

RECEIVED

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APR -4 2016

Public Service
Commission

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April 1, 2016

Jeff Derouen, Executive Director
Kentucky Public Service Commission
211 Sower Blvd
P.O. Box 615
Frankfort, KY 40602

RECEIVED

APR 4 3
Public Service
Commission

Re: U.S. 60 Water District
Alleged Failure to Comply with 807 KAR 5:006, Sections 26 and 27, and
807 KAR 5:066, Section 7
Case No. 2015-00037

Dear Mr. Derouen:

Enclosed are the original and ten copies of U.S. 60 Water District's Notice of Filing of Tank Inspection Reports in regard to the captioned action.

Thank you very much for your attention to this matter. Please contact me if you have any questions regarding this matter.

Yours truly,

MATHIS, RIGGS, PRATHER & RATLIFF, P.S.C.

By: Donald T. Prather
Donald T. Prather

By: Paul McManis

DTP/pm
Enclosures

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

RECEIVED

APR - 4 2016

Public Service
Commission

In the Matter of:

U.S. 60 WATER DISTRICT)

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CASE NO. 2015-00037

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ALLEGED FAILURE TO COMPLY WITH)
807 KAR 5:006, SECTIONS 26 AND 27, AND)
807 KAR 5:066, SECTION 7)

NOTICE OF FILING OF TANK INSPECTION REPORTS

Comes U.S. 60 Water District of Shelby and Franklin Counties, Kentucky ("U.S. 60"), by counsel, and in compliance with Paragraph 2 of the Stipulation of Facts and Settlement Agreement which was incorporated into the Public Service Commission's ("PSC") Order entered herein on August 17, 2015, submits herewith the Inspection Reports of U.S. 60's Clay Village Standpipe and Driscoll Road Elevated Storage Tank. The inspections were conducted on March 7, 2016 by Wet or Dry Tank Inspections. Both Inspection Reports were thoroughly reviewed at U.S. 60's March 15, 2016 Board meeting.

The Driscoll Road tank inspection report does not show any structural issues. It recommends the tank be painted within the next two to three years. Accordingly, at U.S. 60's March 15, 2016 meeting, the following action was taken:

"After discussion concluded, upon motion duly seconded, the Commissioners voted to install VFD pumps, motors and drives in the Graefenburg pump station, then advertise for bids to repaint the inside and outside of the Driscoll tank in the fall of 2017."

The Inspection Report of the Clay Village Standpipe also concluded the tank needs repainting. It has lead paint, and the estimated cost of repainting the tank is in excess of \$150,000. The report also notes a sunken area in the steel roof and recommends that this problem be addressed immediately because the additional weight of the water accumulating in that depression might create over time a very serious structural issue with the tank. The report estimates the cost of repairs to the roof at a minimum of \$40,000-\$50,000. The report concludes U.S. 60 should evaluate whether or not to keep this tank in the system given the minimum repair and painting expenses are estimated to exceed \$200,000.

The Commissioners, U.S. 60's consulting engineer, and U.S. 60's manager extensively discussed the future of the Clay Village tank at the March 15, 2016 Board meeting. Once the Shelbyville transmission main and pump station are in operation, the Clay Village tank will not be needed. Bids for the Shelbyville transmission main and pump station project were due March 24, 2016, and assuming PSC approval of the project, the engineer expects it to be in operation before freezing weather sets in this year.

Accordingly, the Commissioners took the following action:

"After discussion concluded, upon motion duly seconded, the Commissioners voted to lower the water level in the Clay Village tank to a point where the tank will be stable and water inside it kept fresh. A sump pump will be immediately installed on the roof of the tank. The tank will be taken out of service when the Shelbyville transmission line and pump station are in service."

Since the March Board meeting, the sump pump has been installed and tested on the roof of the tank.

WHEREFORE, U.S. 60 respectfully submits the attached Tank Inspection Reports in compliance with the PSC's August 17, 2015 Order.

Respectfully submitted,

MATHIS, RIGGS, PRATHER & RATLIFF, P.S.C.

By: 

Donald T. Prather
500 Main Street, Suite 5
Shelbyville, Kentucky 40065
Phone: (502) 633-5220
Fax: (502) 633-0667

Ground Storage Inspection Report

Inspected By **WET OR DRY WATER TANK INSPECTION**

Year Built: **1965**

Original Builder: **Unknown**

Date of Inspection: **7 March 2016**

Location: **Clay Village**

City: **Shelbyville** State **Ky.**

Present Owner: **US 60 Water** Original Owner: **Same**

Type of Tank **Standpipe**

PART I

Description of Tank : **Standard Standpipe**

1. Capacity: **100,000** Year Built: **1965**
2. Diameter Tank: **1'**
3. Number of Panels **9.5 Sections**
4. Type Construction (Riveted, Welded): **Welded**
5. Type Roof: **Domed**
6. Height **75'**

