Jo-Ann Gershkoff

From: Open Meetings Admin <openMeetings@sos.ri.gov>
Sent: Monday, December 24, 2012 11:32 AM
To: jgershkoff@kentcountywater.org; openMeetings@sos.ri.gov
Subject: SOS Open Meetings : Meeting Minutes

December 24, 2012

This is your electronic confirmation for the electronic filing of meeting minutes for the Kent County Water Authority. The meeting minutes filed are in for the meeting held on: November 15, 2012 15:30:00.

This notice was electronically filed on the Secretary of State Open Meetings Website on: December 24, 2012 11:32:19 am.

Please retain this message as your official proof of electronic filing.

Sincerely,

The Open Meetings Team at
Office of Secretary of State A. Ralph Mollis State House Room 38 Providence, RI 02903
(401) 222-2357
(401) 222-1404
TTY: 711
openmeetings@sos.ri.gov
sos.ri.gov

State of Rhode Island
A. Ralph Mollis
SECRETARY OF STATE

Welcome Jo-Ann Gershkoff

Login | Options | Log Out

The meeting minutes were successfully updated to the database. Click to view the PDF.

Public Information
State House, Room 38
Providence, RI 02903
Open: Monday-Friday, 8:30 a.m. to 4:30 p.m.
Phone: (401) 222-3983
Fax: (401) 222-1404
TTY: 711
Email: openmeetings@sos.ri.gov

Lisa Salisbury

From: Open Meetings Admin [openMeetings@sos.ri.gov]
Sent: Thursday, November 08, 2012 1:36 PM
To: lsalisbury@kentcountywater.org; openMeetings@sos.ri.gov; jgershkoff@kentcountywater.org
Subject: SOS Open Meetings : Meeting Notice

November 08, 2012

This is your electronic confirmation for the electronic filing of meeting notice for the Kent County Water Authority. The meeting notice filed is for the meeting on: November 15, 2012 3:30:00 pm.

This notice was electronically filed on the Secretary of State Open Meetings Website on: November 08, 2012 01:36:15 pm.

Please retain this message as your official proof of electronic filing.

Sincerely,

The Open Meetings Team at
Office of Secretary of State A. Ralph Mollis State House Room 38 Providence, RI 02903
(401) 222-2357
(401) 222-1404
TTY: 711
openmeetings@sos.ri.gov
sos.ri.gov

Agenda

Agenda

BOARD MEETING AGENDA
NOVEMBER 15, 2012 – 3:30 P.M.
OFFICES OF KENT COUNTY WATER AUTHORITY

Approval - Minutes of Meeting:		Board Meeting – October 18, 2012
Guests:	3:30 p.m.	High Service Requests: ▪ 79 Kulas Road, West Warwick, Jean F. Skillicorn
Legal Counsel:		Legal Matters
Director of Finance Report:		Revenue Account Cash Flow Projection November 7, 2012

Point of Personal Privilege & Communication:

General Manager/Chief Engineer's Report:

General:	Restricted Operating – Preparation of Filing CCFD Receivership – KCWA Billings Center of NE Billing/Payments – Board Directed Agreement/Consent Judgment Division Hearing – Service Availability – Appeal Approval Administrative Subdivision Curran Dam Property Acquisition 642 Washington Street, Engagement of Engineering Services Tank Inspection and Cleaning Completed
Capital Projects:	CIP-1C Mishnock Well Treatment Plant (Construction Status) CIP-1B Mishnock Transmission (Construction Status)
Infrastructure Projects:	IFR 2009B (Construction Status) IFR 2010A (Construction Status) IFR 2010B (Construction Status) Quaker Lane P. S. Upgrade (Construction Status) Tech Park Storage Tank Painting (Rebid Late Winter) Water Street Replacement (Construction Status)

The offices of the Kent County Water Authority are handicapped accessible. Individuals requesting interpreter services for the hearing impaired must contact the offices of the Kent County Water Authority 72 hours before the meeting at 821-9300. (Telecommunications device for the hearing impaired available).

Agenda Posted November 8, 2012.

1. KCWA Main Entry Office Public Bulletin Board
2. KCWA Side Entry Door Entrance
3. West Warwick Town Hall Public Bulletin Board

Agenda Sent Via U. S. Post Office November 8, 2012 for Posting on Public Bulletin Board

1. City of Warwick
2. Town of Coventry
3. Town of East Greenwich
4. Town of West Warwick
5. Town of West Greenwich

KENT COUNTY WATER AUTHORITY

MINUTES OF THE MEETING
OF THE BOARD

November 15, 2012

A regular meeting of the Board of Directors of the Kent County Water Authority was held on the 15th day of November, 2012, at 3:30 p.m. at the offices of the Authority in West Warwick, RI, in the Joseph D. Richard Board Room.

Vice-Chairman Masterson opened the meeting at 3:30 p.m. Board Members Mr. Gallucci, and Mr. Giorgio were present together along with the General Manager Timothy J. Brown, legal counsel Patrick J. Sullivan, Esq. as well as Mr. Duscheneau. General Manager Brown informs the board that Mr. Inman reports a prior commitment and Chariman Boyer is not in attendance for medical reasons. Mr. Masterson led the group in the pledge of allegiance.

APPROVAL OF THE MINUTES

The minutes of the regular board meeting of October 18, 2012 were presented for approval. Mr. Giorgio moved passage, seconded by Mr. Gallucci and the minutes were unanimously approved.

