL SERVICES	ON	SITE SERVICE	y FU FU	LL SERVICE DIE (OUR JOI	FACILITIES ISEL & PARTS ISS <b>S (31)</b>
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	8/L wentham	elĭ				
	Powerful S	olutions Jo Yo	our Industrial &	& Marine	Needs.	
	Interest Charge of	112% Per Month Will	Be Added To Any Unpai	d Balance Ord	er 30 Days	

#### D.L.A.C.M.R.I.

Ovener's Representative: Mike Doheny PO#: 1057 MJ Job No.: 333-081 IMI Representative: Tony James

item CDSDD:

D: OIL TANK REPAIRS (API 653):

Provided labor, equipment and material to accomplish the following repairs.

TANK 1P. Welded 6-sech nozzles inside the tank. Removed % coupling from the outside and replaced is with a 6" x %" nipple. Welded 2-each horizontal and 3each vertical lapped joints. Removed the old TL and installed threaded nipple and cap on tank top. Cleaned and then closed the tank.

TANK 2P. Welded 5-each nezzes inside the lank. Removed K<sup>\*</sup>coupling from the outside and replaced is with a 6<sup>\*</sup> x K<sup>\*</sup> nipple. Welded 2-each horizontal and 3each vertical lapped joints. Removed the old TLI and installed threaded nipple and cap on tank top. Cleaned and than closed the tank.

TANK 3P. Welded 6-each nozzles inside the tank. Removed %"coupling from the cutside and replaced it with a 6" x %" nipple. Welded 2-each horizontal and 3each ventical tapped joints. Removed the old TLI and installed timeaded nipple and cap on tank top. Cleaned and then closed the tank.

TARK 4P. Removed the cost TLI and installed threaded hipple and cap on tent top. . . Cleaned and then closed the tent.

TANX 5P. Welded one (1) nozzle inside the tent under manhole. Removed %° coupling from the outside and replaced it with a 6° x %° nipple. Cleared and then closed the tent.

TANX 6P. Removed %"coupling from the outside end replaced it with a 6"  $\times$  %" nipple. Cleaned and then closed the tank.

TANK 7P. Removed %"coupling from the outside and replaced it with a 6" x %" nipple. Cleaned and then closed the tank.

TANK 8P. Removed  $\frac{1}{2}$  coupling from the outside and replaced it with a 6" x  $\frac{1}{2}$  nipple. Cleaned and then closed the tank.

TANK 9P. Removed %"coupling from the cuteids and replaced it with a 6" x %" nipple. Cleaned and then closed the tank.

245.25 S/T hrs. @ \$37.50	a	\$9,1 <b>98.88</b>
16.5 O/T hrs. @ \$47.50	3	\$ 783.75
Meterials: \$573.14+15%	=	<u>§ 659.11</u>
ITEM TOTAL		S10.639.74

TOTAL INVOICE: \$10,639.74

#### WORK LIST FOR OIL TANKS

#### 1P

· . · · .

- L. WELD (6) NOZZLES, INSIDE OF TANK
- 2. REMOVE ¾" COUPLING FROM OUTSIDE, REPLACE W/ 6" X ¾" NIPPLE
- 3. WELD (2) HORIZONTAL LAPPED JOINTS 3-7775.57
- 4. WELD (3) VERTICAL LAPPED JOINTS 7'
- 5. REMOVE OLD TLI, INSTALL THREADED NIPPLE & CAP ON TANK TOP.
- 6. CLEAN & CLOSE

#### 2P

- 1. WELD (5) NOZZLES, INSIDE OF TANK
- 2. REMOVE ¼" COUPLING FROM OUTSIDE, REPLACE W/ 6" X ¼" NIPPLE
- 3. WELD (2) HORIZONTAL LAPPED JOINTS 17年今日
- 4. WELD (3) VERTICAL LAPPED JOINTS 271
- 5. REMOVE OLD TLI, INSTALL THREADED NIPPLE & CAP ON TANK TOP.
- 6. CLEAN & CLOSE