Part II

Foundation Conditions

1. Are there any indications of foundation settlement? **No**
Describe:
2. Is concrete or grout chipped or cracked? **Yes.**

Describe:
3. Is soil around base of tank saturated with water? Are there any indications of underground pipe leaks? **No.**
4. What is condition of pump house? **Fair**

C. Condition of Paint on outside of tank:

1. Outside of Tank Shell:

General condition of topcoat or coats. **Poor**

Estimated percentage of topcoat or coats in good condition. **25%**

General condition of primer **Poor**

Estimated percentage of primer in good condition: **25%**

2. Outside of Tank Roof:

General condition of topcoat or coats: **Poor**

Estimated percentage of topcoat or coats in good condition. **25%**

3. Are roof manhole and finiel vent well covered by paint? **No**

4. General comments about any paint failure. **Age**

D. Condition of Paint on inside of tank:

1. Underside of roof and inside of shell above high water line: **See video footage.**

General condition of topcoat or coats: **See video footage.**

Estimated percentage of topcoat or coats in good condition? **10%**

General condition of primer. **Poor**

Estimated percentage of primer in good condition. **10%**

2. Inside of Tank Shell:

General condition of topcoat or coats: **Poor**

Estimated percentage of topcoat or coats in good condition: **10%**

General condition of primer: **Poor**

Estimated percentage of primer in good condition: **10%**

3. Inside Tank Bottom:

General condition of top coat or coats: **Poor**

Estimated percentage of topcoat or coats in good condition: **10%**

General condition of primer: **Poor**

Estimated percentage of primer in good condition: **10%**

Is bottom covered with mud or scale? **Yes**

What Depth? **Less than 1 inch**

4. General comments about any paint failure: **See last page**

5. General comments about any paint failure on inside of tank: **See last page**

E. Recommendations for cleaning and painting: SEE LAST PAGE

PART IV

Condition of Metal

A. Shell:

1. Are anchor bolts and nuts in good condition? **There is extensive coating failure.**

Are anchor bolt nuts tight? **Yes**

2. Condition of anchor bolt connections to sidewall. **Heavy rust**

Are anchor bolt connections or chairs on columns and cylinder in good condition? **Heavy rust**

Describe:

3. Has dirt or rust accumulated on roof? **Yes**

Is roof in good condition? **No(imploded)**

4. General comments on condition of shell: **See last page**

B. Outside of Tank:

1. Is there any rusting or pitting on the outside of the tank? **Yes- there are numerous large sections where the coating has failed and primer have been exposed. Subsequently there are a small number of small areas of pitting and rusting. There are no larger areas where rusting and pitting have yet occurred.**

2. Is there any rusting or pitting on the outside of the tank roof? **No**

Describe: **See pictures**

3. Is the connection of roof to shell in good condition? **Yes**

4. If the tank is riveted, state the condition of laps and rivets on outside of shell and roof? **N/A**

5. Are there any indications of leaks in shell? **No.**

Describe:

6. General comments on condition of shell metal: **Excellent**

C. Inside of Tank:

1. Was the tank emptied for inspection? **No**

If not completely emptied, state how far down: **6'**

2. If the tank is riveted, have lapped seams and rivet heads been seal welded? **N/A**

Describe any previous repairs to inside areas: **None found.**

General comments on condition of metal inside bottom: **Good**

Is pitting local or general? **General**

General comments on condition of metal inside roof: **Good**

PART V

Condition of Accessories

A. Is ladder safe? **No**

Type of climbing safety device: **None**

B. Is shell ladder fixed or revolving? **Fixed**

Is it safe? **Yes**

Are lugs and bolts in good condition? **Yes**

C. Is roof ladder fixed or revolving: **Fixed** Is it safe? **No**

Are lugs, bolts, trolley, etc. in good condition? **No**

Describe: **Twisted**

Type of climbing safety device on roof ladder: **None**

Condition:

If no climbing safety device length of ladder: **N/A**

D. Is finial or vent in good condition? **No**

Are bolts in good condition? **N/A**

Describe: **Twisted and screen needs replacing(see pics)**

E. Is roof manhole in good condition? **No**

Describe: **Rusted and comprised**

F. Does tank have a float-type indicator? **No**

Is it in good condition and working? **N/A**

G. Does tank have inside tank ladder? **No** Is it in good condition? **N/A**
Is it safe? Describe:

H. Does tank have inside spider? **No** Is it in good condition?

Size number? Describe :

I. Are any pipes or valves leaking? **No**

J. Do pipes in valve fit have frost casing? **Yes**

Are they in good condition and well supported? **No**

Describe: **Need replacing**

K. Does tank have a cathodic protection system? **No**

If so, give manufacturer and condition of anodes:

M. Type of overflow? **Pipe.** Size: **6"**

Condition: **Pipe cap is in very poor condition.**

N. Other accessories: **None**

PART VI

Repairs and Recommended Repairs

1. Repairs made by inspector: **Temporary vent screen**
2. Recommended Repairs: *Wet or Dry has a KY registered P.E. structural engineer that can fully evaluate the roof system of the tank, and make a full recommendation to the District if so desired.*

Tank comments:

Serious consideration needs to be given to this tank, as to whether the District actually needs this tank in the system. The tank overall is in need of a total rehab from a painting standpoint. Structurally, in our opinion the tank has been comprised, due to the roof collapse. The roof can be repaired, but is somewhat costly(the repair has to be completed by a water tank contractor with a structural engineer on staff).

