S	TI-I	NT	ER	NA	L	
1	N	5	E	R	V	

INTEGRATED SERVICE COMPANY LLC

Company: AGP

Location: Hastings, NE

Job ID: 652149 **Date**: 08-04-2021

Tank: DVOP 10

Tank Inspector(s) J. Martin (STI# AC 44355) and M. Emert

Name Plate/Construction					
● Steel ○ Stainless Steel ○ Plastic ○ Aluminum ○ Fiberglass					
Build Date <u>2000</u> Manufacturer <u>Palmer Manufacturing and Tank</u>					
Build Stnd: ○ API-650 ○ API-12C ○ API-12F ○ UL-142 ○ Re-Erected ○ Unknown					
Date Last External Date Last Internal					
Name Plate Data					
Dia/Width: <u>12.00</u> ft Must be <=30 ft					
Height: <u>42.00</u> ft Must be <=50 ft					
Length:ft					
Capacity: 35,286 GAL					
STI Not applicable for tanks over 50,000 Gal.					
Product Service DVOP					
Specific Gravity 1.00					
□ Ambient □ Heated					
□ Refrigerated					
Operating Temperature 150 F					
STI Not applicable for heated tanks over 200°F					
Tank Description					
● Vertical ○ Horizontal ○ Box ○ Tote ○ Other					
Foundation: ○ Grade ○ Ringwall ● Concrete Pad ○ Saddles ○ Skids ○ Other					
Pottom: • Wolded O Diveted O Delted O N/A Veer Installed:					
Bottom: ● Welded ○ Riveted ○ Bolted ○ N/A Year Installed:					
○ No Coating ○ Thin Coating ○ Thick Coating					
☐ Pan Type ☐ Cathodic Protection ☐ Double Bottom ☐ Leak Detection					
Shell: ● Welded ○ Riveted ○ Bolted ○ Combination					
☐ Lap welded ☐ Insulated ☐ Double Wall ☐ Containment Vessel					
Horizontal Tank Heads: ○ Flat ○ Hemispherical ○ Dish					
Roof: ● Cone ○ Flat ○ Geo-Dome ○ Dome ○ Open/None ○ N/A					
Roof Access: ○ Spiral Stair ○ Radial Stair ● Catwalk ○ Ladder ○ None					
·					

STI-INTERNAL	Company: AGP	Job ID : 652149
INSERV	Location: Hastings, NE	Date : 08-04-2021
INTEGRATED SERVICE COMPANY LLC		Tank: DVOP 10
1. Spill Control		○ None
○ Containment AST ○	⊃ Dbl Wall/Bottom ⊃ Dike Area ⊃ Remote Imp	oound • in Building
2. CRDM (Continuo	us Release Detection Method)	○ None
● RPB (Release Pre	vention Barrier)	
Type ● Concrete	Pad ○ Liner ○ Steel Plate ○ Other	
O Double Wall/Botto	om with Interstitial Space	
○ OK ○ Not OK ○	○ Not Checked	
○ Elevated		
3. AST Category		Category <u>1</u>
1 Any	Tank with Both Spill Control and CRDM	
2 Sing	le wall AST in contact with ground NO CRDM Has Spill C	ontrol
3 Sing	le wall AST in contact with ground has CRDM NO Spill Co	ontrol
Verti	cal AST on concrete pad CRDM has NO Spill Control	
Sing	le/Double wall AST Has CRDM NO Overfill Protection	
4. Venting		
☐ Open vents not e	levated 12 feet □ Open vents not vented outsid	de building
☐ Uses long bolted	Manway as emergency vent ☐ Vapor recovery	system
_		•
Primary Vent ● C	pen ○ Pressure/Vacuum ○ Pressure Size: _	6.00"
Secondary Vent O	pen ○ Pressure/Vacuum ○ Pressure Size: _	
Emergency Vent ○ O	pen ○ Pressure/Vacuum ○ Pressure Size: _	
Interstice Vent OO	pen ○ Pressure/Vacuum ○ Pressure Size: _	
5. Comments		
The tank had one 6-in	ch open vent.	

STI-INTERNAL	Company: AGP	Job ID: 652149
INSERV	Location: Hastings, NE	Date : 08-04-2021
INTEGRATED SERVICE COMPANY LLC		Tank : DVOP 10
1. Foundation		Concrete Pad
Anchorage: ○ No A	nchors ○ Cable Tie Downs ● Ancho	or Bolts
Numbe	r of Anchors: <u>4</u> Size of Bolt (in) <u>1</u>	. <u>00</u> Height (in) <u>13.00</u>
Thickne	ess of top plate (In) <u>0.509</u> Thicknes	s of side plate (In) <u>0.509</u>
Ringwall/Pad	Distance from Bottom extension to e	edge (in) <u>4.00</u> Min <u>5.00</u> Max
Dimensions:	Distance from top surface to grade (in) <u>24.00</u> Min <u>26.00</u> Max
Support	Number of supports: Space betw	veen Supports (in)
Dimensions:	Size of supports (in): Height of su	upports (in):
○ No Pad Plate ○ Pa	ad Plate $ \bigcirc $ Stitch welded pad plate $ \bigcirc $	Seal welded pad plate
2. Undesirable Foun	dation Conditions	
☐ Grade against tank	☐ Washout ☐ Voids under tank ☐	Hairline Cracks in concrete
☐ Large Cracks in co	ncrete (>1/8") 🗆 Exposed rebar 🗆 Dis	continuous Ringwall
☐ Corrosion of suppo	rts □ Anchor Bolt Corrosion □ Bottor	n extension corrosion
☐ Sealant under tank	☐ Grout under tank ☐ Grout/Sealan	t Failure □ Corroded Shims
3. Undesirable Area	Conditions	
☐ Obvious settlement	: □ Water Against tank □ Drainage to	ward tank □ Excessive debris
☐ Vegetation by tank	☐ Moss under bottom ☐ No Contain	ment Dike/Wall
☐ Damaged Containn	nent Dike/Wall □ Product residue □	Wet Product by Tank
4. Comments		