#### 3P

- 1. WELD (6) NOZZLES, INSIDE OF TANK
- 2. REMOVE ¾" COUPLING FROM OUTSIDE, REPLACE W/ 6" X ¾" NIPPLE
- 3. WELD (2) HORIZONTAL LAPPED JOINTS  $\gamma \neq \gamma'$
- 4. WELD (3) VERTICAL LAPPED JOINTS 271
- 5. REMOVE OLD TLI, INSTALL THREADED NIPPLE & CAP ON TANK TOP.
- 6. CLEAN & CLOSE

#### 4P

- 1. REMOVE OLD TLI, INSTALL THREADED NIPPLE & CAP ON TANK TOP.
- 2. CLEAN & CLOSE

#### 5P

- 1. WELD (1) NOZZLE, INSIDE OF TANK (UNDER MANHOLE)
- 2. REMOVE ¼" COUPLING FROM OUTSIDE, REPLACE W/ 6" X ¼" NIPPLE
- 3. CLEAN & CLOSE

6P

1. REMOVE ¼" COUPLING FROM OUTSIDE, REPLACE W/ 6" X ¼" NIPPLE

.

2. CLEAN & CLOSE

#### 7P

- 1. REMOVE 5." COUPLING FROM OUTSIDE, REPLACE W/ 6" X 5." NIPPLE
- 2. CLEAN & CLOSE

#### 8P

- 1. REMOVE ¼" COUPLING FROM OUTSIDE, REPLACE W/ 6" X ¼" NIPPLE
- 2. CLEAN & CLOSE

#### 9P

- 1. REMOVE ¼" COUPLING FROM OUTSIDE, REPLACE W/ 6" X ¼" NIPPLE
- 2. CLEAN & CLOSE



March 14, 2001

Mr. Mike Doherty Water Recovery, Inc. 1819 Albert St. Jacksonville, FL 32202

#### SUBJECT: Report of Inspection of Tanks 1P-10P, 1SW, and Discharge Tank Water Recovery, Inc. Jacksonville, Florida LAW Project Number 40563-1-0225

Dear Mr. Doherty:

As requested and authorized by you, representatives from Law Engineering and Environmental Services, Inc. (LAW) performed external and internal assessments of Tanks 1P, 2P, 3P, 4P, 5P, 6P, 7P, 8P, 9P, 10P, 1SW, and the Discharge Tank in January 2001. This report will describe the qualifications of our personnel, the services provided, and the findings of our assessment.

#### QUALIFICATION OF PERSONNEL AND PROCEDURES

Personnel performing the nondestructive testing were qualified as Level I and Level II technicians. They are qualified and certified in accordance with LAW's Standard for Personnel Training and Certification, which is in accordance with the American Society of Nondestructive Testing Recommended Practice SNT-TC-1A. Testing procedures used were LAW's standard operating procedures, which are in accordance with ASME Section V, Nondestructive Testing.

#### PROJECT INFORMATION AND SCOPE OF SERVICES

LAW was directed to perform external and internal assessments, including ultrasonic thickness testing (UT) of the shells, roofs and floors of the noted tanks located at the Water Recovery, Inc. facility in Jacksonville, Florida. Ultrasonic thickness measurements were obtained on the shell utilizing four general compass points located at approximately 90-degree intervals around the circumference of each tank. At each compass point location, three to four thickness measurements were recorded on each shell course. The floors and roofs had thickness readings obtained at 2-foot intervals located along the

LAW Engineering and Environmental Services, Inc. 3901 Carmichael Avenue • Jacksonville, FL 22207 904-396-5173 • Fax: 904-396-5703

March 14, 2001 Revision 0

same four compass points as the shells. All readings were obtained utilizing a Krautkramer USN52. Minimum thickness requirements were calculated based on API-653 specifications and full hydrostatic load. For complete results of our testing please refer to the attached drawings and spreadsheets for each tank.

#### **Observations and Findings**

Tank 1P is a 23,750-gallon Receiving Waste Oil Storage Tank located on Albert Street. It measures 26 feet, 9 inches tall with 3 courses and is 12 feet in diameter. The sump pump at the tank's base was not operational and the tank's grounding strap was missing. The surface coating was deteriorated and there was pitting in the bottom external lip and the roof of the tank. Additionally, a small hole was found in the south center of the roof. The roof of the tank was also slightly buckled. All of Tank 1P's nozzles were not welded on the inside diameter. The internal surface of the tank's roof and shell was coated with product, limiting our visual inspection. All thickness readings recorded on this tank were above minimum thickness requirements per API-653 guidelines.

