



Tank Inspection Report

Lost Hills Utility District
Western Tank
Liquid Engineering Corporation 44412

Tank Name:	Western Tank	Tank Type:	On-Grade
City:	Lost Hills	Tank Capacity:	2,200,000 Gallon
State:	CA	Type of Construction:	Riveted Steel
Year Built:	Unknown		

Inspected By:	LEC Maintenance Team 10 – Team Leader C. Fromm		
Inspection Date:	January 19, 2013		

GENERAL

This report is a supplement to the visual and video inspection undertaken for the Lost Hills Utility District, CA, by Liquid Engineering Corporation of Billings, MT. The Western Tank is an on-grade style, riveted steel water storage tank. (See Photo No.1). The tank has a 2,200,000-gallon capacity, with an approximate height of 30' and an overall diameter of approximately 115'.

Photograph No. 1



STANDARDS

The inspection of this tank was performed by a dive maintenance technician using surface supplied air, totally encapsulated in a sealed dry suit mated to a sealed dry divers hard hat and conducted in accordance with all applicable OSHA, EPA, AWWA, NACE, SSPC and ADC requirements and/or recommendations.

The inspection consisted of a visual observation of the tank's interior and exterior components and coating system. The tank was not drained for the inspection and all interior assessment data was recorded using real time video with live voice narration. Exterior assessment data was documented using digital still photographs.

CONDITION OBSERVATIONS

Conditions noted during the field inspection are documented in the following pages and are supplemented with color photographs at the end of the report. Condition ratings used to describe the inspection findings are annotated as follows:

Excellent:	No deficiencies noted.
Good:	Minor deficiencies noted. Item is functioning as designed.
Fair:	Major deficiencies noted. Item is in need of repairs to continue functioning as designed.
Poor:	Repair or replacement required immediately. Item may no longer function as designed.

CONTAMINATION, HEALTH & SAFETY REPORT

Contamination and Health

- **Air Vent(s) and Screen(s)** – There is one center roof vent, and multiple screened cutouts in the upper wall panels for ventilation. The vents contain screening that is in Fair condition. The screens should be cleaned and replaced as needed to allow adequate airflow, and provide contamination protection. There is no Vent Security shroud on the vents. Absence of a Vent Security Shroud can allow the intentional introduction of hazardous chemical or biological contaminants.
- **Hatches** – There are two access hatches on the roof. The hatches are properly sealed.
- **Exterior Overflow** – The overflow is not properly sealed with a flapper valve, gasket, or screen. Installation is recommended to prevent debris/animals from entering or nesting in the plumbing.
- **Cathodic Covers** – *Not applicable*, there are no cathodic covers on this roof.
- **Roof to Wall Joint** – The roof to wall joint is properly sealed.
- **Roof Integrity** – There are no holes or standing water on the roof, but the roof is visibly sagging.
- **Wall Integrity** – There is extensive pitting damage to the interior side of the wall panels. A structural engineer should be hired to identify if the panels can be rehabilitated, or if the tank should be condemned.
- **Manway Integrity** - No visible leaking is present. Proper gasket material is in place.
- **Water Clarity** – Water is clear, there is no unusual odor or floating debris present.
- **Telemetry Penetration(s)** – The visible telemetry penetration appears to be sealed properly.

Facility Safety Compliance

- **External Ladder** – There is no ladder, but a full staircase is in place to access the roof. The staircase appears to be in Good condition. All the attachments, standoffs, and bolt assemblies show no major discrepancy. There is NO locking Vandal Guard on the staircase to help prevent unauthorized access to the tank. Installation is recommended.
- **Safety Climb** – The staircase has a full hand railing for safe access.
- **Manway** – There is one round manway penetration in the lower wall. The manway is approximately 21" in diameter, and appears to be sealed properly.
- **Hatch** – The primary roof access hatch measures 60" x 18". There is deterioration of the wooden structure, and this access point should be considered unsafe. A new steel hatch structure should be installed, with the current minimum dimensions recommended by the American Water Works Association and OSHA.
- **Balcony & Railing** – There is a balcony around the upper ladder, with an adequate railing with 42" high handrails, and a 4" toe rail.
- **Roof** – There are no transmitting antenna, and no approved safety tie off points on the roof of the tank.

INTERIOR RESERVOIR INSPECTION REPORT

Interior Reservoir Roof

- **Vent(s)** – There is one center roof vent, and multiple screened cutouts in the upper wall panels for ventilation. The interior view of the vents shows a heavy amount of uniform surface corrosion.
- **Roof** – The interior roof is rated in Fair to Poor condition. The roof structure is made of wood. There is heavy condensation on the interior roof, allowing the wood to form biologic growth/mold. The hardware for the roof supports is 100% corroded on the surface. There is extensive evidence of advanced cracking, splitting, and deterioration of the wood beams and support structure across the entire area.
- **Protective Coating** – *Not applicable*, there is no paint coating on the interior roof.