STI-INTERNAL	Company: AGP	Job ID: 652149
INSERV	Location: Hastings, NE	Date: 08-04-2021
INTEGRATED SERVICE COMPANY LLC		Tank: DVOP 10
1. External Tank She		Welded
	Rivets Unsealed □ Rivets Seal	
		elds on All Item <2" □ Foam System
□ No Fau Flates Offu	el Sileli Diackets 🗆 No ice sille	ads on Air item 12 🖂 i bain bystem
2. Coating Condition	S C Like New ● G	Good ○ Fair ○ Poor ○ No Coating
☐ Peeling ☐ Crackin	g □ Thinning □ Rust Stained	☐ Primer Only ☐ Areas not Coated
Insulation Condition	S Clike New C Good C	⊃ Fair ⊝ Poor
○ Sprayed ○ Corrug	ated/ Banded ○ Smooth Metal	☐ Areas Removed
☐ Tears ☐ Damaged	d □ Holes □ Penetrations Not S	Sealed 🛘 Wet under Insulation
3. Undesirable Shell	Conditions	
☐ Weld Seam Corros	ion □ Weld Pinholes □ Arc Str	rikes □ Weld Porosity □ Weld Slag
☐ Weld Cracks ☐ W	eld Undercut □ Lack of Fusion	☐ Holes in Shell ☐ Gouges in Shell
☐ Inactive Corrosion	☐ Active Corrosion ☐ Surface	Corrosion □ Corrosion Damage
Deepest Shell Corros	ion Found: Height above Gra	ade □ Needs Evaluation
4. Shell Distortion ar	nd Buckling	
☐ Peaking ☐ Banding	ց □ Lower Shell Distortion □ Uր	pper Shell Distortion □ Torn Plate
☐ Distortion around N	lozzles/Repairs □ Minor Buckles	s □ Major Buckles □ Sharp Creases
5. Possible Imprope	r Construction Practices	List Items Below
☐ Square Corner Inse	erts/Pads 🗆 Lap Patches 🗵 Unro	einforced Penetration □ Split Repad
⊠ No Telltale Hole in	Repad □ Plugged Telltale Hole	in Repad □ Improper Weld Space
☐ Insufficient Reinfor	cement 🗆 Undersize Insert 🗀 C	over Plate Thin 🛚 Flange Thin
Shell Nozzles A, H, I,	J, and K were over 2 inches in d	diameter and did not have repads.
The repads of Shell It	ems C, L, and M did not have te	Iltale holes.
· ·		
6. Ground cables		Quantity <u>1</u>
☐ None Found ☐ Not	t Attached □ Broken □ Imprope	
	11	

STI-INTERNAL Company: AGP	Job ID : 652149
Location: Hastings, NE	Date: 08-04-2021
INTEGRATED SERVICE COMPANY LLC	Tank: DVOP 10
7. Level Gauge Manufacturer DP Harp Proc	duct Height: 0.00 FT
☐ Float with Gauge ☐ Target Board ☐ Electronic ☐ Float	<u> </u>
□ Not Working □ Conduit damaged □ Needs Service	dats, Cables Guides Hot Attached
□ Not Working □ Conduit damaged □ Needs Service	
8. Top Angle Wind Girder	
□ None □ Toe In ⊠ Toe Out □ Corrosion □ TA Weld	d Size Greater than 3/16"
☐ Damaged Welds ☐ Buckled ☐ Coating Failure ☐ Ho	olds Water □ Buckled
Top Angle : Vertical (in) 3.00 Horizontal (in) 3.00	Thickness (in) <u>0.243</u>
Wind girder: Vertical (in) Horizontal (in) Thickness	ess (in)
Distance from Top of Tank (in):	
9. Shell Vents and Overflows	
☑ None □ Indicator Holes □ Screens Missing/Damage	ed □ Over Stairway □ Geo Dome
Number of Vents: Size (in): Distance from roof (in	n):
Number of Overflows: Size (in): Distance from room	of (in):
10. Comments	
The pad plates on the external shell were not seal welde	ed.
The coating on the external shell and appurtenances wa	s in good condition.