Tank 2P is a 23,750-gallon Insulated Oil Treatment Tank located on Albert Street. It is 26 feet, 11 inches tall with 3 courses and is 12 feet in diameter. This tank is completely insulated. The tank's insulation was damaged, loose, and leaking in some areas. Tank 2P's autogauge was damaged and its ground strap was missing. All of Tank 2P's nozzles were not welded on the inside diameter. All thickness readings recorded on this tank were above minimum thickness requirements per API-653 guidelines.

Tank 3P is a 23,750-gallon Receiving Waste Oil Storage Tank located on Albert Street. It is 26 feet, 10 inches tall with 3 courses and is 12 feet in diameter. The sump pump at the tank's base was not operational and the tank's grounding strap was missing. The surface coating showed some signs of deterioration. All of Tank 3P's nozzles were not welded on the inside diameter. The internal surface of the roof and shell were coated with product, limiting our visual examination. All thickness readings recorded on this tank were above minimum thickness requirements per API-653 guidelines.

Tank 4P is a 20,000-gallon Receiving Waste Oil Storage Tank located on Albert Street. It is 25 feet tall with 4 courses and is 12 feet in diameter. The surface coating showed some signs of deterioration. A 9-inch lap patch was welded over a 6-inch diameter hole on the West Side of the tank located on the first shell course. All of Tank 4P's nozzles were not welded on the inside diameter. All thickness readings recorded on this tank were above minimum thickness requirements per API-653 guidelines.

Tank 5P is a 20,000-gallon Receiving Waste Oil Storage Tank located on Albert Street. It measures 31 feet tall with 5 courses and has a diameter of 10 feet, 6 inches. The surface coating was notably thin and showed some signs of deterioration. There was a small hole present on the south end of the roof. All of nozzles were not welded on the inner diameter of the tank. All thickness readings recorded on this tank were above minimum thickness requirements per API-653 guidelines.

Tank 6P is a 20,000-gallon Receiving Waste Oil Storage Tank located on Albert Street. It measures 25 feet tall with 4 courses and has a diameter of 12 feet. The surface coating

March 14, 2001 Revision 0

showed some signs of deterioration. The tank was slightly buckled on the east side. The autogauge was also slightly damaged and the grounding strap was missing. All of the nozzles were not welded on the inside diameter of the tank. The tank has a baffle running northeast to southwest along the center. This baffle had a section that has been partially removed. All thickness readings recorded on this tank were above minimum thickness requirements per API-653 guidelines.

Tank 7P is a 20,000-gallon Receiving Waste Oil Storage Tank located on Albert Street. It measures 32 feet in height and consists of 4 courses with a diameter of 10 feet, 6 inches. The surface coating showed some signs of deterioration. All of the nozzles were not welded on the inside diameter. All thickness readings recorded on this tank were above minimum thickness requirements per API-653 guidelines.

Tank 8P is a 20,000-gallon Receiving Waste Oil Storage Tank located on Albert Street. The tank measure 32 feet, 3 inches tall with 4 courses and had a diameter of 10 feet, 6 inches. The tank's foundation was cracking and the concrete around the base showed signs of deterioration. The surface coating was also deteriorated. The tank's grounding strap was missing. A patch was welded along the bottom-to-foundation seal along the south side of the external shell. All of the nozzles were not welded on the inside diameter. The floor showed signs of pitting and deterioration. All thickness readings recorded on this tank were above minimum thickness requirements per API-653 guidelines.

Tank 9P is a 20,000-gallon Receiving Waste Oil Storage Tank located on Albert Street. It is 31 feet, 2 inches tall with 4 courses and has a diameter of 10 feet, 4 inches. A 9-inch diameter lap patch was welded on the west side of the roof. In addition, an external patch was present on the floor of the tank. All of the nozzles were not welded on the inside diameter. All thickness readings recorded on this tank were above minimum thickness requirements per API-653 guidelines.

