American Can Packaging Inc.

P. O. Box 2092
3801 East 8th Street
Oakland, CA 94604

February 10, 1987

Mr. Ted Gerow
COUNTY OF ALAMEDA
Division of Environmental Health
470 - 27th Street, Room 324
Oakland, California 94612

RE: UNDERGROUND TANKS

Dear Mr. Gerow:

Further to our letter of November 12, 1986 to you, we have recently completed the retesting of the four (4) empty tanks in our tank farm. These tanks have remained empty during the interim period. To retest the tanks, we removed the overburden and disconnected all piping so that the tanks could be tested independently of any piping or fittings. A copy of the testing results is attached for your information.

As you can see from the report, there is evidence of leakage on several of the tanks, so they will not be refilled or used. We are, at this time, determining whether to remove some or all of the tanks and how many, if any, we will wish to replace with new tanks. As we reach that point, we will be in further contact with your office.

Please advise if there are any further steps we should be taking, or if you wish any further explanation or information at this time.

Sincerely,

D.P. BERGESON, Manager
Industrial Engineering

DPB:sc
Enclosure

cc: L. Feldman, Reg. Water Quality Control Board
R.W. Schneiter, Aqua Terra Technologies

SMITH & DENISON

1581 Industrial Parkway West, Suite 3, Hayward, Ca. 94544 (415) 782-9788

S & D 3232 E. Willow Street, Long Beach, Ca. 90806 (213) 426-0461

Report on Helium Leak Test of Underground Tanks
at American Can Company
on January 19, 1987

Tank 1 - Holds pressure well for ½ hour.

Leaks: 1. The north end bung.
2. NE corner of tank (at or near surface).

Tank 2 - Not tested.

Tank 3 - Will not hold pressure.

Leaks: Many small leaks were found on the exposed tanks surface and nearby soil.

Tank 4 - A 2-inch nipple was perforated by corrosion. After its replacement, the tank lost pressure, but (apparently) most leaks were at bungs. A soap test is needed at these bungs to determine whether leaks are at welds or around threads of the bungs.

Tank 5 - Will not hold pressure.

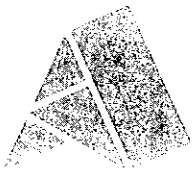
Leaks: Many small leaks were found on the tank surface and nearby soil.

Tank 6 - Not tested.

Our plan was to test the tanks at 5 psi pressure. All were tested with 1 to 2 psi pressure. This decision was made because we did not want to fill the site with escaping helium, nor use up all the helium before the test was complete.

William H. Burkhart

cc: Mike Block
AquaTerra Technologies



AMERICAN
CAN PACKAGING INC.

P.O. Box 2092
3801 East 8th Street
Oakland, Cal. 94604

November 12, 1986

Mr. Ted Gerow
COUNTY OF ALAMEDA
Division of Environmental Health
470 - 27th Street, Room 324
Oakland, California 94612

RE: UNDERGROUND TANKS

Dear Mr. Gerow:

Further to my letters of March 26 to you and July 28 to Mr. Feldman (c/c to you), we have now performed tank testing on five of the six tanks in our tank farm. Four of the tanks were empty and were tested by the Helium Test method. The fifth tank was full and was tested by the approved full tank test method. A copy of the test results is attached. The full tank test result met the required criteria. The empty tanks all had some helium leakage indicating possible leakage in piping, fittings and possibly tanks.

It is our plan to leave the empty tanks empty and, again working through Aqua Terra Technologies, remove the overburden and at least repair piping as necessary and then retest the tanks proper for leakage. At that point, we will make a decision as to which if any tanks to leave in and use, or to remove and possibly replace some or all of the tanks.

Please advise if you wish any further explanation or information at this time.