Interior Reservoir Walls

- **Wall to Roof Joint** – The joint appears to be fully sealed and there is no leaking or ambient light visible.
- **Ring Panels** – The interior wall panels are made from riveted steel. The walls are rated in Very Poor condition. All of the panels are rated a 0 on the SSPC legend, with 100% of the surface showing corrosion. Corrosion is present in the form of heavy rust noduling with pitting damage underneath, concentration cell corrosion, and uniform surface corrosion. Tested areas identify pitting damage at approximately ¼"+ deep. The middle and upper wall panels show a heavy amount of dealloying. There are layers of dealloyed steel falling off the walls, and much of this material was found lying throughout the floor of the tank.
- **Interior Ladder** – *Not applicable*, there is no ladder inside this tank.
- **Cathodic Protection System** – *Not applicable*, there is no cathodic protection system in this tank.
- **Protective Coating** – The coating on the interior walls is in Extremely Poor condition, and is NOT protecting the steel substrate. The coating has completely failed.

Interior Reservoir Floor

- **Perimeter Seam** – The seam appears sealed and there is no leaking identified at the time of inspection.
- **Floor Panels** – Due to the amount of debris in the tank, the utility could not authorize a complete cleaning as an extensive amount of hand nozzling/debris removal would have to be done. The areas around the inlet and outlet plumbing were cleaned thoroughly, and were enough to get a small localized sample area of the floor to inspect. The subsequent inspection notes the floor in Fair to Poor condition. The floor is concrete, and there were isolated areas of visible cracking present.

Interior Reservoir Plumbing Components

- **Plumbing** – The inlet and outlet plumbing penetration appears to be in Fair to Poor condition. There is corrosion on the visible interior surfaces. Due to the placement of the plumbing, the reservoir water does not appear to be mixing adequately for turnover. This may allow thermal stratification of the water, stagnant water from dead zones, disinfection byproducts to form, and there may be a loss of disinfectant residual in the upper layers of the water. An active mixing system should be installed to prevent stratification, and allow the disinfectant residual to mix thoroughly in the entire water column. Call Liquid Engineering Corp. for options and pricing.
- **Manways** – The manway is in Fair condition. Adequate gasket material is in place and no leaking is identified at the time of inspection. There is corrosion visible in isolated areas.
- **Overflow** – The interior overflow box appears to be in Fair condition. There is corrosion visible, and there is debris partially clogging the opening. The debris consists of failed wooden roof material.

Interior Reservoir Support Columns

- **Column Structure(s)** – The interior columns are made of wood. The columns are rated in Poor/Critical condition. See supplemental video documentation of the interior. Many of the columns have completely failed, and are lying on the floor or suspended in the roof crossbeams. The wood shows many critical discrepancies, including cracking, splitting, separation, as well as biological/mold growth. All of the hardware connecting the supports show varying amounts of corrosion, some have completely failed. Due to the amount of column failure in this tank, the structure is not supporting the roof as designed. **Roof support structure is in critical condition.**

EXTERIOR RESERVOIR INSPECTION REPORT

Exterior Reservoir Roof

- **Vent(s)** – The roof vent is covered in uniform surface corrosion. The screen is very large mesh, and may be allowing contaminants to enter the reservoir. The screen should be cleaned or replaced periodically to maintain an adequate contamination protection and proper ventilation. An ARC³ Omega Security Vent should be installed for the best combination of ventilation and security.
- **Roof** – The exterior roof covering appears to be Good condition. The covering does not show any leaks.
- **Access Hatch** – The primary roof access hatch measures 60" x 18". There is severe advanced deterioration of the wooden structure, and this access point should be considered unsafe. A new steel hatch structure should be installed, with the current minimum dimensions recommended by the American Water Works Association and OSHA.
- **Coating** – *Not applicable*, there is no paint coating on the exterior roof.

Exterior Reservoir Walls

- **Wall to Roof Joint** – The roof to wall joint appears to be in Fair to Good condition and is properly sealed.
- **Ladder** – There is no ladder, but a full staircase is present to access the roof. The staircase appears to be in Good condition. All the attachments, standoffs, and bolt assemblies show no major discrepancy. There is NO locking Vandal Guard on the staircase to help prevent unauthorized access to the tank. Installation is recommended.
- **Ring Panels** – The exterior view of the wall panels show a Fair to Poor condition. There are isolated areas of severe penetrating corrosion damage with areas of complete coating failure.
- **Overflow** – The overflow plumbing appears to be in Good condition. The overflow is not properly sealed with a flapper valve, gasket, or screen. Installation is recommended to prevent debris from entering the plumbing.
- **Coating** – The exterior wall panel coating is in Fair/Good condition. The identified areas of corrosion from the coating discrepancies should be touched up to prevent further corrosion damage.

Footings / Foundation

- **Footings / Foundation** – The exterior foundation is not visible. Any debris, vegetation and overgrowth should be kept clear from the foundation area to prevent unwanted settling of the tank. Any voids should be filled to prevent standing water and water infiltration.
- **Anchor Bolts** – *Not applicable*, there are no visible anchor bolts.

GENERAL TANK SECURITY

Security

- **Fencing** – The tank is surrounded by a security fence.
- **Ladders** – The ladder/staircase is NOT equipped with a locking Vandal Guard.
- **Perimeter** – The area surrounding the tank does NOT appear to be well lit.
- **Vents** – Air Vent(s) do NOT have an installed Vent Security Shroud to prevent the intentional introduction of chemical or biological contaminants. This presents significant water tank security vulnerability and should be addressed as a priority. To the best of LEC's knowledge the only known practical and cost-effective security solution is the Omega Vent Security Shroud, evaluated by the EPA and found on its website. Unless you request otherwise, LEC will have ARC³'s Omega Vent Security Shroud manufacturer contact you in order to provide detailed information to assist you in addressing this security vulnerability.
- **Hatches** – The hatch is NOT equipped with an electronic monitoring device. Installation of such a system is recommended to assist in securing the tank from unauthorized personnel.