The most outstanding issue is the imploded roof(most likely the result of a frosted vent screen). During a cold winter. This creates a number of problems.

- **Structural integrity of the tank is now in question.**
- **The roof no longer sheds water as intended. Thus causing ponding of water on the roof, this ponding adds a tremendous amount of weight to the roof. Which also adds stress to the sidewalls of the tank. The tank was not designed for standing water (this has to be addressed asap). Furthermore this can and will over time lead to a very serious structural issue with the tank, that could lead to a catastrophic conclusion.**

Exterior:

It is time to repaint the tank, the current coating we feel are lead containing, and recommend an overcoat of the exterior to avoid having to deal with the lead issues and everything that comes along with them as well as the expense. There are very specific products on the market for this purpose, Some of which offer a 10 year warranty.

Interior:

Needs attention this year, the protective coating is providing little if any protection of the steel, (see video). The interior needs to be completely removed and replaced with a high performance coating product

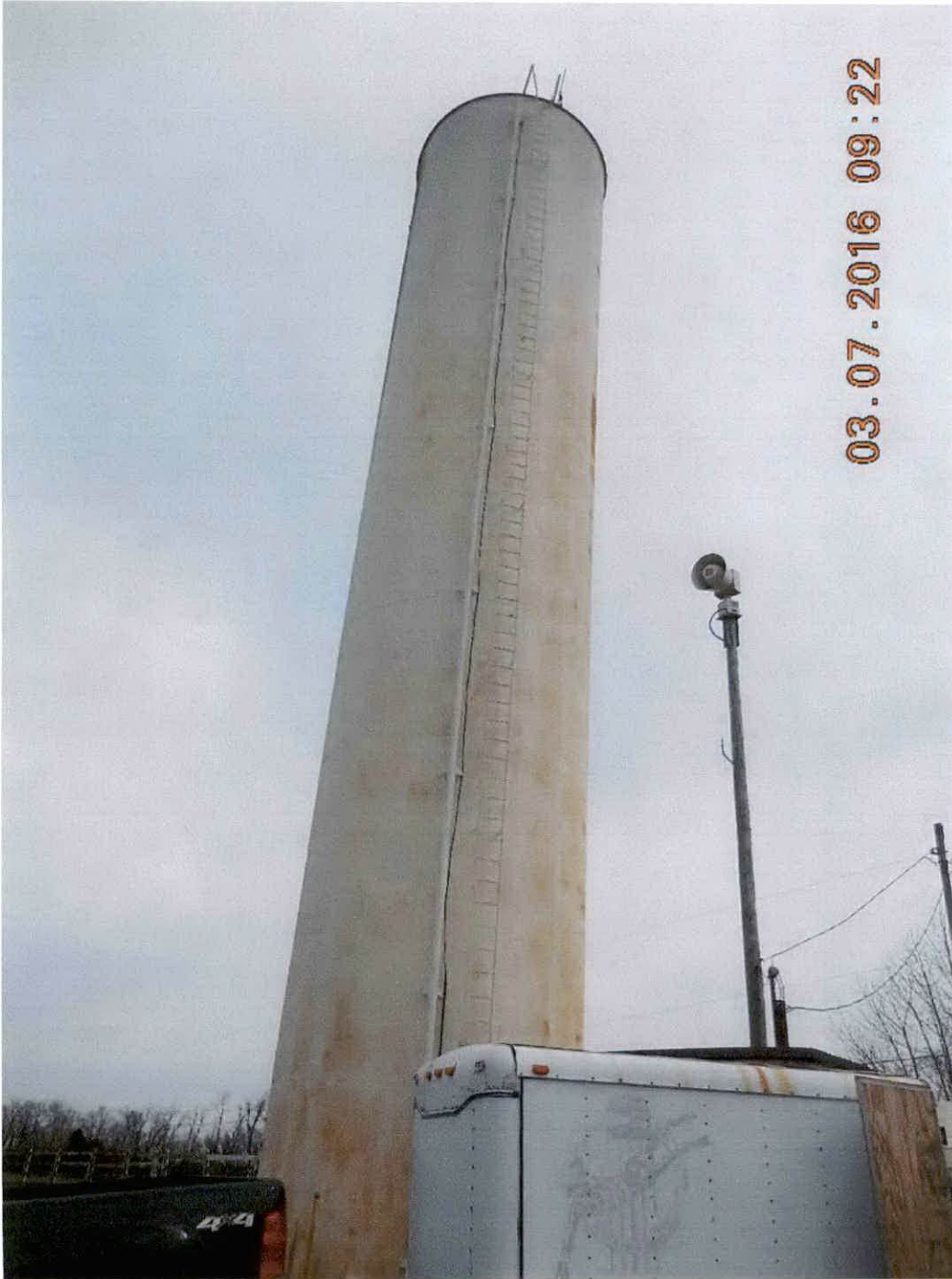
**Current cost estimates for painting the tank \$ 150,000+
Roof repairs are unknown at this time, estimate a minimum of 40-50,000.00**