SII-INTERNAL	Location: Hastings, NE	Job ID: 652149 Date: 08-04-2021						
INSERV	Eocation: Hastings, NE	Tank: DVOP 10						
1. Internal Tank Shell Welded								
☑ Product Build-Up ☑ Product Residue ☐ Lower Shell Coated ☐ Entire Shell Coated								
☐ Shell Not Inspected	d □ Shell Welds Not Inspected							
2. Undesirable Shell	Conditions							
☐ Weld Seam Corros	sion □ Weld Pinholes □ Weld Porosity	☐ Weld Slag ☐ Weld Cracks						
\square Weld Undercut \square	Lack of Fusion ☐ Arc Strikes ☐ Holes	in Shell □ Gouges in Shell						
☐ Weld Burrs ☐ Mine	or Shell Corrosion $\;\square$ Shell Corrosion Da	amage						
Deepest Shell Corros	ion Found: Height above Bottom	☐ Needs Evaluation						
5. Possible Imprope	r Construction Practices	List Items Below						
☐ Lap Patches ☐ Ite	em Penetrates but Not Welded □ Hot Ta	p Drilled Hole for Coupling						
☐ No Pads on Gauge	e Pole Supports 🛭 No Pads on Datum F	Plate Supports □ Undercut						
☐ Incomplete Shell W	/eld □ Lack-of-Fusion □ Cracked Weld	d □ Welds Not Visible						
5. Internal Piping an	d Supports							
⊠ No Pads on Pipe S	Supports ☐ Pipe Support Welded to Bott	h Pipe and Bottom						
☐ Inadequate Pipe S	upports 🛘 Corrosion on Piping 🗀 Broke	en Welds □ No Diffuser						
☐ No Suction Trough	☐ Center Suction / Fill ☐ Has Floating	ງ Suction Line						
The piping supports la	acked pad plates on the internal shell.							
6. Comments								
There was product bu	uildup and residue on the internal shell.							
-								

I-EX	



Company: AGP	Job ID:
Location: Hastings, NE	Date:
	Tank:

*	A \bigcirc E	3	$C \cap$	$D \cap E \cap$	$F \diamondsuit$	G H
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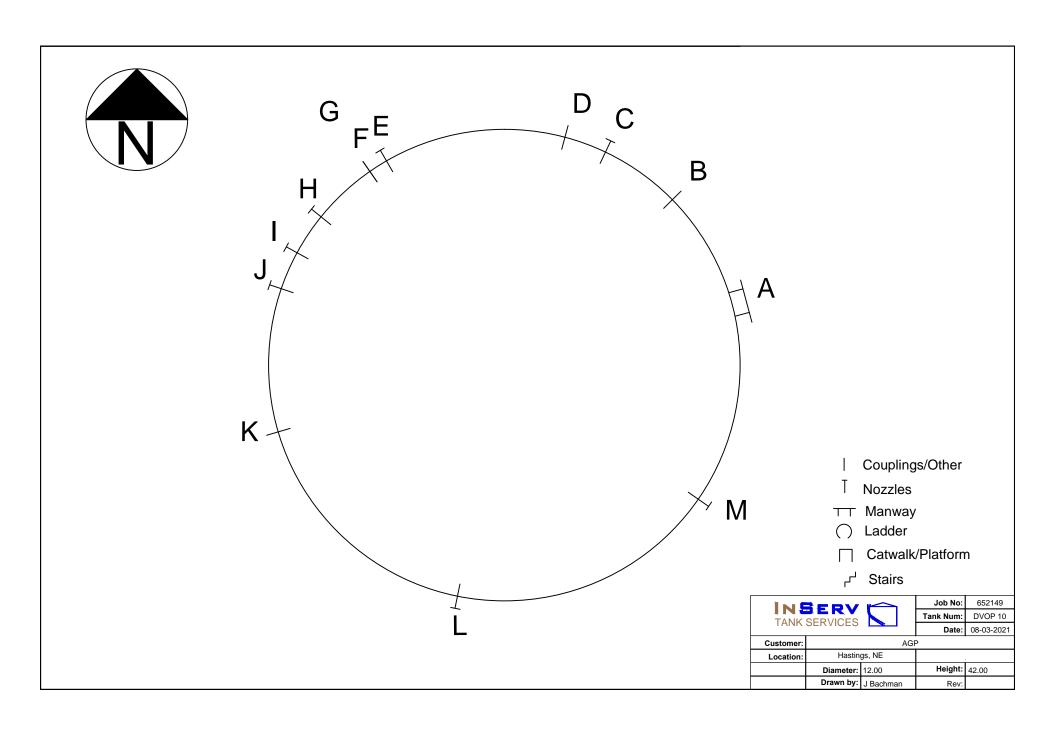
Height is measured from bottom to the centerline of the item. Weld spaces are measured toe-to-toe of the welds.

ID	Size	TT	Shape*	Description	Location	Height	F	Repad/Inse	rt		Neck Thi	cknesses		Weld	
ייו	Size	hole	Snape	Description	Location	Height	Width	Height	t	Тор	Bottom	Left	Right	Space	To**
Α	24.00			Manway	0.00	30.00					0.389			17.00	CW
В	0.75			Coupling	3.10	30.00								24.00	CW
С	2.00		Α	Nozzle	5.20	6.50	10.00	10.00	0.265		0.206			1.00	CW
D	0.75			Coupling	6.30	24.00								23.00	CW
Е	3.00			Nozzle	11.00	Ring 7									
F	0.75			Coupling	11.50	24.00								12.00	CW
G	3.00		С	Flange	11.50	6.00	10.00	10.00						0.00	CW
Н	4.00			Nozzle	13.20	32.00					0.225			11.00	I
1	4.00			Nozzle	14.30	18.00								10.00	J
J	4.00			Nozzle	15.30	8.00					0.226			5.00	CW
K				Catwalk	19.00										
L	8.00		Α	Nozzle w/ Mixer	25.50	36.00	24.00	24.00	0.248		0.286			23.50	CW
М	2.00		Α	Nozzle	32.50	9.00	10.00	10.00	0.261		0.215			3.25	CW
N															
0															
Р															
Q															
R															
S															
Т															
U															
٧															
W															
Х															
Υ															
Z															
AA															
ВВ															