SUMMARY

The overall **INTERIOR** condition of the tank appears to be Poor to Critical overall. Recommendations follow:

- There is extensive degradation to the interior of this tank, noted in the above sections and supplemental video and other documentation. **It is the opinion of Liquid Engineering Corporation that this tank is no longer structurally sound, and the tank should be immediately taken out of service - for safety reasons.** There is almost certainly too much damage to allow rehabilitation of the tank, and a new tank will likely have to be constructed. It is imperative that a licensed structural engineer assess if this tank can possibly be rehabilitated, or if it should be decommissioned. **These decisions should be made immediately.** In the event of a seismic event of any significant magnitude, it is our opinion that this tank would likely experience a total structural failure. **It is highly recommended that this tank, if absolutely necessary to keep in service, should in the normal course of operation, contain a significantly reduced quantity of water, in order to reduce loads on the failed roof support structure and the severely corroded wall structure.**

After rehabilitation or replacement tank is completed, the following recommendations should be implemented:

- Installation of a cathodic protection system is recommended, as this technology would prevent corrosion formation under the water line.
- Due to the placement of the plumbing, the reservoir water is not mixing adequately for turnover. This will allow thermal stratification of the water, stagnant water from dead zones, disinfection byproducts to form, and there may be a loss of disinfectant residual in the upper layers of the water. An active mixing system should be installed to prevent stratification, and allow the disinfectant residual to mix thoroughly in the entire water column. Call Liquid Engineering Corp. for options and pricing.
- The utility should clean and inspect the tank every 3 years per AWWA recommendation, which will prevent biological growth in the sediment, and allow opportunity to make touch up repairs to help extend the life of the tank.

The overall **EXTERIOR** condition of the tank appears to be Fair. Recommendations follow:

- The exterior panels appear to be in Fair/Good condition overall. There is severe corrosion in isolated areas of the panels and bolted lap joints, so touch up repair is recommended to prevent further corrosion damage. This inspection should take place again at the recommended 3 year interval per the American Water Works Association.
- The foundation area is impossible to assess. Any debris, vegetation and overgrowth should be kept clear from the foundation area to prevent unwanted settling of the tank. Any voids should be filled to prevent standing water and water infiltration.
- The general tank security condition should be upgraded to include an electronic monitoring device on the hatch, a locking Vandal Guard on the ladder, additional perimeter lighting, and a Vent Security Shroud (see above security section for details).

(As a disinterested third-party inspector, LEC does not engage in the construction or rehabilitation of potable water storage facilities. LEC will, in its commitment to our clients and upon request, identify to the client relevant entities that are professionally reliable and best capable of completing the recommended work, or assist the client in research tips that will enable them to make a decision that best serves the utility.)

DISCLAIMER

Unless otherwise noted, the findings documented in this report were neither prepared by nor reviewed by a Licensed Professional Engineer.

APPENDIX A

Photographs

Example of dealloyed steel from the wall panels, lying on the floor



Example of heavy rust noduling on the interior wall



Interior plumbing in lower wall (note heavy amount of corrosion)



Example of a wall support, and the wooden beam that has detached



Example of a large piece of dealloyed steel fallen from the interior wall (approx. 2' x 1' piece)



Example of heavy dealloying on the interior wall panels



Example of corroded hardware and missing wood support on the interior wall column



Interior wooden wall column (many pieces of broken wood have fallen from the structure)



Interior wooden roof (many pieces of broken wood have fallen from the structure)



Example of an interior floor column with failed lateral wood supports



Example of a failed wooden support



Fractured and failed supports lying on the tank floor



Example of corroded hardware and missing wood supports on a center support column



Example of heavy dealloying corrosion on the interior wall



Exterior ladder



Example of corrosion on the exterior wall rivet/panel with visible water penetration



Exterior walls and overflow penetration



Lower walls and overflow plumbing



Exterior plumbing



Exterior plumbing penetration into the lower wall (note advanced severe corrosion damage)



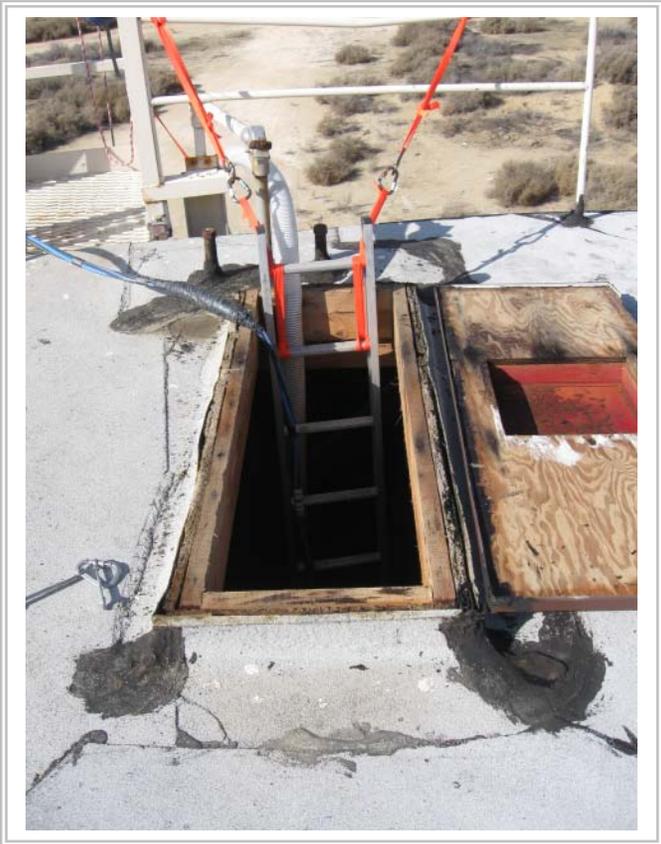
Exterior center roof vent with severe corrosion