Tank 10P is a horizontal tank with a capacity of 9,000 gallons. It is designated as a Pretreatment Tank with mixer and is located on Albert Street. It measures 15 feet in length with a diameter of 10 feet. No internal inspection was performed on this tank. Thickness readings were obtained on the shell and both heads. All thickness readings recorded on this tank were above minimum thickness requirements per

Tank 1SW is a 30,000-gallon Stormwater Receiving Tank located on Albert Street. Inspection of this tank was limited to an external ultrasonic thickness examination. All thickness readings recorded on this tank were above minimum thickness requirements per API-653 guidelines.

The Discharge Tank measures 32 feet, 11 inches in height and consists of 5 shell courses. The diameter measures 10 feet, 6 inches. No ultrasonic thickness data was obtained from the bottom course of this tank because it is reportedly scheduled to be replaced at a later date. The floor of the tank was covered with debris and scale. One thickness reading of 0.210 inch was obtained from the floor. Two scab plates were present on the roof along with accumulation of water along the south side. The neck for the manway located on the roof was missing. There were also two holes on the

northwest side of the roof. All thickness readings recorded on this tank were above minimum thickness requirements per API-653 guidelines.

#### Recommendations

Tank 1P has eight nozzles that should be welded on the internal surface. Also, the lapped weld seams with stitch welding should have full fillet welds. The hole in the roof should have a welded patch plate installed. Although not a code requirement, a grounding strap should be added to the tank for safety purposes.

Tank 2P has three vertical lapped weld seams that are stitch welded, and these should have full fillet welds. There are seven nozzles that should be welded on the internal surface. Although not a code requirement, a grounding strap should be added to the tank for safety purposes.

Tank 3P has lapped weld seams; however, due to the cleanliness of the tank's internal surface, these welds, if existence the weld is not visible due to "build-up" on the tank's internal surface. There are five nozzles that should be welded on the internal surface. Although not a code requirement, a grounding strap should be added to the tank for safety purposes.

Tank 4P has three nozzles that should be welded on the internal surface. Also, there is a welded patch plate over a 6-inch hole in the lower course of the tank that needs to be welded on the internal surface. Although not a code requirement, a grounding strap should be added to the tank for safety purposes.

Tank 5P has five nozzles that should be welded on the internal surface. The hole in the roof should have a welded patch plate installed. The conservation vent on the roof should be cleaned. Although not a code requirement, a grounding strap should be added to the tank for safety purposes.

Tank 6P has two nozzles that should be welded on the internal surface. Although not a code requirement, a grounding strap should be added to the tank for safety purposes.

Tank 7P has two nozzles that should be welded on the internal surface. Although not a code requirement, a grounding strap should be added to the tank for safety purposes.

Tank 8P has three nozzles that should be welded on the internal surface. Although not a code requirement, a grounding strap should be added to the tank for safety purposes.

Tank 9P has six nozzles that should be welded on the internal surface. The patch plate on the floor should be welded on the internal surface. Although not a code requirement, a grounding strap should be added to the tank for safety purposes.

The Discharge Tank should have the manway replaced on the roof of the tank. Also welded patch plates should be installed on the roof at the two hole locations. Please note that the internal assessment of the floor was limited due to the presence of debris and scale.

#### CLOSING

Our conclusions are based on information obtained from conversations with your office and our field observations. Additional items of concern may exist in areas unforeseeable to our personnel. Any conditions discovered which deviate from the information presented in this report should be presented for our review. It should be noted that an evaluation of wind loading was not performed under this limited scope.

LAW appreciates the opportunity to provide our professional services on this project. Should you have any questions concerning this report, or if we may be of further services on this, or future projects, please contact this office.

Respectfully submitted,

#### LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

Gregg A. Lentz

Operations Manager, Industrial Services

Floyd S. Simpson, P.E. Principal Engineer Registered, Florida 50791

Attachments: Drawings of Field Data for Each Tank

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D.L.A.C.M.R.I.

IN: Job No.: 333-081 IN: Representative: Tony James

Owner's Representative: Mike Doherty POC: 1957

llam 00500:

: OIL TANK REPAIRS (API 653):

Provided labor, equipment and material to accomplish the following repairs.

TANK 1P. Welded 6-each nozzles inside the tank. Removed %"coupling from the outside and replaced it with a 6" x %" nipple. Welded 2-each horizontal and 3each vertical lapped joints. Removed the old TLI and installed threaded nipple and cap on tank top. Cleaned and then closed the tank.