^{**} TS=Tombstone or low type repad, CW=Cornerweld, HW= Horz. weld, VW=Vertical Weld, R#=Repad of Item #, #=Weld of Item#, PB=Pan Bottom weld

652149

8/4/2021 DVOP 10



II-EXIERNAL
NSERV
NTEGRATED SERVICE COMPANY LLC

Company: AGP	Job ID:	652149
Location: Hastings, NE	Date:	8/4/2021
	Tank:	DVOP 10

Cauraa		Shell	Joint	5	Shell Thicknesses (in)					
Course	Height (in)	Material	Type*	Bottom	Middle	Тор				
				0.248	0.248	0.250				
1	70.00		DW	0.251	0.249	0.250				
1	72.00		BW	0.250	0.252	0.253				
					0.256	0.250	0.248			
2	72.00		BW	0.253	0.252	0.250				
3	72.00		BW	0.250	0.251	0.252				
4	72.00		BW	0.247	0.253	0.252				
5	72.00		BW	0.252	0.252	0.248				
6	72.00		BW	0.255	0.252	0.251				
7	72.00		BW	0.252	0.251	0.252				
8										
9										
10										

^{*} Joint Type: BW= Butt Weld, LW= Lap Weld, LR# = Lap Riveted (num of rivets), BR= Riveted Butt joint (Num Rivets on one side), BLT=Bolted

Total

Height 42.00 Feet

Minimum Thickness written in Blue Font

Enter Vertical seam Location in CCW order from Start point.

			•	
1	35.90	11	21	31
2		12	22	32
3		13	23	33
4		14	24	34
5		15	25	35
6		16	26	36
7		17	27	37
8		18	28	38
9		19	29	39
10		20	30	40

Second	Course offset	
Third	Course offset	

SII-INIERNAL	Company: AGP		Job ID: 052149
INSERV	Location: Hastings, NE	•	Date : 08-04-2021
INTEGRATED SERVICE COMPANY LLC			Tank: DVOP 10
1. Tank Roof			Cone
□ No Access ⊠ Lim	ited Access □ Access No	ot Safe ⊠ No Safety	Tie Off
Slope, Run 24 inche	es Rise (in): 4.00	·	
	(). <u></u>		
2. Coating Condition	ne like Ne	ew O Good O Fair C	Poor ○ No Coating
			<u>_</u>
☐ Peeling ☐ Crackin	g □ Thinning □ Primer	Only ☐ Areas Not C	oated
Insulation Condition	s O Like New O (Good ○ Fair ○ Poor	
○ Sprayed ○ Corrug	ated/ Banded O Smooth	ı Metal 🛮 🗆 Areas Re	emoved
☐ Tears ☐ Damaged	d □ Holes □ Penetration	ns Not Sealed □ Wet	t under Insulation
3. Undesirable Roof	Conditions		
	ion Weld Pinholes		
☐ Inactive Corrosion	☐ Active Corrosion ☐ S	urface Corrosion □ (Corrosion Damage
☐ No Safety Bars on	>30" Openings Thinne	est RWT Found: <u>0.24</u>	<u>5"</u> □ Needs Evaluation
4. Roof Distortion ar	nd Buckling		
☐ Excessive Wavines	ss 🗆 Areas Holding Wate	er Settlement of Su	upport Structure
	arp Creases □ Roof Join		• •
	p 0.00000 = 1.001.00	111011 Talligiolo (0/ 10	,
5. Vents and settings	<u> </u>	List vent si	izes and settings below
·	ssure/Vacuum Vents □ F	•	
9	Screens □ Vents Need S		
The tank had one 6-in	nch open vent that was pi	ped down to a lower a	area of the tank.
6. Comments			
The coating on the ev	ternal roof and appurtena	nces was in like new	condition
The coaling on the ex	ternal root and appurtena	IIICGS WAS III IING IIGW	CONTRICTION .
Access to the roof wa	s limited.		
The tank did not have	a safety tie off		
tariit ala not navo	a saisty 110 oii.		