Close up view of the center roof vent



Exterior view of the roof hatch



Exterior view of the roof covering (Note sagging roof panels)



APPENDIX B

Steel Potable Water Reservoir Inspection Report

Job Number:

Utility:

Tank:

Inspector:

Dive Controller:

Date:

**AMERICAN WATER WORKS ASSOCIATION
ANSI/AWWA M42 / D101-53**

SSPC Legend		NACE Legend		AWS Legend	
Grade	Description	Grade	Description	Grade	Description
10	No Rusting, or <0.01% of surface is rusted	A	None	L	Satisfactory
9	Minor rusting, or <0.03% of surface is rusted	B	Uniform Surface Corrosion	M	Spatter
8	Isolated rust, <.01% of surface is rusted	C	Pitting	N	Porosity
7	Isolated rust, <.03% of surface is rusted	D	Concentration Cell Corrosion	O	Convexity / Concavity
6	Extensive rusting, <1% of surface is rusted	E	Galvanic Corrosion	P	Cracks
5	Approximately 3% of the surface is rusted	F	Stress Corrosion Cracking	Q	Inclusions
4	Approximately 10% of the surface is rusted	G	Erosion Corrosion	R	Incomplete Fusion
3	Approximately 17% of the surface is rusted	H	Intergranular Corrosion	S	Incomplete Penetration
2	Approximately 33% of the surface is rusted	I	Dealloying	T	Undercut
1	Approximately 50% of the surface is rusted			U	Underfill
0	Approximately 100% of the surface is rusted			V	Overlap
				W	Unable to evaluate

QUADRANT 1
QUADRANT 2
QUADRANT 3
QUADRANT 4

INTERIOR RESERVOIR ROOF

-SEE SUPPLEMENTAL REPORT

	SSPC	NACE	AWS									
Vents												
Roof Panels												
Roof Support												
Roof Gussets												
Painting Ring												

Overall Coating Rating Average Blister Diameter Average Pit Depth

Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

ROOF IS WOOD CONSTRUCTED AND IN FAIR CONDITION, RECOMMEND FINE MESH SCREEN FOR THE VENT

INTERIOR RESERVOIR WALLS

	SSPC	NACE	AWS									
Wall to Roof weld SEAM												
Lower Ring Panels												
Middle Ring Panels												
Upper Ring Panels												
Interior Ladder												

Overall Coating Rating Average Blister Diameter Average Pit Depth

Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR FLOOR CONCRETE

	SSPC	NACE	AWS									
Perimeter weld CONCRETE												
Floor Panels												

Overall Coating Rating Average Blister Diameter Average Pit Depth

Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

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Steel Potable Water Reservoir Inspection Report

Job Number:

Utility:

Tank:

Inspector:

Dive Controller:

Date:

QUADRANT 1	QUADRANT 2	QUADRANT 3	QUADRANT 4
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-SEE SUPPLEMENTAL REPORT **INTERIOR RESERVOIR SUPPORT COLUMNS**

	SSPC	NACE	AWS									
Column Structures												
Column Bases												
Column to Roof												

Overall Coating Rating Average Blister Diameter Average Pit Depth
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR PLUMBING COMPONENTS

	SSPC	NACE	AWS									
Inlet Plumbing												
Outlet Plumbing												
Manways												
Floor Drains												
Interior Overflow												

EXTERIOR RESERVOIR ROOF WOOD CONSTRUCTION

	SSPC	NACE	AWS									
Vents												
Roof Panels												
Access Hatches												

Overall Coating Rating Average Blister Diameter Average Pit Depth
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

ROOF IS WOOD AND APPEARS TO BE IN OVERALL SATISFACTORY CONDITION

WOOD AROUND ACCESS HATCH IS BEGINNING TO DETERIORATE

EXTERIOR RESERVOIR WALLS

	SSPC	NACE	AWS									
Wall to Roof Weld												
Lower Ring Panels												
Mid Ring Panels												
Upper Ring Panels												
Exterior Overflow												

Overall Coating Rating Average Blister Diameter Average Pit Depth
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

FOOTINGS / FOUNDATION

Footings / Foundations: Satisfactory	Cracking	Spalling	Erosion/Exposed Aggregate
Anchor Bolts: Satisfactory	Loose	Rusted Corroded	(If excessive) Diameter =

TOWER SUPPORT STRUCTURES

Tower Legs/Columns: Satisfactory	Alignment	Settling	Rust /Corrosion
Riser Pipe: Satisfactory	Alignment	Frost Casing	Rust /Corrosion
Rods & Turnbuckles: Satisfactory	Turnbuckle Tension	Rod Tension	Cotter Pins/Rod Nuts
Leg shoes/Brackets: Satisfactory	Coating	Rust/Corrosion	Pitting/Cracking

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Potable Water Reservoir Contamination, Health and Safety Report