TANK 2P. Welded 5-each nextee inside the tank. Removed Wecupling from the outside and replaced it with a 6" x %" nipple. Welded 2-each horizontal and 3each vertical lapped joints. Removed the old TLI and installed threaded nipple and cap on tank top. Cleaned and then closed the tank.

TANK 3P. Walded 6-each nozzles inside the tank. Removed  $\frac{1}{2}$  coupling from the outside and replaced it with a 6" x  $\frac{1}{2}$ " nipple. Welded 2-each horizontal and 3each vertical tapped joints. Removed the old TLI and installed threaded nipple and cap on tank top. Cleaned and then closed the tank.

TANK 4P. Removed the old TLI and installed throaded nipple and cap on tank top. , Cleaned and then closed the tent.

TANK 5P. Welded one (1) nozzle inside the tank under menhole. Removed %°coupling from the outside and replaced it with a 6° x %° nipple. Cleaned and then closed the tank.

TANK 6P. Removed %"coupling from the cutside and replaced it with a 6" x %" nippla. Closned and then closed the tank.

TAAK 7P. Removed "4" coupling from the outside and replaced it with a 6" x  $\frac{1}{4}$ " nipple. Cleaned and then closed the tank.

TANK 8P. Removed %"coupling from the outside and replaced it with a 6" x %" nipple. Cleaned and then closed the lank.

TANK 9P. Removed %"coupling from the culture and replaced it with a 6"  $\times$  %" nipple. Cleaned and then closed the tank.

245.25 S/T hrs. @ \$37.50	8	39,198.88
16.5 O/T hrs. @ \$47.50	-	\$ 783.75 ·
Meterials: \$573.14+15%	=	<u>§ 659.11</u>
ITEM TOTAL		§10,639.74

TOTAL INVOICE: \$10,639.74

#### WORK LIST FOR OIL TANKS

#### 1P

- 1. WELD (6) NOZZLES, INSIDE OF TANK
- 2. REMOVE ¼" COUPLING FROM OUTSIDE, REPLACE W/ 6" X ¼" NIPPLE

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- 3. WELD (2) HORIZONTAL LAPPED JOINTS 3-7-7' 75.4'
- 4. WELD (3) VERTICAL LAPPED JOINTS 37'
- 5. REMOVE OLD TLI, INSTALL THREADED NIPPLE & CAP ON TANK TOP.
- 6. CLEAN & CLOSE

#### 2P

- 1. WELD (5) NOZZLES, INSIDE OF TANK
- 2. REMOVE ¾" COUPLING FROM OUTSIDE, REPLACE W/ 6" X ¾" NIPPLE
- 3. WELD (2) HORIZONTAL LAPPED JOINTS 75.4
- 4. WELD (3) VERTICAL LAPPED JOINTS 277
- 5. REMOVE OLD TLI, INSTALL THREADED NIPPLE & CAP ON TANK TOP.
- 6. CLEAN & CLOSE

#### 3P

- 1. WELD (6) NOZZLES, INSIDE OF TANK
- 2. REMOVE ¾" COUPLING FROM OUTSIDE, REPLACE W/ 6" X ¾" NIPPLE
- 3. WELD (2) HORIZONTAL LAPPED JOINTS 75.9'
- 4. WELD (3) VERTICAL LAPPED JOINTS 97'
- 5. REMOVE OLD TLI, INSTALL THREADED NIPPLE & CAP ON TANK TOP.
- 6. CLEAN & CLOSE

#### 4P

- 1. REMOVE OLD TLI, INSTALL THREADED NIPPLE & CAP ON TANK TOP.
- 2. CLEAN & CLOSE

#### 5P

- 1. WELD (1) NOZZLE, INSIDE OF TANK (UNDER MANHOLE)
- 2. REMOVE ¾" COUPLING FROM OUTSIDE, REPLACE W/ 6" X ¾" NIPPLE
- 3. CLEAN & CLOSE