SII-INTERNAL										
INSERV	Locatio	Date : 08-04-2021 Tank : DVOP 10								
INTEGRATED SERVICE COMPANY L										
1. Internal Tank Ro	oof									
, , ,		elf Supporting (No Stru	ucture)							
Record column radius I	ocation and n	umber of columns								
Center	Bay 1	Bay 2	E	Bay 3	Bay 4					
Radius 0										
Number 0										
2. Column Type, S	Size and Co	nditions								
○ Structural Steel	O Steel Pi	pe O Both Types	,							
Dimensions (in)		Center Colum	n	Oı	uter Columns					
Size of Members										
☐ Welded ☐ Rivet	ted 🗆 Bolte	ed □ Bowed □ Twiste	ed 🗆 (Out-of-Plur	mb □ Damaged					
☐ Corroded ☐ Bro	ken Welds	☐ No Drain Hole in P	ipe							
3. Column Base T	vpe. Size a	nd Conditions								
○ H-Shaped ○ T-	•									
Dimensions (in)	Chapta ©	Center Base		(Outer Bases					
Size of Members		Ocinici Buse			Julei Buses					
Bearing Plate										
	tod □ Polto	d □ Damagad □ Wa	ldod to	Pottom [No Cuido Clino					
		d □ Damaged □ We			•					
☐ Insufficient Guide	e Clips 🗆 C	Corroded No Bearin	ig Piat	e ⊔ Not s	Seai vveided					
4. Rafter Condition	ns									
☐ Bowed ☐ Twiste	ed 🗆 Hangi	ing $\;\square$ Sagging $\;\square$ Co	rroded	☐ Dama	ged □ Not Radial					
5. Roof Conditions										
	•									
☐ Hole ☐ Corrode		pped Opening 🗆 Ent	ire Un	derside Co	ated					
☐ Hole ☐ Corrode		pped Opening ☐ Ent	ire Un	derside Co	ated					
		ipped Opening □ Ent	ire Un	derside Co	ated					
☐ Hole ☐ Corrode 6. Comments		ipped Opening □ Ent	ire Un	derside Co	ated					
		ipped Opening □ Ent	ire Un	derside Co	ated					
		ipped Opening □ Ent	ire Un	derside Co	ated					
		ipped Opening □ Ent	ire Un	derside Co	ated					

STI - INTERNAL	Company: AGP	Job ID:	652149
INSERV	Location: Hastings, NE	Date:	8/4/2021
IN JERV		Tank:	DVOP 10
INTEGROTED BERVICE COMPANY ELE		<u> </u>	

Roof Nozzles and Appurtenances (Measure one and give quantity for peripheral vents)

	Type	Size	Radius*	Comment
Α	Nozzle	4.00 "	5.00'	blinded
В	Coupling	1.50 "	5.00'	plugged
С	Open Vent	6.00 "	0.00'	vented to lower part of the tank
D	Nozzle	4.00 "	4.00'	
Е	Nozzle	4.00 "	3.50'	
F	Manway	20.00 "	4.50'	
G	Nozzle	4.00 "	3.50'	
Н	Nozzle	4.00 "	4.00'	
	Nozzle	4.00 "	4.50'	
J	Nozzle	4.00 "	5.00'	
K				
L				

Estimate Radius from Center

Roof plate thickness readings

Measure thickness every 10 feet.

Quadrant	Center	10'					
North		0.245					
South		0.245					
East		0.248					
West							

Quadrant						
North						
South						
East						
West						

Minimum Thickness written in Blue Font

SII-INTERNAL	Company: AGP	Job ID: 052149
INSERV	Location: Hastings, NE	Date : 08-04-2021
INTEGRATED SERVICE COMPANY LLC		Tank: DVOP 10
1. Tank Bottom		
☐ Annular Ring ☐ W	/ater Washed □ Blasted □	☐ Product Residue ☐ Dirt/Debris
☐ Heavy Rust Scale	\square Standing Water \square Heav	y Product (Not Inspected)
2. Undesirable Botto	om Conditions	See Layout and X,Y Sheet for locations
☐ Lap Seam Corrosid	on Cornerweld Corrosio	n □ Weld Pinholes □ Weld Cracks
☐ Gouges ☐ Inactive	e Corrosion Active Corre	osion Welds Not Inspected
☐ Isolated Pitting ☐	Areas of Pitting □ Hole(s)	
Topside Thresholds	: Inner Plates: 0.100" Ske	etch Plates: <u>0.100"</u> Critical Zone: <u>0.080"</u>
	nd: Plate Number:	
		s. A 5-year inspection interval was used.
		- 7
3. Coating Condition	าร	● None ○ Thin ○ Thick
Coating Thickness	_mils □ Peeling □ Crac	king □ Holidays □ Blistered
# Areas Removed	☐ Needs Further Testing	☐ Needs Repair ☐ Needs Replacement
_		·
4. Inspection Method	ds	See Layout and X,Y Sheet for locations
Ultrasonic Edge Sc	crubs Thickness Range: 0.	170-0.260" Thinnest Area Found:
_	m ⊠ Isolated Corrosion ⊠ <i>I</i>	
		etch Plates: <u>0.150"</u> Critical Zone: <u>0.170"</u>
	d: 0.130 Plate Number	
	_	□ Patch Plates □ Leaks Found
	•	d Plates □ Patch Plates □ Cracks Found
	•	a of soilside corrosion below the
-		n the critical zone. These areas were
marked for repair. A 5	5-year inspection interval w	as used.
5. Sump (thickness	ses on UES Sump form)	Quantity: <u>1</u>
\square Hole \square Corrosion	☐ Coated ☒ Water/Produ	ct □ Patched □ Not Inspected
6. Settlement		Measure on Survey Page
☐ Humps ☐ Saɑs ☐		er Foot ☐ Needs Evaluation
A settlement survey w	•	•