Job Number:

Utility:

Tank:

Inspector:

Dive Controller:

Date:

Complies With: AWWA • OSHA • ANSI • NIOSH • NAVFAC • NFPAC

CONTAMINATION & HEALTH

Air Vents	Type:	#:	Screen Condition(s):	
Hatches	Type:	#:	Secured Properly:	Properly Sealed:
Exterior Overflow	Flapper:	Screen:	Gasket:	Condition:
Cathodic Covers	In-Place:	#:	Gasket:	Properly Sealed:
Roof to Wall Joint	Welded:	Properly Sealed:		
Roof Integrity	Holes:	Cracking:	Standing Water:	
Wall Integrity	Holes:	Cracking:		
Manway Integrity	Leaks:	Condition:		
Water Clarity	General Appearance:		Odor:	
Floating Surface Debris	Type:	Source:		
Hypalon Floating Cover	Condition:	Holes:	Tears:	
Telemetry Penetrations	Properly Sealed:			

FACILITY SAFETY COMPLIANCE

~~Exterior Ladder~~ STAIRS

Overall Ladder	Condition:	#:	Offset Landing:	Height:	
Vandal Guard	Present:	Vandal Guard Locked:			
Ladder Rails & Rungs	Condition:	Missing/Damaged Rungs:			
Rung Spacing & Depth	Spacing:	in. (max 12")	Toe Depth:	in. (min 7")	
Rail Spacing & Size	Width:	in. (min 2")	Thickness:	in. (min 1/4")	Rail to Rail: in. (min 16")
Safety Climb System	Type:	Condition:			
Number & Locations	Wall:	Leg:	Roof:	Riser Pipe:	Other:
Ladder Attachments	WELDED				

Manways

Type and size	Type:	#:	Size:	inches (24" – 18"x22" min)	
Support Structure	Type:	Condition:			
Number & Locations	Wall:	Roof:	Riser Pipe:	Other:	

Hatches

Hatch Type & Size	Type:	#:	Size:	in. (24" – 24"x15" min)	
Hatch & Lid Lip Height	Hatch:	in. (min 4")	Lid:	in. (min 2")	

Balconies & Railing

Deck / Walkways	Condition:	Width:			
Hand Rails	Condition:	Height:	in. (min 42")	No. Rails:	(min 2)
Toe Rail	Condition:	Height:	in. (min 4")		
Welds / Attachments	Condition:				

Roof

Safety Tie-Off Points	Condition:	#:
Antennas	Type:	#:

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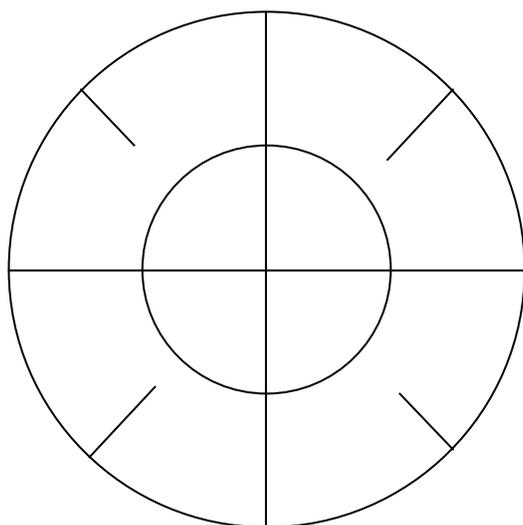
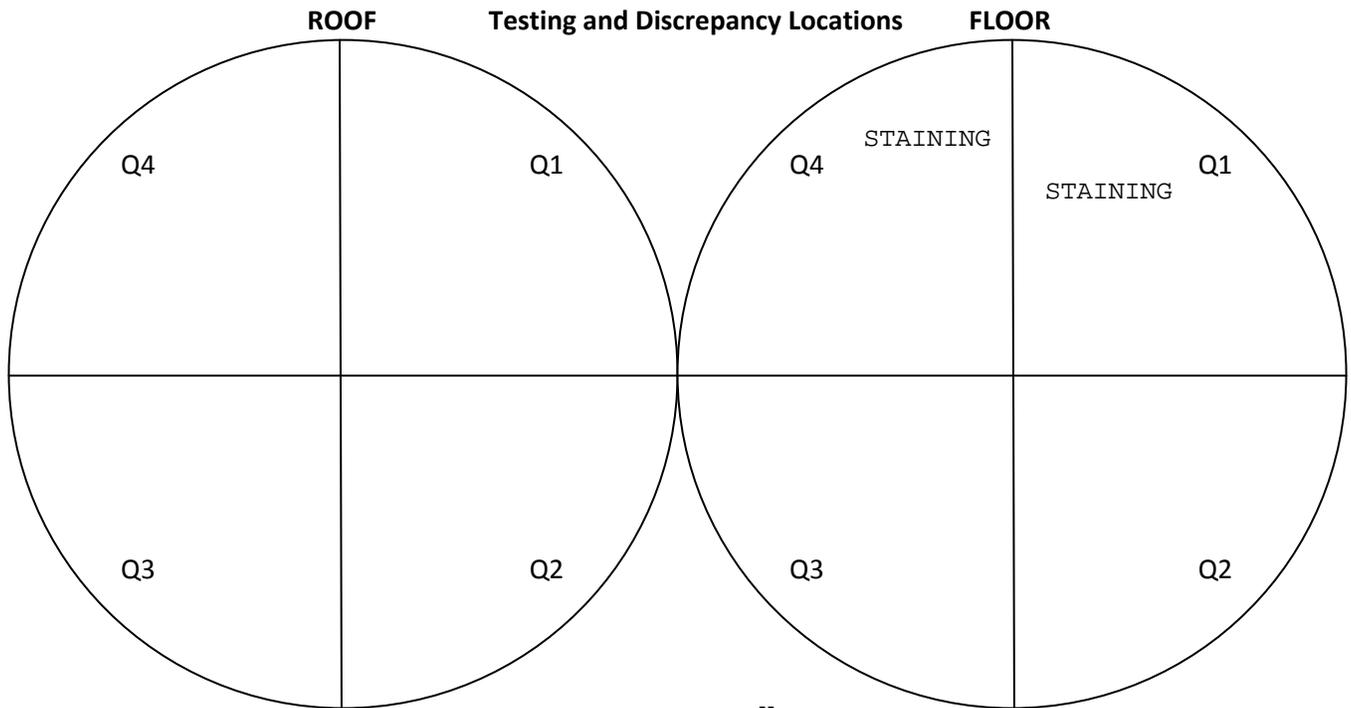
Liquid Engineering Corporation
Circular Tank Diagram / Information Worksheet