Date: March 7, 2016

Signature of Inspector: *Jay L. Hoffman*

National Association of Corrosion Engineers (NACE) # 4250

Tank Photos





Failed coating tank exterior





Construction plate



Tank sidewall to foundation



Same



Inlet /outlet piping to valve house, most insulation damaged or missing



Inlet pipe no insulation



Foundation and piping



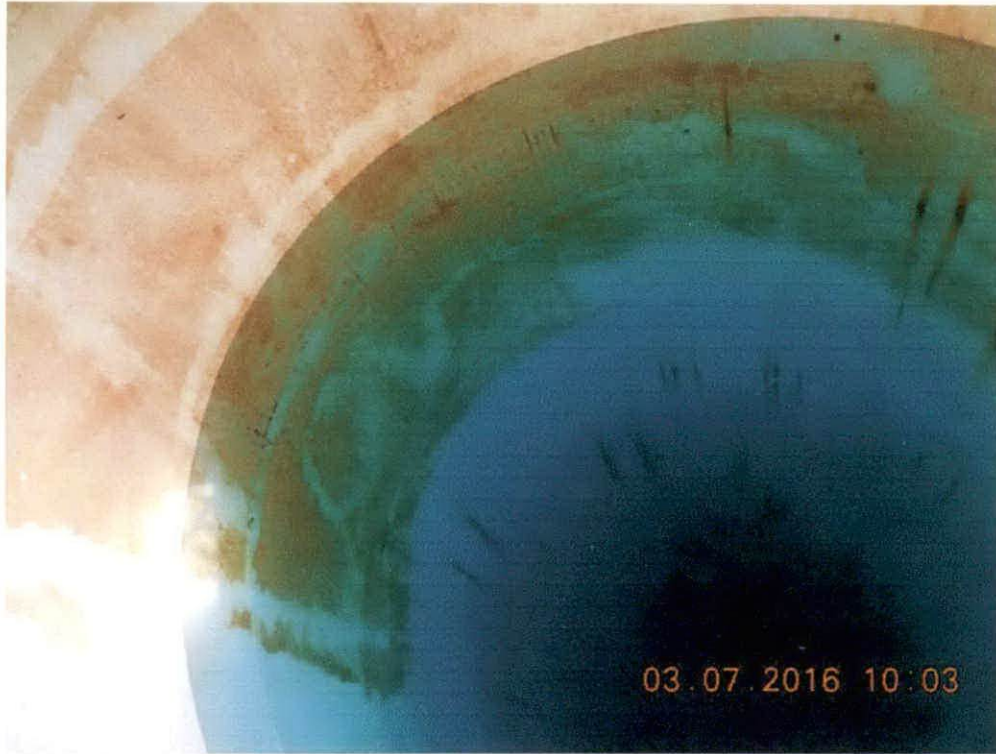
**Interior roof and vent failed coatings, compression ring rusted heavily.
Note that roof has a bow inward. This is from the imploded roof(see
comments in report, about roof)**



Roof vent interior heavily rusted



Roof manway, compression ring heavily rusted. Old ladder supports not removed, when ladder was removed. Overflow piping heavily rusted



Looking into tank, failed coating upper 3 courses, as well as numerous failed areas in sidewall of tank



Another look into tank



Comm antenna mast and wire not secured



Roof vent with fine mesh screen. This screen is most likely the cause of the roof collapse/implosion. Most likely the screen frosted over during a cold period.