INTERNAL



Company: AGP

Location: Hastings, NE

Job ID: _ Date: 652149 8/4/2021

Tank: DVOP 10

 MinThickness
 0.250
 Max Thickness
 0.252
 AVG Thickness
 0.251

Enter plate thicknesses

Plate	t	Plate	t	Plate	t	Plate	t	Plate	t
1	0.250	41		81		121		161	
2	0.252	42		82		122		162	
3		43		83		123		163	
4		44		84		124		164	
5		45		85		125		165	
6		46		86		126		166	
7		47		87		127		167	
8		48		88		128		168	
9		49		89		129		169	
10		50		90		130		170	
11		51		91		131		171	
12		52		92		132		172	
13		53		93		133		173	
14		54		94		134		174	
15		55		95		135		175	
16		56		96		136		176	
17		57		97		137		177	
18		58		98		138		178	
19		59		99		139		179	
20		60		100		140		180	
21		61		101		141		181	
22		62		102		142		182	
23		63		103		143		183	
24		64		104		144		184	
25		65		105		145		185	
26		66		106		146		186	
27		67		107		147		187	
28		68		108		148		188	
29		69		109		149		189	
30		70		110		150		190	
31		71		111		151		191	
32		72		112		152		192	
33		73		113		153		193	
34		74		114		154		194	
35		75		115		155		195	
36		76		116		156		196	
37		77		117		157		197	
38		78		118		158		198	
39		79		119		159		199	
40		80		120		160		200	

UES Thickness Scrubs

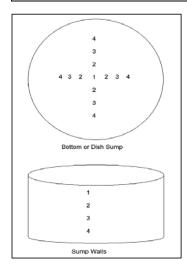
MinThickness 0.170

Max Thickness 0.260

Enter Ultrasonic Edge Scrub thicknesses (UES) 12"x12" at each station

Station	Min	Max	Station	Min	Max	Station	Min	Max
1	0.170	0.260	11			21		
2	0.200	0.260	12			22		
3	0.240	0.260	13			23		
4	0.250	0.260	14			24		
5	0.250	0.260	15			25		
6	0.240	0.260	16			26		
7	0.210	0.260	17			27		
8	0.250	0.260	18			28		
9			19			29		
10			20			30		

Sump Inspection



	Center	North	South	East	West
1					
2		There was	product	in the	sump
3					
4					

Size: 12"x36"

Bottom or Dish Sump

	North	South	East	West
1	0.450	0.452	0.457	0.450
2	0.460	0.465	0.455	0.450
3	0.453	0.451	0.455	0.460
4	0.450	0.462	0.450	0.450

Sump side walls

STI - INTERNAL



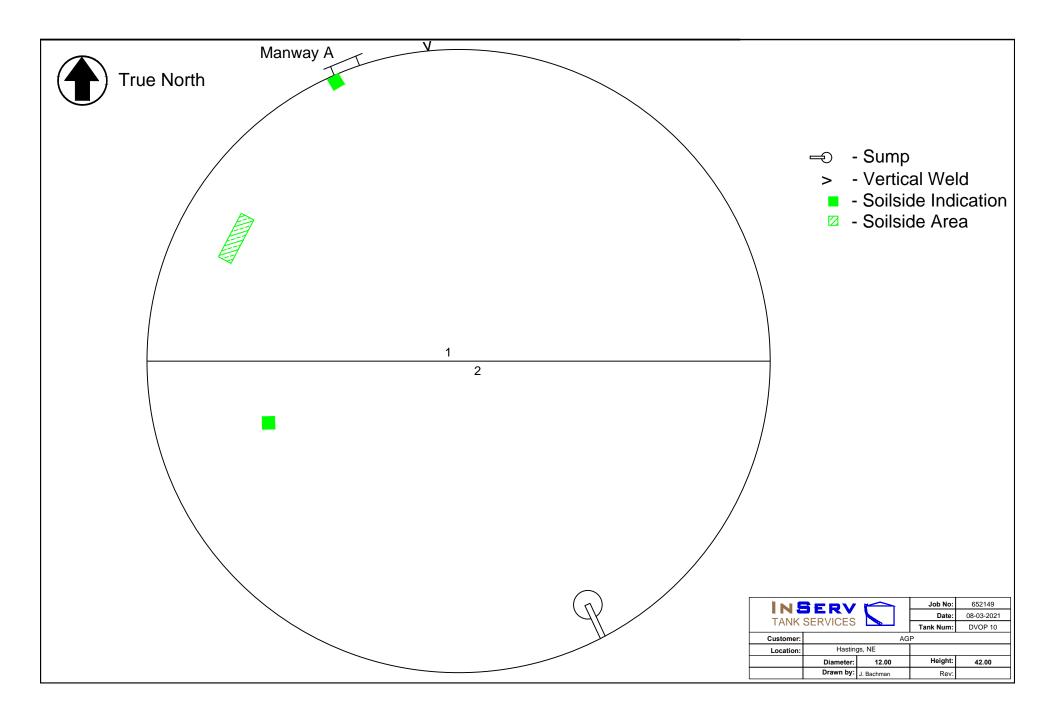
Company: AGP	Job ID:	652149
Location: Hastings, NE	Date:	8/4/2021
<u>-</u>	Tank:	DVOP 10

A total of	 areas of Topside pitting were found.	 of those were below thresholds.
A total of	 areas of Soilside corrosion were found.	 of those were below thresholds.