Job Number

Utility Name

Tank Name

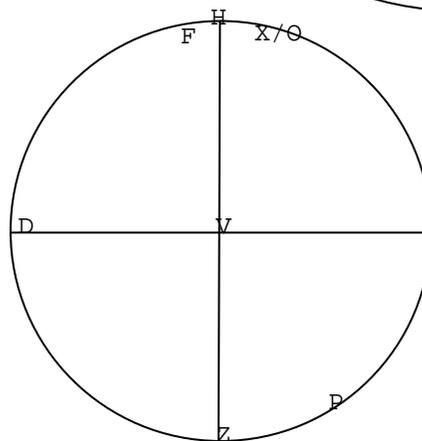
Quadrant 1	Quadrant 2	Quadrant 3	Quadrant 4
-PIT DEPTH MEASUREMENT	1/4"		

Sediment Depth Measurements

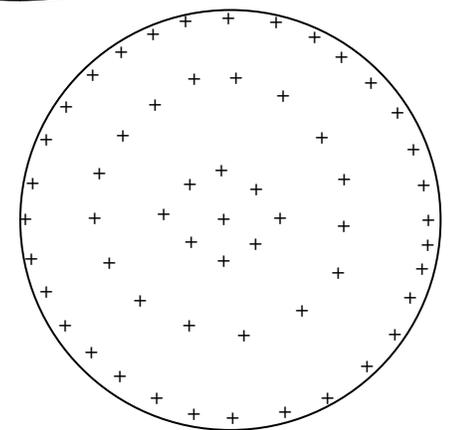
Average Sediment Depth = The sum of all measurements taken, divided by the number of measurements taken

Avg. Depth Cubic Yardage Sediment Type



Plumbing & Structure location

Plumbing and structure codes
 O=Outlet X=Inlet Z=Manway
 V=Vent D=Drain S=Sump
 L=Ladder H=Hatch P=Overflow
 F=Float Level Indicator
 T=Telemetry