Imploded roof



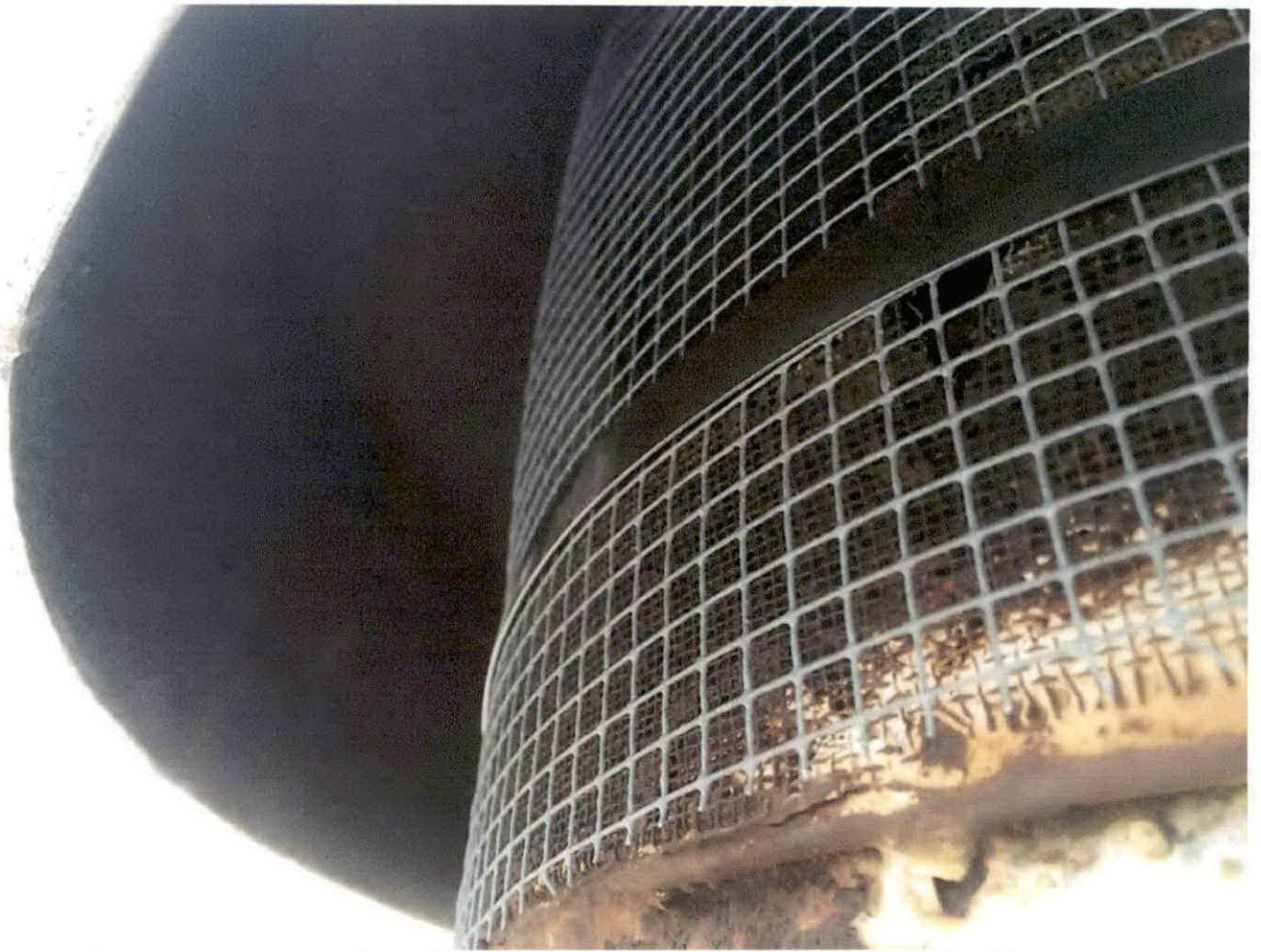
Same



Roof vent and imploded roof. Note vent is no longer straight



Another view of vent and roof with ponding water



**New temporary screen installed by Wet or Dry, to keep un-desirables,
access to tank interior**



Same another view



Ponding water on roof(where imploded), roof ladder(not secured, no



Another view of roof





Telemetry antenna



Failed coatings roof



Unsecured comm cable



Elevated Water Tank Inspection Report

Inspected By: **WET OR DRY WATER TANK INSPECTION**

Year Built: **1999 Driscoll Road Tank**

Original Builder: **Caldwell**

Date of Inspection: **7 March 2016**

Location: **City**

City: **Waddy** State: **KY**

Present Owner: **US 60 Water District**

Original Owner: **Same**

PART I

Description of Tank

1. Capacity Gallons **200,000**
2. Height to Bottom: **125'** Overflow: **155'**
3. Number of Columns **4**
4. Number Tower Panels: **1**
5. Type of Columns: **Tubular**
6. Type Construction (Riveted, Welded): **Welded**
7. Type Bottom: **Ellipsoidal**
8. Type of Roof: **Ellipsoidal**
9. Diameter Tank: **30'**
10. Height Shell: **30'**

Table for percentages of coatings failures

0-25% Poor (requires attention)

25-40% Fair (Will require attention within year)

40-60 % Good (Noting immediately 2-3 years)

60-80 % Acceptable (3-5 years)

80-100 % Excellent (Evaluate again 5 years)

B. Condition of Paint on Tower (including Columns, Base Plates, Struts, Rods, Ladders, Balcony, Etc.)

1. Are base plates, column shoes, anchor bolts, and anchor bolt chairs well protected by paint? **Yes**

Describe:

2. Columns and Struts:

Estimated percentage of topcoat or coats in good condition: **40%**

General condition of primer: **Fair**

Estimated percentage of primer in good condition: **40%**

Describe any paint failure on columns or struts and indicate if general or local (if columns or struts are laced, examine inside thoroughly and describe):

3. Are ladders, ladder lugs and cages well covered by paint? **No**

Describe: **See pics**

4. Are tower rods, cylinder rods and pins well covered by paint? **No**

Describe: **failed at crosses**

5. Balcony and Handrail: **N/A**

What is the general condition of topcoat or coats?