#### 1. REMOVE ¼" COUPLING FROM OUTSIDE, REPLACE W/ 6" X ¼" NIPPLE

2. CLEAN & CLOSE

#### 7P

- 1. REMOVE ¼" COUPLING FROM OUTSIDE, REPLACE W/ 6" X ¼" NIPPLE
- 2. CLEAN & CLOSE

#### 8P

- 1. REMOVE ¾" COUPLING FROM OUTSIDE, REPLACE W/ 6" X ¾" NIPPLE
- 2. CLEAN & CLOSE

#### 9P

- 1. REMOVE ¾" COUPLING FROM OUTSIDE, REPLACE W/ 6" X ¾" NIPPLE
- 2. CLEAN & CLOSE

#### 6P

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WATER RECOVERY INC. 1819 ALBERT STREET JACKSONVILLE, FL. 32202

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## ABOVE-GROUND STORAGE TANK ASSESSMENTS

LAW Engineering and Environmental Services, Inc. LAWGIBB Group Member 3901 Carmichael Avenue Jacksonville, FL. 32207 LAW Project Number 40563-0-0113 April 13, 2000



March 14, 2001

Mr. Mike Doherty Water Recovery, Inc. 1819 Albert St. Jacksonville, FL 32202

#### SUBJECT: Report of Inspection of Tanks 1P-10P, 1SW, and Discharge Tank Water Recovery, Inc. Jacksonville, Florida LAW Project Number 40563-1-0225

Dear Mr. Doherty:

As requested and authorized by you, representatives from Law Engineering and Environmental Services, Inc. (LAW) performed external and internal assessments of Tanks 1P, 2P, 3P, 4P, 5P, 6P, 7P, 8P, 9P, 10P, 1SW, and the Discharge Tank in January 2001. This report will describe the qualifications of our personnel, the services provided, and the findings of our assessment.

#### QUALIFICATION OF PERSONNEL AND PROCEDURES

Personnel performing the nondestructive testing were qualified as Level I and Level II technicians. They are qualified and certified in accordance with LAW's Standard for Personnel Training and Certification, which is in accordance with the American Society of Nondestructive Testing Recommended Practice SNT-TC-1A. Testing procedures used were LAW's standard operating procedures, which are in accordance with ASME Section V, Nondestructive Testing.

#### PROJECT INFORMATION AND SCOPE OF SERVICES

LAW was directed to perform external and internal assessments, including ultrasonic thickness testing (UT) of the shells, roofs and floors of the noted tanks located at the Water Recovery, Inc. facility in Jacksonville, Florida. Ultrasonic thickness measurements were obtained on the shell utilizing four general compass points located at approximately 90-degree intervals around the circumference of each tank. At each compass point location, three to four thickness measurements were recorded on each shell course. The floors and roofs had thickness readings obtained at 2-foot intervals located along the

LAW Engineering and Environmental Services. Inc. 3901 Carmichael Avenue • Jacksonville, FL 32207 904-396-5173 • Fax: 904-396-5703 same four compass points as the shells. All readings were obtained utilizing a Krautkramer USN52. Minimum thickness requirements were calculated based on API-653 specifications and full hydrostatic load. For complete results of our testing please refer to the attached drawings and spreadsheets for each tank.

#### **Observations and Findings**

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Tank 1P is a 23,750-gallon Receiving Waste Oil Storage Tank located on Albert Street. It measures 26 feet, 9 inches tall with 3 courses and is 12 feet in diameter. The sump pump at the tank's base was not operational and the tank's grounding strap was missing. The surface coating was deteriorated and there was pitting in the bottom external lip and the roof of the tank. Additionally, a small hole was found in the south center of the roof. The roof of the tank was also slightly buckled. All of Tank 1P's nozzles were not welded on the inside diameter. The internal surface of the tank's roof and shell was coated with product, limiting our visual inspection. All thickness readings recorded on this tank were above minimum thickness requirements per API-653 guidelines.

Tank 2P is a 23,750-gallon Insulated Oil Treatment Tank located on Albert Street. It is 26 feet, 11 inches tall with 3 courses and is 12 feet in diameter. This tank is completely insulated. The tank's insulation was damaged, loose, and leaking in some areas. Tank 2P's autogauge was damaged and its ground strap was missing. All of Tank 2P's nozzles were not welded on the inside diameter. All thickness readings recorded on this tank were above minimum thickness requirements per API-653 guidelines.