Column Placement

Type of Column ○ □ I
 Base Structure 
 Top Structure 
 Column Construction

DISCLAIMER

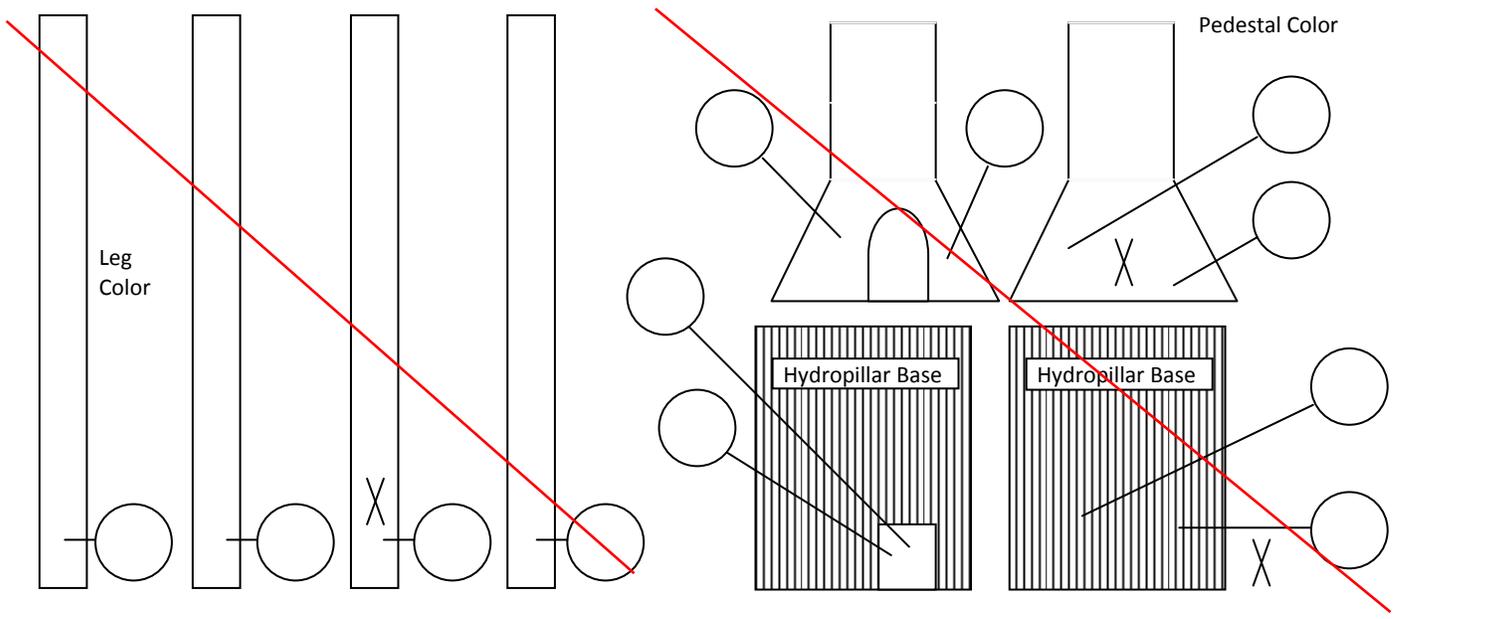
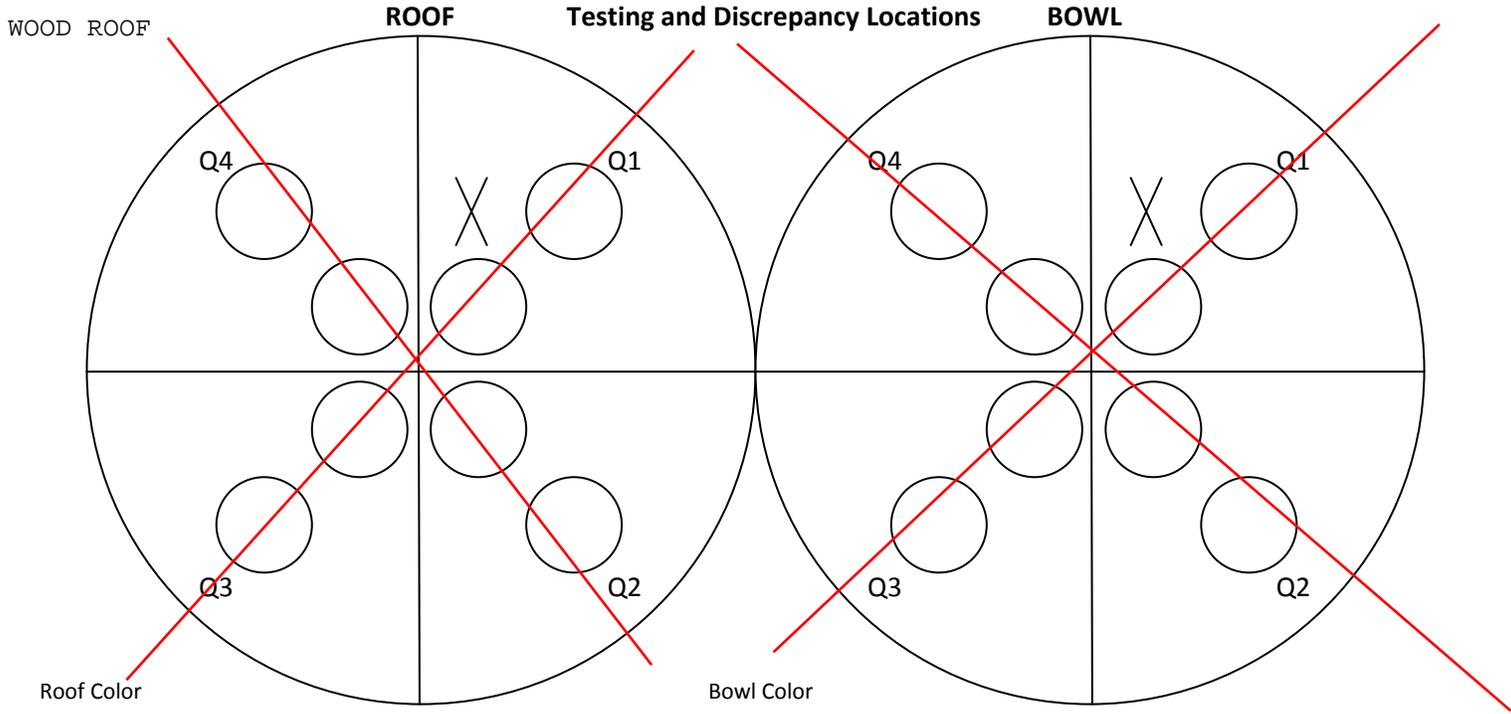
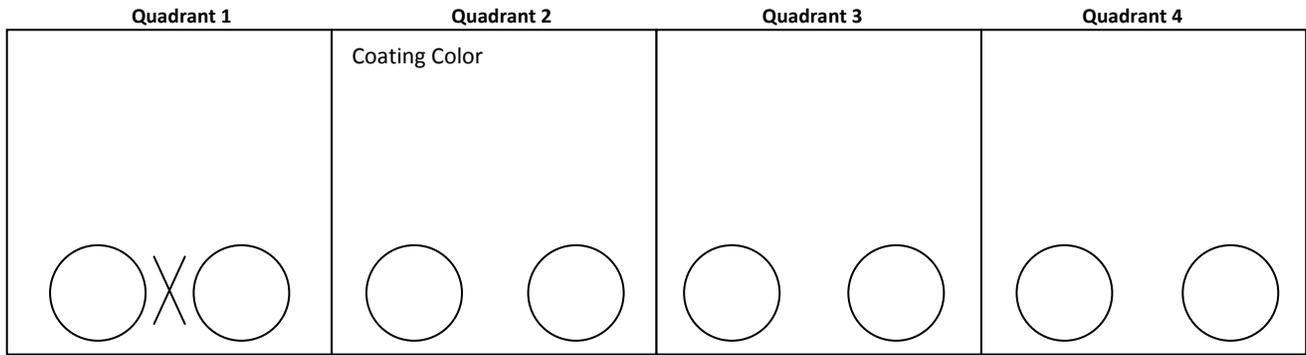
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Circular Tank Diagram / NDT DFT Coating Adhesion Presence of lead