Estimated percentage of top coat or coats in good condition:

General condition of primer: Describe:

Estimated percentage of primer in good condition:

Describe any paint failure on balcony and handrail and indicate if local or general:

C. Condition of Paint on Outside of Tank:

1. Large Cylinder Riser:

General condition of topcoat or coats: **Fair**

Estimated percentage of top coat or coats in good condition: **40%**

General condition of primer: **Fair**

Estimated percentage of primer in good condition: **40%**

2. Tank Bottom:

General condition of topcoat or coats: **Fair**

Estimated percentage of top coat or coats in good condition: **40%**

General condition of primer: **Fair**

Estimated percentage of primer in good condition: **40%**

3. Outside of Tank Shell:

General condition of top coat or coats: **Fair**

Estimated percentage of top coat or coats in good condition: **40%**

General condition of primer: **Fair**

Estimated percentage of primer in good condition: **40%**

4. Outside of Tank Roof

General condition of top coat or coats: **Fair**

Estimated percentage of top coat or coats in good condition: **40%**

General condition of primer: **Fair**

Estimated percentage of primer in good condition: **40%**

5. Is roof manhole and finial vent well-covered by paint? **No**

6. General comments about any paint failure on outside of tank and cylinder: **Minor**

D. Condition of Paint on Inside of Tank and Cylinder Riser:

1. Underside of Roof and Inside of Shell above High Water Line: Fair 30%

General condition of top coat or coats: **Fair**

Estimated percentage of top coat or coats in good condition: **30%**

General condition of primer **Fair**

Estimated percentage of primer in good condition: **30%**

2. Inside of Tank Shell:

General condition of top coat or coats: **Fair**

Estimated percentage of topcoat or coats in good condition **30%**

General condition of primer: **Fair**

Estimated percentage of primer in good condition: **30%**

3. Inside Tank Bottom:

General condition of top coat or coats: **Fair**

Estimated percentage of top coat or coats in good condition: **30%**

General condition of primer: **Fair**

Estimated percentage of primer in good condition: **30%**

Is bottom covered with mud or scale? **Yes**

What Depth? **less than 1/2"**

4. Inside large Cylinder Riser:

General condition of topcoat or coats: **Fair**

Estimated percentage of topcoat or coats in good condition: **30%**

General condition of primer: **Fair**

Estimated percentage of primer in good condition: **30%**

Are inside ladders, spiders, pipes, pipe supports, etc., well covered by paint?
Fair, like the rest of interior

5. General comments about any paint failure on inside of tank and cylinder:

E. Recommendations for cleaning and painting: **See end of report**

PART IV Condition of Metal

A. Tower:

1. Are base plates or column shoes in good condition? **Yes several has minor coating failures.**

Describe:

2. Are anchor bolts and nuts in good condition? **Yes**

Are anchor bolt nuts tight? **Yes**

Describe: **They are in excellent condition.**

3. Are anchor bolt connections or chairs on columns and cylinder in good condition?
Yes

Describe:

4. Are tower posts in line? **Yes**

Describe: **At time of inspection**

5. Is riser or cylinder straight? **Yes.**

Describe: **At time of inspection**

6. Are tower rods and cylinder rods in good adjustment and well tuned? **Yes**

Describe: **Tune most during rehab**

7. Are rods in good condition? **Yes.**

Describe: **Coating failures at crosses, normal**

8. Are tower rod pins, strut pins, and cylinder rod pins or bolts in good condition? **Yes.**

Describe:

9. Are struts in good condition? **Yes.**

10. Are columns in good condition (Note: If laced columns examine inside of columns carefully)? **Yes.**

11. Are column connections to tank in good condition? **Yes.**

12. Has dirt or rust accumulated on balcony floor? **A negligible amount of normal soiling is present.**

Is balcony floor in good condition? **Yes. Ponding water in low spots(normal)**

13. Is balcony toe plate or channel in good condition? **Yes.**

14. Is balcony handrail in good condition? **Yes**

15. Are balcony splices, supports and connections to tank shell in good condition? **Yes.**

16. Are there any missing bolts or rivets in the tower or in the balcony and handrail? **No.**

17. General comments on condition of tower and balcony: **Excellent overall**

B. Outside of Cylinder Riser and Tank

1. Is there any rusting or pitting on the outside of the cylinder? **Yes**

Describe: **Minor**

2. Is there any rusting or pitting on the outside of the bottom? **Yes**

Describe: **Minor**

3. Is there any rusting or pitting on the outside of the tank shell? **Yes, failed coating**

4. Is there any rusting or pitting on the outside of the tank roof? **Yes**

Describe: **See pictures (Poor application)**

5. Is the connection of roof to shell in good condition? **Yes**

Describe:

6. If the tank is riveted, state the condition of laps and rivets on outside of cylinder, bottom shell and roof: **NA**

7. Are there any indications of leaks in cylinder, bottom, or tank shell? **No.**

Describe:

8. General comments on condition of metal outside cylinder and tank: **Excellent**

C. Inside of Cylinder Riser and Tank

1. Was tank emptied for inspection? **No**

If not emptied, state how far down: **15'**

2. If the tank is riveted, have lapped seams and rivet heads been seal welded? **NA**

Describe any previous repairs to inside areas: **No**

3. Is large cylinder riser pitted? **Yes**

Size of pits: **Minor** Depth of pits: **Minor**

4. Is bottom head plate pitted? **Yes, Minor**

Size of pits: **Minor** Depth of pits: **Minor**

Are bottom bowl plates pitted? **Yes, minor**

Is pitting local or general? **Local, small areas**

General comments on condition of metal inside bottom. **Excellent**

5. Is 1st shell ring pitted? **Yes, Minimal**

Size of pits? Depth of pits?

Is 2nd shell ring pitted? **Yes, Minimal**

Size of pits? Depth of pits?

Is 3rd shell. ring pitted? **N/A**
Size of pits? **Depth of pits?**
Is 4th shell ring pitted? **N/A**
Size of pits? **Depth of Pits?**
Is pitting local or general?

General comments on condition of metal inside roof. **Excellent**

6. Is underside of roof pitted? **No**

PART V

Condition of Accessories

1. Is column ladder safe? **Yes**

Are lugs and bolts in good condition? **Yes.**

Type of climbing safety device? **Saf-T-Climb cable**

2. Is shell ladder fixed or revolving? **Fixed** Is it safe? **Yes**

Are lugs and bolts in good condition? **Yes.**

Describe:

Type of climbing safety device on shell ladder: **Cable**

If no climbing device, what is the length of the shell ladder?

3. Is roof ladder fixed or revolving? **Fixed** Is it safe? **Yes**

Are lugs, bolts, trolley, etc. in good condition? **Yes.**

Describe: If no climbing safety device length of ladder?

4. Is finiel vent in good condition? **Yes, rusted** (dissimilar metal)

Are bolts in good condition? **Welded in**

5. Is roof manhole in good condition? **Rusted**

6. Does tank have a float-type indicator? **No**

Is it in good condition and working?

Describe:

7. Does tank have inside tank ladder? **Yes**

Is it in good condition? **Fair** Is it safe? **Yes**

What type of climbing safety device is used? **Cable** Condition: **Good**

8. Does tank have inside riser ladder? **NO** Is it in good condition? **N/A**

9. Does tank have inside spider? **N/A** Is it in good working condition?

Size and number:

10. Does tank riser or pipe have an expansion joint? **N/A** Does it leak?

Describe:

11. Are any pipes or valves leaking? **No.**

Describe:

12. Do pipes have frost casing? **N/A**

In good condition and well supported?

13. Does tank have a cathodic protection system? **N/A**

14. Type of overflow? **Weir box** Size: **6"**

Condition: **Excellent**

15. Other accessories: **None**

PART VI
Repairs and Recommended Repairs

Repairs made by inspector:

None

Recommended Repairs:

Exterior:

It is time to address the coatings on the tank. They are 17 years old and that is typical of the life cycle, for the coatings used at that time. In our opinion the tank can take an overcoat at this time.

Interior:

It is beyond time to repaint the interior. There are large areas of the coating that have failed. In the roof, sidewalls and floor of the tank(one area in the floor is several square feet with no coating in place, raw exposed steel).