Tank 3P is a 23,750-gallon Receiving Waste Oil Storage Tank located on Albert Street. It is 26 feet, 10 inches tall with 3 courses and is 12 feet in diameter. The sump pump at the tank's base was not operational and the tank's grounding strap was missing. The surface coating showed some signs of deterioration. All of Tank 3P's nozzles were not welded on the inside diameter. The internal surface of the roof and shell were coated with product, limiting our visual examination. All thickness readings recorded on this tank were above minimum thickness requirements per API-653 guidelines.

Tank 4P is a 20,000-gallon Receiving Waste Oil Storage Tank located on Albert Street. It is 25 feet tall with 4 courses and is 12 feet in diameter. The surface coating showed some signs of deterioration. A 9-inch lap patch was welded over a 6-inch diameter hole on the West Side of the tank located on the first shell course. All of Tank 4P's nozzles were not welded on the inside diameter. All thickness readings recorded on this tank were above minimum thickness requirements per API-653 guidelines.

Tank 5P is a 20,000-gallon Receiving Waste Oil Storage Tank located on Albert Street. It measures 31 feet tall with 5 courses and has a diameter of 10 feet, 6 inches. The surface coating was notably thin and showed some signs of deterioration. There was a small hole present on the south end of the roof. All of nozzles were not welded on the inner diameter of the tank. All thickness readings recorded on this tank were above minimum thickness requirements per API-653 guidelines.

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showed some signs of deterioration. The tank was slightly buckled on the east side. The autogauge was also slightly damaged and the grounding strap was missing. All of the nozzles were not welded on the inside diameter of the tank. The tank has a baffle running northeast to southwest along the center. This baffle had a section that has been partially removed. All thickness readings recorded on this tank were above minimum thickness requirements per API-653 guidelines.

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The Discharge Tank measures 32 feet, 11 inches in height and consists of 5 shell courses. The diameter measures 10 feet, 6 inches. No ultrasonic thickness data was obtained from the bottom course of this tank because it is reportedly scheduled to be replaced at a later date. The floor of the tank was covered with debris and scale. One thickness reading of 0.210 inch was obtained from the floor. Two scab plates were present on the roof along with accumulation of water along the south side. The neck for the manway located on the roof was missing. There were also two holes on the

northwest side of the roof. All thickness readings recorded on this tank were above minimum thickness requirements per API-653 guidelines.

#### Recommendations

. . .

Tank 1P has eight nozzles that should be welded on the internal surface. Also, the lapped weld seams with stitch welding should have full fillet welds. The hole in the roof should have a welded patch plate installed. Although not a code requirement, a grounding strap should be added to the tank for safety purposes.

Tank 2P has three vertical lapped weld seams that are stitch welded, and these should have full fillet welds. There are seven nozzles that should be welded on the internal surface. Although not a code requirement, a grounding strap should be added to the tank for safety purposes.

Tank 3P has lapped weld seams; however, due to the cleanliness of the tank's internal surface, these welds, if existence the weld is not visible due to "build-up" on the tank's internal surface. There are five nozzles that should be welded on the internal surface. Although not a code requirement, a grounding strap should be added to the tank for safety purposes.

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Tank 9P has six nozzles that should be welded on the internal surface. The patch plate on the floor should be welded on the internal surface. Although not a code requirement, a grounding strap should be added to the tank for safety purposes.

The Discharge Tank should have the manway replaced on the roof of the tank. Also welded patch plates should be installed on the roof at the two hole locations. Please note that the internal assessment of the floor was limited due to the presence of debris and scale.

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#### CLOSING

Our conclusions are based on information obtained from conversations with your office and our field observations. Additional items of concern may exist in areas unforeseeable to our personnel. Any conditions discovered which deviate from the information presented in this report should be presented for our review. It should be noted that an evaluation of wind loading was not performed under this limited scope.

LAW appreciates the opportunity to provide our professional services on this project. Should you have any questions concerning this report, or if we may be of further services on this, or future projects, please contact this office.

Respectfully submitted,

#### LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

Gregg A. Lentz

Operations Manager, Industrial Services

Floyd S. Simpson, P.E. Principal Engineer Registered, Florida 50791

Attachments: Drawings of Field Data for Each Tank