Job Number

Utility Name

Tank Name



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Steel Potable Water Reservoir Security / Measurement Worksheet

Job Number

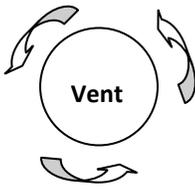
Utility Name

Tank Name

Security

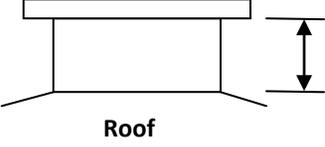
Is the area surrounding the tank well lit?	
Is the tank surrounded by a Security Fence?	
Are the access gates locked?	
Is the tank equipped with a Vandal Guard on the primary access ladder?	
If so, is the Vandal Guard locked?	
Are the vents equipped with security vent shrouds?	
Are all of the hatches equipped with electronic monitoring devices?	
Are the external plumbing components housed in a secure vault or out-building?	
Does the surrounding geography of the tank obscure it from public view?	
Does the exterior of the tank show signs of trespass?	

Measurements



Vent

Outside Circumference
Inches



Roof

~~Flange Metal Thickness~~ Inches

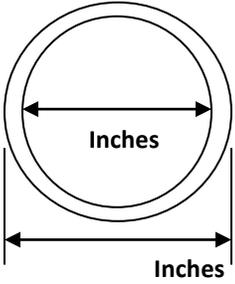
Roof to Screen or Flange Inches

Flange

~~Number of Bolt Holes~~ Inches

~~Size of Bolts~~ Inches

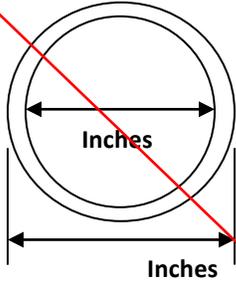
Inlet



Inches

Inches

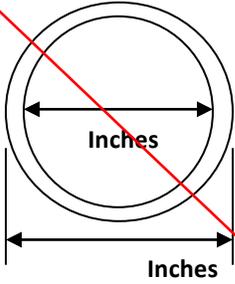
Outlet



Inches

Inches

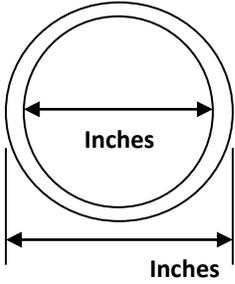
Drain



Inches

Inches

Overflow

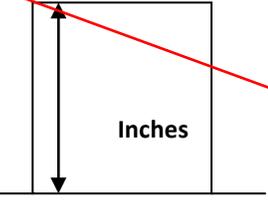


Inches

Inches

COMMON INLET/OUTLET

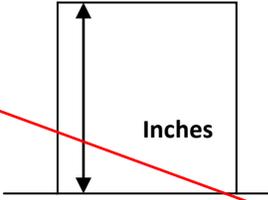
Inlet Riser



Inches

Floor

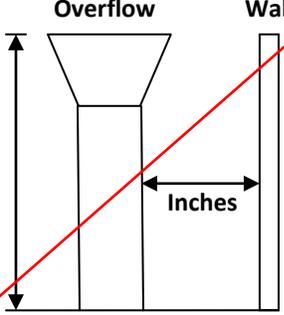
Outlet Riser



Inches

Floor

Overflow



Feet/Inches

Inches

Floor

DISCLAIMER

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Steel Potable Water Reservoir Immediate Needs Assessment

Job Number:

Utility:

Tank:

Inspector:

Dive Controller:

Date:

1. Health and Safety Items

Safety Climb System Installation:

Vent Screen Repairs:

2. Testing Items

Dye Testing for Leak Evaluation:

Presence of Lead Test (Interior/Exterior):

3. Destructive Testing Items

% of Lead Test (Interior/Exterior) *(Coating samples are removed for laboratory analysis)*

Coating Adhesion Test (Interior/Exterior):

Specific written authorization required to perform destructive testing. Destructive tests include touch-up of coating system.

4. Repair Items

Epoxy Coating Repairs:

Temporary Leak Repairs:

Float Operated Level Indicator Repairs / Maintenance:

Hypalon Repairs:

5. Security Related Items *(Critical security upgrade information is immediately available)*

Tank vents are not equipped with a security vent shroud:

Tank hatches are not equipped with a security hatch locking device:

Tank perimeter not adequately secured:

The above mentioned additional work is considered immediately necessary and is recommended to be completed. Some items may be completed in conjunction with work currently being performed while the crew is on site.

Reservoir Inspection Condition Supplemental

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