Sincerely,

D.P. BERGESON, Manager
Industrial Engineering

DPB:sc
Attachments

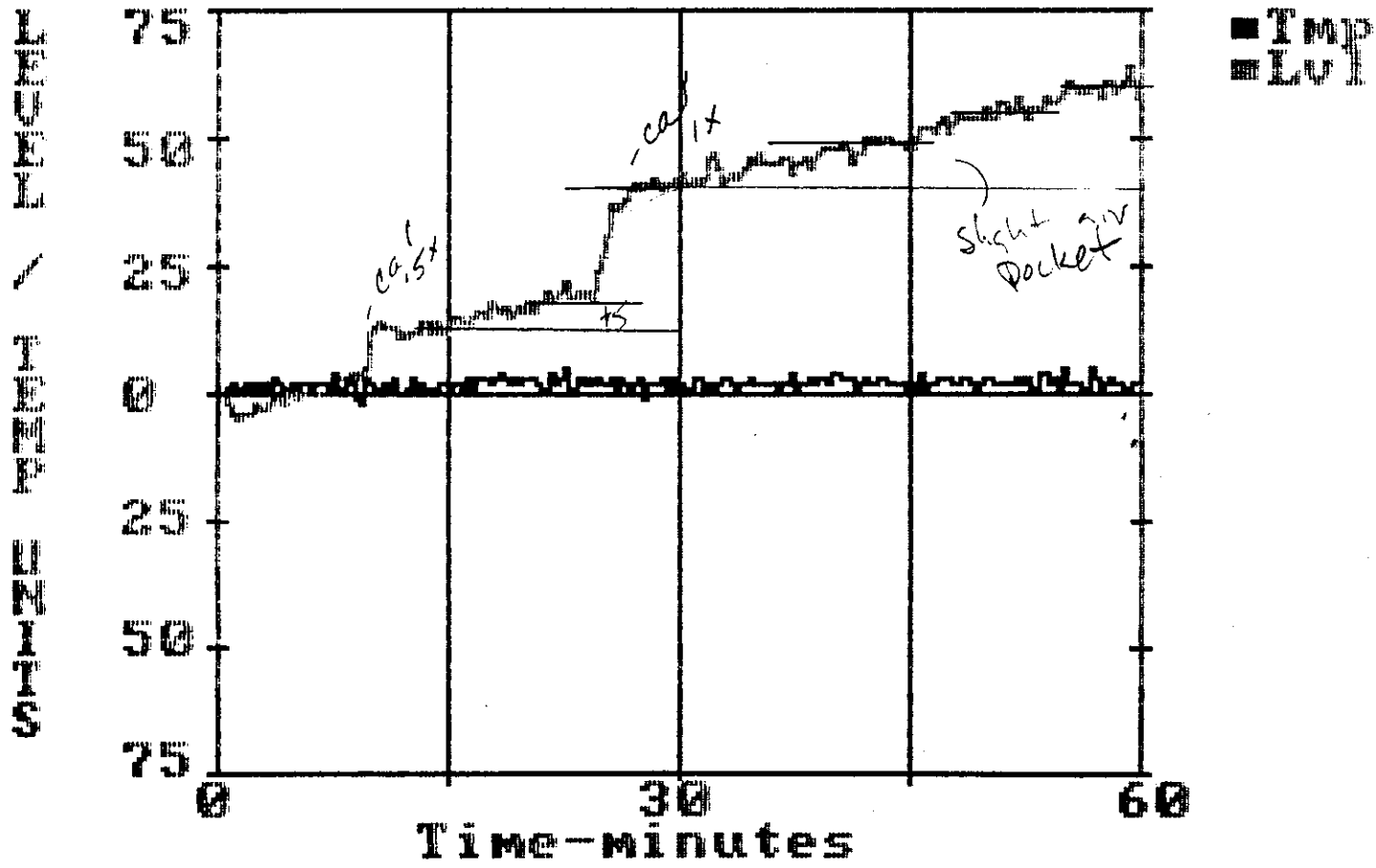
cc: Mr. Lester Feldman
Regional Water Quality Control Board
San Francisco Bay Region
1111 Jackson Street, Room 6040
Oakland, California 94607