Min RWT 0.130 Max Pit Depth 0.000

Enter topside and soilside indications (Type S=Soilside, T=Topside, B=Both Solside and Topside, G=Gouge, D=Dent, H=Hole)

Plate	Type	Topside Depth	Soilside RWT	Critical Zone	X	Y	Ref Corner	Comments
1a	SSA		0.130		16.00	24.00	SW	14"x24" (0.130"-0.150")
1b	S		0.170	Х	26.00	43.00	SW	12"x12" T
2a	S		0.150		18.00	12.00	NW	12"x12





 Company: AGP
 Job ID: 652149

 Location: Hastings, NE
 Date: 08-04-2021

 Tank: DVOP 10

Summary

The coating on the external shell and appurtenances was in good condition. **This should be monitored at future inspections.**

Shell Nozzles A, H, I, J, and K were over 2 inches in diameter and did not have repads. Since the shell is over the required thickness, no additional reinforcement is required.

The repads of Shell Items C, L, and M did not have telltale holes. No action is required.

There was product buildup and residue on the internal shell.

Access to the roof was limited. The coating on the external roof and appurtenances was in like new condition. **This should be monitored at future inspections.**

A visual inspection was performed on the tank bottom to locate topside pits 0.100 inches deep and deeper in the bottom plates and 0.080 inches deep and deeper in the critical zone (within three inches of the shell) for a 5-year inspection interval. There were no pits detected below the thresholds.

A Magnetic Flux Leakage (MFL) scan was performed on the tank bottom at a remaining wall threshold of 0.150 inches thick in the bottom plates and 0.170 inches thick in the critical zone (within three inches of the shell) for a 5-year inspection interval. There were two soilside indications and one area of soilside corrosion below the thresholds. One soilside indication was located in the critical zone. These areas were marked for repair. The lowest readings were 0.130 inches and located on Bottom Plate 1. **The corroded areas should be patched per API 653 standards.**

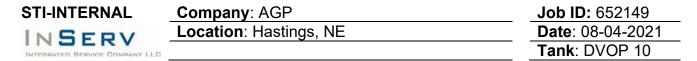
Ultrasonic Edge Scrubs (UES) were performed around the entire circumference of the tank. The thicknesses ranged from 0.170 to 0.260 inches. No corrosion below the thresholds was found.

The dish-shaped sump was 12 inches in diameter and 36 inches deep. The wall thicknesses ranged from 0.450 to 0.465 inches. No corrosion was detected. There was product in the bottom of the sump at the time of inspection.

An ultrasonic thickness reading was taken at random on each bottom plate. The thickness readings were 0.250 and 0.252 inches.

A settlement survey was not performed.

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Inserv utilizes certified inspectors (STI and API-653) to perform small tank inspections in compliance with industry standards such as SP001 and API-653. The tank was categorized and inspection intervals determined per STI's SP001, 5th Edition, Table 5.5.

Tank DVOP 10 had a capacity of 35,286 gallons, a containment area and a CRDM (RPB, concrete pad), making it a Category 1 tank. The tank still requires periodic inspections by the owner's inspector per SP001. The next inspection required is an external inspection due in 2041.



 Company:
 AGP
 Job ID:
 652149

 Location:
 Hastings, NE
 Date:
 8/4/2021

 Tank:
 DVOP 10

Vertical Tank Thickness and Venting

(Not under pressure, Hydraulic head pressure only)

Inputs:

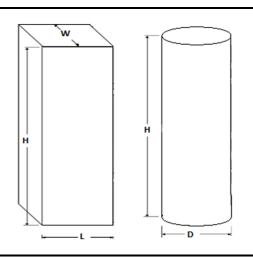
No	Rectagular Tank?
No	Elevated Tank
No	Stainless Steel Tank

42.00	(ft) H	Tank Height
12.00	(ft) D	Tank Diameter 5.98 (ft) Ri Inside radius
0.70	E	Joint efficiency (use 1 for butt weld, 0.70 for lap welds)
23600	S	Allowable stress (Use 23600 if unknown steel)
62.4	lb/cf	Density of product (use 62.4 for water if unknown)
42	(ft) Hp	Height of product when full (inside tank shell)



(in) Tsm Measured minimum thickness on shell

(in) Trm Measured minimum thickness on roof



Tank Properties

35286.79	Gal	Tank Capacity
1130.97	sq ft	Wetted area per UL-142
18.20	Р	Internal Hydraulic Pressure (P= H(lbs/cf)/144

Shell Circumferential Stress (longitudinal Joint) Note:1

0.167	(in) Tsl	Required thickness = 12*P*Ri/(S*E-0.6*P) or 0.167 inches	min per UL-142
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Shell Longitudinal Stress (Circumferential Joint) Note: 1

Required Venting

4.00	(in)	Minimum Normal Vent per UL142 Table 8.2 Note:3
10.00	(in)	Minimum Emergency Vent per UL142 Table 8.1 Note:4

Required shell thickness Maximum of Tsl and Tsc

Shell Thickness evaluation per STI-SP001 4th Ed. Section10

0.167 (in) Tsr

0.250 (in) Tsm Measured thickness	
Shell Thickness is Okay all Categories Shell Thickness is Okay Category 1 Shell Thickness is Okay Category 1	0.1253 75% of required thickness 0.0835 50% of required thickness 0.0418 25% of required thickness