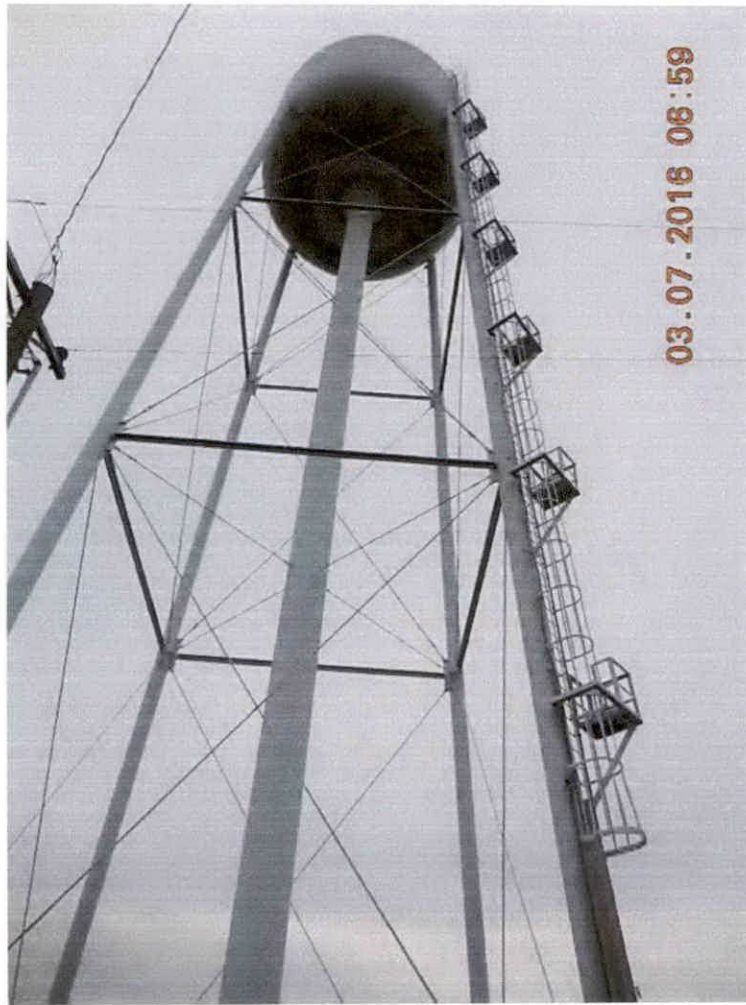
The interior will need to be solid abrasive blasted and recoated with a high performance 2-3 coat NSF approved immersion service coating.

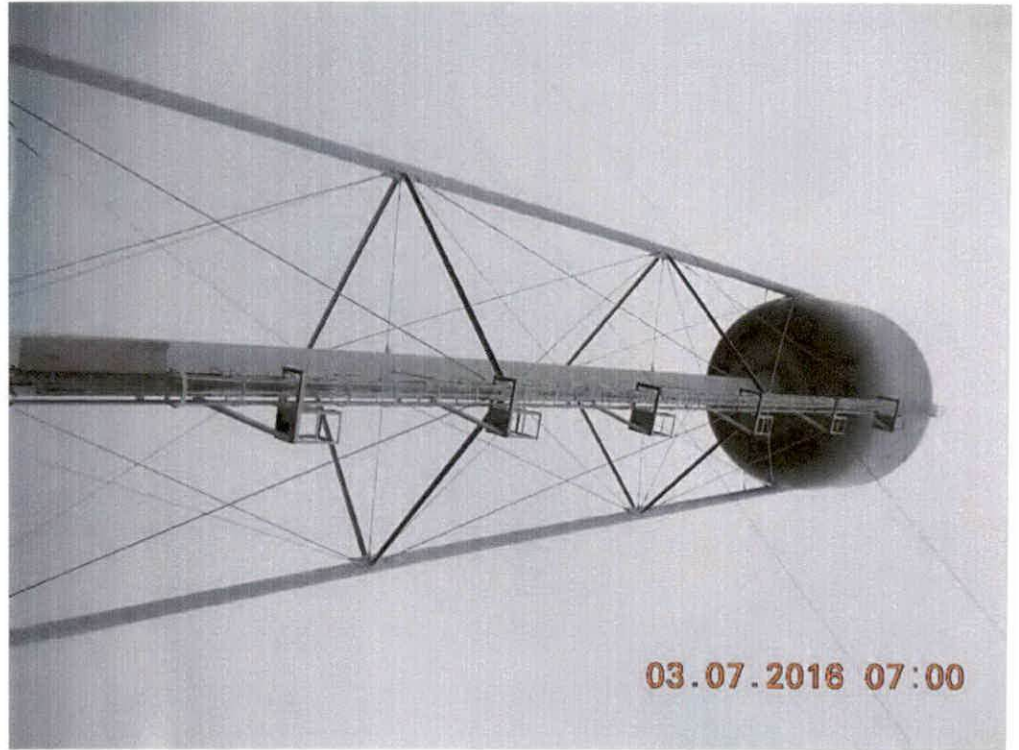
Current cost estimates to rehab tank \$150,00-175,000.00. By a competent painting contractor.

Signature of Inspector: *Jay L. Hoffman*

National Association of Corrosion Engineers Inspector # 4250

Tank Photos







Roof coating



Roof coating thinning



Roof coating thinning



Roof manway failed coating



Roof vent



Vent screening



Same



Roof vent



Same



Failed coating roof



Failed coating roof and ladder



Failed coating roof



Failed coating roof corral



Rusing and failed coating interior roof



Failed coating interior roof vent



Failed coating ladder platforms



Same ladder rung



Backs of ladder rungs not painted, large amount of bird feces on leg



Foundation ladder leg



Tank site

CALDWELL TANKS INC.
LOUISVILLE, KENTUCKY



DATE 1999

NO. 4371

CAPACITY 200,000 GALS.

BOTTOM HEIGHT 126 FT. 9 IN.

OVERFLOW HEIGHT 155 FT. 9 IN.

03.07.2016 08:29



Riser manway



Riser foundation





Belly of tank mildew







Overflow flap valve, not secured in place



Overflow piping





Valve pit