Mr. R.W. Schneiter
AQUA TERRA TECHNOLOGIES
3490 Buskirk Avenue, Suite A
Pleasant Hill, California 94523

AES/Brockman Precision Leak Test

P.O. Box 151 Bakersfield * 805/325-2212

Technician	WILSON	Calibration Value	23 =.05 Gal.		
Date	10/23/86	System Variation	Scale	GPH	
Time Started	15:08	Tank Only	+20	+.043	
Gallons	4200	Product Line	N/A		
Gallons Added	100	Non Pressure Lines	+20	+.043	
Hrs Since Added	30	Notes			



Tank 1 - SOLVENT

Focus 1L/ 8T Order no. 1358

** Notes

HI LVL .5XCAL AND 1XCAL P/L INVOLVED IN HI LVL TEST
NO PUMP TEST NO BYPASS ON PUMP
AMERICAN CAN CO OAKLAND

Associated Environmental Systems

P.O. Box 151
Bakersfield, CA
93302
(805) 393-2212

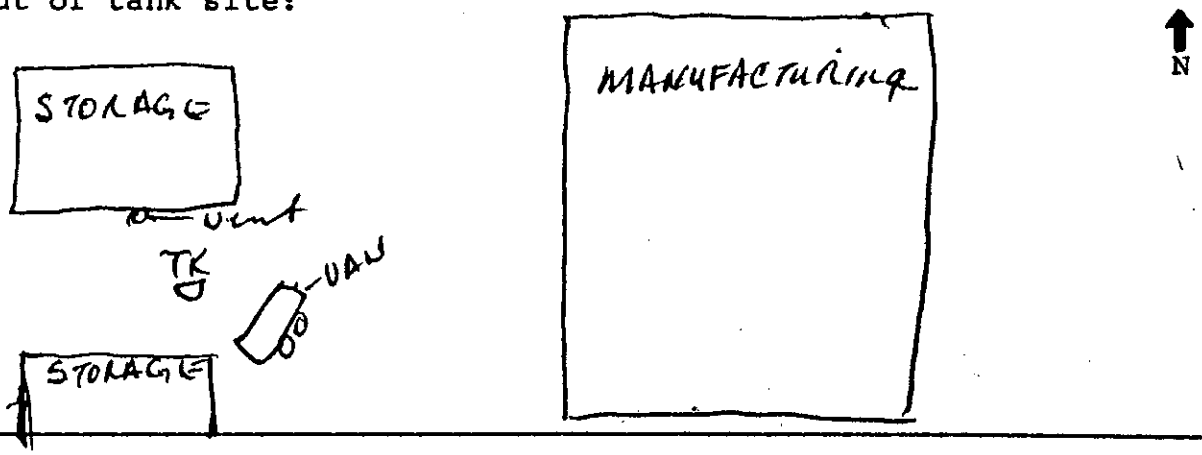
PRECISION TANK & LINE TEST RESULTS

Invoice Address:	Tank Location: AMERICAN CAN CO. 3801 E. 8th ST OAKLAND, CA	W.O.#: 1358
		Technician: WILSON
		Tech #: 8615 Van#: 6105
Date: 10.23.86	Time start: 15:00 end: 16:45	Tech. Signature: Mike Wells
Facility phone #:	Groundwater depth: N/A	Blue prints: Yes
Contact:	Date; time system was filled for testing:	

Tank	Cap.	Prod.	Tank	Line	P/L	High Cal	Low Cal	V/R	Prod+	Pump	Mat	P dia.
1	4000	Solvent	P	P	P	2209	2190	/	100	Con	ST	2"2"
2												
3												
4												
5												
6												

Additional information (i.e. weather, tanks uncovered?, re-test?)
TANK COVERED
WEATHER - OVERCAST - COLD

Layout of tank site:



a) Above results are provisional. Final results issued from A.E.S. Bakersfield.
b) + or - 0.05 GPH is used to certify tightness.
c) These results obtained using the patented A.E.S./Brockman system.
d) This system and method meets the criteria set forth in NFPA #329.