Roof Thickness evaluation per STI-SP001 4th Ed. Section10

0.123 (in) Trr Required roof thickness		
0.245 (in) Trm Measured roof thickness		
Roof Thickness is Okay all Categories	0.0923	75% of required thickness
Roof Thickness is Okay Category 1	0.0615	50% of required thickness
Roof Thickness is Okay Category 1	0.0308	25% of required thickness

Note: 1 ASME Boiler and Pressure Vessel Code Division I, Section 8 (1986)

Note: 2 STI SP001 4th edition

Note: 3 UL-142 8th edition July 11, 2002 Tables 15.1, 8.1, 8.2





IMG_0103







IMG_0106

IMG_0107





IMG_0108

IMG_0109











IMG_0112

IMG_0113











IMG_0117





IMG_0119

IMG_0120





IMG_0122





IMG_0123







IMG_0125

IMG_0126





IMG_0127

IMG_0128





IMG_0129







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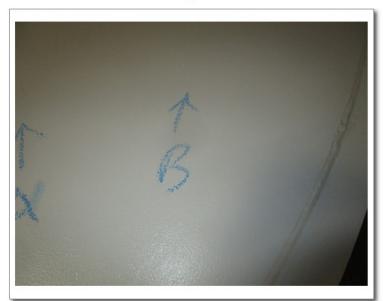






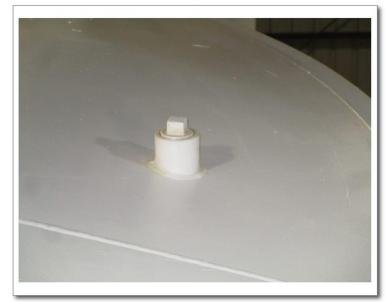
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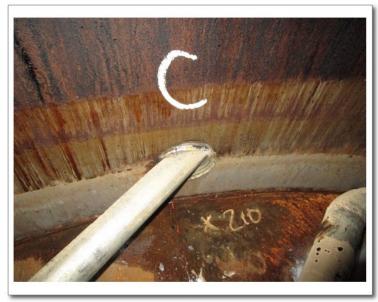
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IMG_0169

Dear Mr. Martin:

Congratulations on passing STI SP001 Adjunct online certification course. Below is your STI Inspector identification card and certificate. We suggest that you print this page and:

- Cut out and laminate the ID card
- Frame the certificate

If you have any questions about this or any field related inspection, please feel free to call Joseph Mentzer, STI Project Engineer, at (224) 286-6469.



STI/SPFA

Aboveground Tank Inspector Certification Program 847/438-8265

Issue Date: 08/23/2019

Name: James Martin STI Inspector No: AC 44355 Expires: August 23, 2024

The person to whom this card has been issued has met the requirements to attain the STI SP001 Adjunct Certification for API 653 Inspectors.

This certificate is dependent on an active API 653 certification.

CERTIFICATION Steel Tank Institute James Martin STI Inspector No: AC 44355 Expires: August 23, 2024 The person whose name appears on this certificate has met all of the requirements to attain the STI SP001 Adjunct Certification for API 653 Inspectors. This certification is dependent on an active API 653 certification. Joseph Mentzer, P.E. Steel Tank Institute Issue Date: 08/23/2019

AMERICAN PETROLEUM INSTITUTE

Individual Certification Programs: ICP™

API Individual Certification Programs

verifies that

James William Martin

has met the requirements for API certification

API-653 Aboveground Storage Tank Inspector

Certification Number 32455

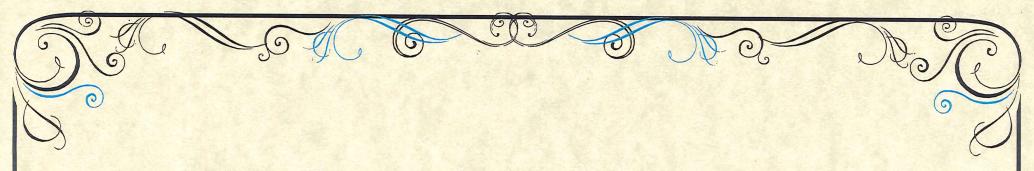
Original Certification Date April 30, 2008

Current Certification Date April 30, 2020

Expiration Date April 30, 2023

Manager, Individual Certification Programs





MAGNETIC FLUX LEAKAGE TESTING

THIS ACKNOWLED GES THAT

Mikell Emert

HAS SUCCESSFULLY COMPLETED THE REQUIREMENTS OF INSERV INSPECTION AND CONSULTING SERVICES LLC QUALIFICATION AND CERTIFICATION OF NDE PERSONNEL WRITTEN PRACTICE REFERENCING ASNT-TC-1A





x Budlystilen

SIGNED, Authorized NDT Level III





ULTRASONIC TESTING

THIS ACKNOWLEDGES THAT

Mikell Emert

HAS SUCCESSFULLY COMPLETED THE REQUIREMENTS OF INSERV INSPECTION AND CONSULTING SERVICES LLC QUALIFICATION AND CERTIFICATION OF NDE PERSONNEL WRITTEN PRACTICE REFERENCING ASNT-TC-1A





SIGNED, Authorized NDT Level III