JLB1

HELIUM LEAK TESTS

AT

AMERICAN CAN COMPANY
OAKLAND

OCT. 21, 22, 1986

Prepared By:

SMITH & DENISON, INC.
October 23, 1986

TEST METHOD

Helium was injected into the tanks via the fill neck to a pressure of about 1 psig. If this pressure did not decay quickly then more helium was added to raise the pressure to about 5 psig. In the case where the tank pressure fell rapidly, we allowed a continuous flow of about 1 standard cubic foot of helium per minute.

Several gross leaks were found at above-ground fittings. After each was repaired the test was restarted. This report gives data obtained after repair of gross leaks.

The method used in leak pinpointing is described in an attached 1983 paper. The enclosed marked drawing shows the areas where highest helium concentration were observed. We cannot be certain that the fill pipes are positioned exactly as shown on the plan view of the tanks, so most leak areas were recorded in our notes using the actual fill pipe as a reference point for measurement.

FINDINGS

Tank No. 1

Highest helium concentrations were at the fill neck and points between the fill neck and building 13. The center of this helium-rich area is about 17 feet from building 13 along the line of tank bungs.

The leaks in this system are so great that when the system is pressurized to 1 psig, the pressure falls to 0.5 psig in about 30 minutes.

Wide variations in helium concentration at sampling points three to four feet apart indicates that the leaks are near grade level - either at bungs or in pipe fittings above the tank itself.

We do not know whether Tank No. 1 leaks. The large amounts of helium leaking from pipe fittings would mask an actual tank leak. After the leaky fittings have been repaired it will be possible to test the tank.

Tank No. 3

Helium peak concentrations were found at the fill neck and at a point six feet east of building 13 and 3 feet north of the tank centerline.

Tank 3 held pressure overnight; there are no gross leaks above the liquid level.

Wide variations in helium concentration indicate the leaks are at or above bung level.

Tank No. 4

Peak helium concentration was found about 4 feet west and 4 feet north of the fill neck. Possibly this is a leak in the vent pipe or an elbow in that pipe. Another area of high concentration is at the fill neck.

Tank No. 5

One point of high helium concentration is at the fill neck. Another is halfway between the fill neck and the vent riser at Building 13. This tank held pressure well during the test.

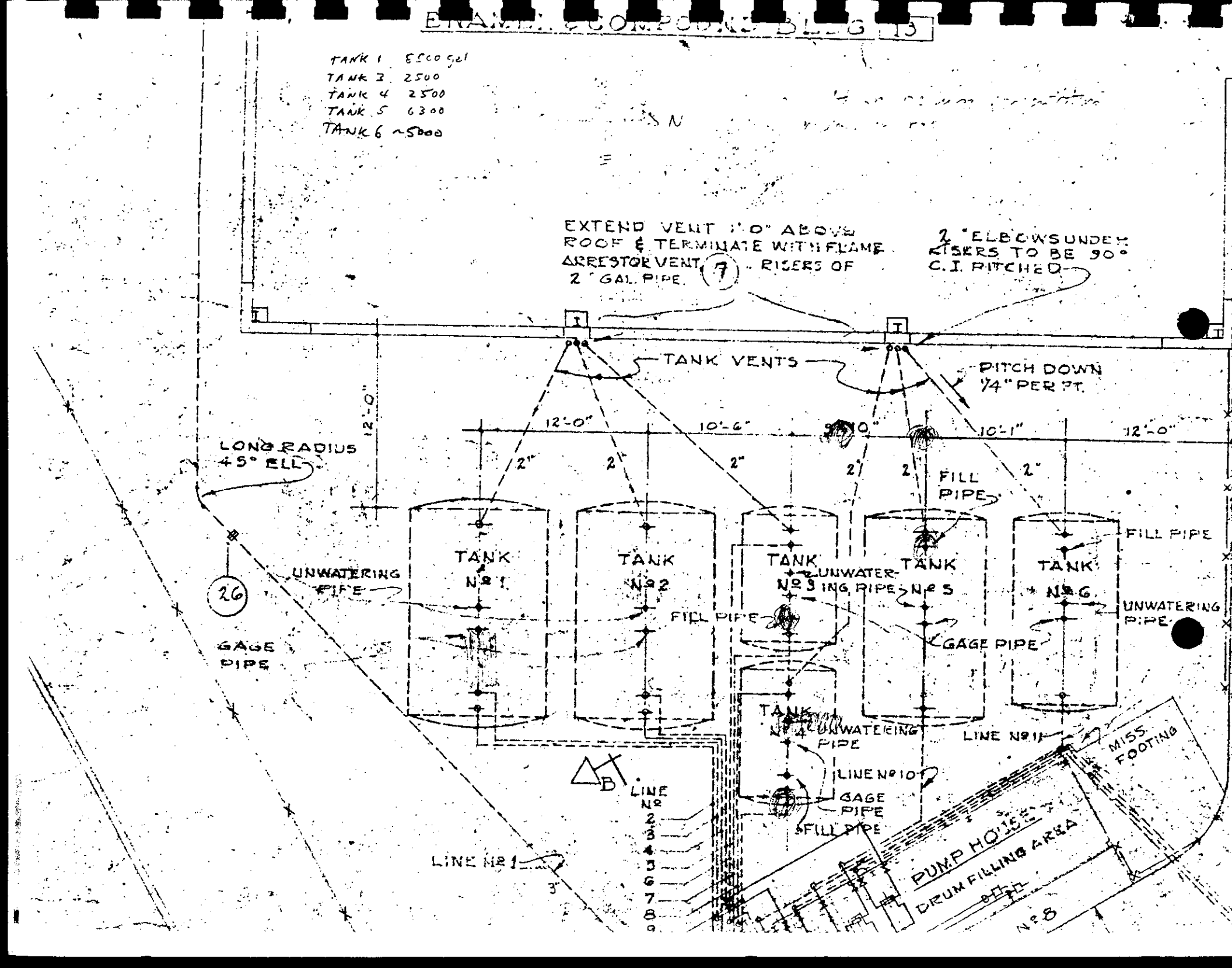
CONCLUSIONS

Rarely, if ever, have we found piping systems that had no leaks. The system at American Can fits the pattern.

RECOMMENDATIONS

The least cost way to save the system is to remove the overburden, tighten all pipe connections and pump the tanks dry for a second test in which all tanks are filled and tested at the same time.

Cathodic protection of the tank system (costing less than $5,000.) is recommended to extend the life of the tanks should further testing show them to be sound.


TANK 1 8500 gal
TANK 3 2500
TANK 4 2500
TANK 5 6300
TANK 6 ~5000
EXTEND VENT 1'-0" ABOVE ROOF & TERMINATE WITH FLAME ARRESTOR VENT
7
RISERS OF 2" GAL. PIPE.
2 "ELBOWS UNDER RISERS TO BE 90° C.I. PITCHED
TANK VENTS
PITCH DOWN 1/4" PER FT.
12'-0"
10'-6"
10'-1"
12'-0"
LONG RADIUS 45° ELL.
2"
FILL PIPE
TANK Nº 1
TANK Nº 2
TANK Nº 3
TANK Nº 5
TANK Nº 6
TANK Nº 4
UNWATERING PIPE
GAGE PIPE
26
LINE Nº 1
LINE Nº 10
LINE Nº 11
LINE Nº 2 3 4 5 6 7 8 9
B
PUMP HOUSE
DRUM FILLING AREA
MISS. FOOTING
Nº 8