GUESTS

3:30 p.m. High Service Requests:

79 Kulas Rd., West Warwick, RI

The General Manager presented the board with the high service request of Jean F. Skillicorn. Mr.Brown reports the applicant resides in Royal Oak, CA. The petitioner wants to subdivide one lot to create four lots for residences. Single-family dwellings are proposed to be built on the new lots, four new homes and one existing home. The General Manager reports no issues with the petition.

It was moved by Mr. Giorgio, seconded by Mr. Gallucci, to conditionally approve the request for water supply to a single family home with the following conditions in lieu of a moratorium:

1. The Kent County water Authority is not a guarantor of water supply for this or any other approval and KCWA can only supply water reasonably available to it and therefore any applicant/customer of KCWA understands that any third-party commitments made by an applicant/customer are subject to the reasonable availability of water Supply and limits of the existing infrastructure to support service.

2. A deficient condition associated with accelerated commercial and residential development exists in the area serviced by the KCWA, the KCWA is in the process of planning for additional water supply and therefore delays or diminution in service may occur if the water supply is unavailable or unable to produce water sufficient to service the customers KCWA.

3. Ventures, commitments or agreements are at the applicant's sole risk if supply for existing infrastructure is found to be insufficient to support service. The applicant may afford the authority with system improvements to facilitate adequate service.

4. The applicant shall file a formal single-family home application. The applicant/customer understands that any undetected error in the application or an increase or change in demand as proposed, which materially affects the ability to supply water to the site, will be the responsibility of the applicant/customer and not the KCWA.

5. Only conservation-wise plumbing fixtures are to be installed including, but not limited to, low flow shower heads, low flow toilets and low flow aerators on faucets.

6. If irrigation systems are installed, they must be supplied by a private well. Xeriscape landscaping technique and/or proper planting bed (high water holding capacity) soil preparation shall be employed throughout the project.

Upon Motion made, and duly seconded, and unanimously voted,

VOTED: That based upon health and safety concerns to conditionally approve the request for water supply to service a single family home with the following conditions in lieu of a moratorium:

1. The Kent County water Authority is not a guarantor of water supply for this or any other approval and KCWA can only supply water reasonably available to it and therefore any applicant/customer of KCWA understands that any third-party commitments made by an applicant/customer are subject to the reasonable availability of water supply and limits of the existing infrastructure to support service.

2. A deficient condition associated with accelerated commercial and residential development exists in the area serviced by the KCWA, the KCWA is in the process of planning for additional water supply and therefore delays or diminution in service may occur if the water supply is unavailable or unable to produce water sufficient to service the customers KCWA.

3. Ventures, commitments or agreements are at the applicant's sole risk if supply for existing infrastructure is found to be insufficient to support service. The applicant may afford the authority with system improvements to facilitate adequate service.

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6. If irrigation systems are installed, they must be supplied by a private well. Xeriscape landscaping technique and/or proper planting bed (high water holding capacity) soil preparation shall be employed throughout the project.

LEGAL

Legal counsel Patrick J. Sullivan reports that he attended the hearing for Central Coventry Fire District in Superior Court on the business calendar in front of Judge Stern. Attorney Sullivan summarized the hearing's highlights, including the fact that Mr. Land, the special master, has been collecting revenue for the District and that the District hopes to pay all its bills at some point in the future. The master also reports that there has been a finance committee formed to deal with the structural deficit and he hopes to convene a meeting soon.

In addition, Mr. Sullivan reported on his dealings with representatives of the Centre of New England. He reports that he has prepared all the legal documents for service on the principals of all the various companies who own real estate in the development, and that he had forwarded all documents to Mr. Cambio and Mr. Nelson per the request of the board. Mr. Sullivan reports that he didn't receive a response, but that he received a call on the eve of this meeting from Mr. Cambio. Mr. Cambio approved the legal documents and the payment arrangements but requested that the current bill be included in the consent judgment that requires a bi weekly payment to the authority. That would raise the principal amount to $108,000.00. Mr. Sullivan reports that the advised Mr. Cambio that he would present Mr. Cambio's offer to the board.

A discussion ensued among the board members. Mr. Masterson reports that Mr. Sullivan acted quickly after the last meeting and that a call on the eve of the today's meeting by Mr. Cambio was unacceptable. He requests that Mr. Sullivan continue with his efforts in resolving the issue. Mr. Giorgio suggested that Mr. Sullivan notify the tenants of the Centre of New England so they could put pressure on Mr. Cambio with a threat of a shutoff of water service. General Manager reported that they would normally notify the fire department that the private fire lines would be shutoff. Mr. Brown further reports that there was a prior agreement where Mr. Cambio would pay his arrearage over eight (8) months and he was supposed to continue to pay the ongoing charges. Mr. Brown indicates, however, that Mr. Cambio hasn't upheld his end of the agreement. Mr. Brown further reports the new combined balance would be about $108,000.00.

Mr. Gallucci asked what the difference was between the Central Coventry Fire District not paying for their water and the Centre of New England. The General Manager reports that the

fire district just hasn't paid the hydrant fees. There was a tax revenue problem with the fire district. Conversely, Mr. Cambio has been collecting the funds from his tenants and hasn't paid the water bills with the collected funds.

Mr. Giorgio recommends that if the board were to consider the addition of the current bill to the arrearage, then the payment should increase to $10,000.00 bi weekly from the $5,000.00 previously agreed upon amount. Mr. Brown indicates that he thinks the board should hold Mr. Cambio to the original November 1, 2012 date, and not move to the December 1, 2012 date that Mr. Cambio requests. In connection therewith, Mr. Brown says there should be a stipulation that he pay $10,000.00 for the month of November by December 1, 2102, and the board agreed unanimously to have Mr. Sullivan continue with the previously authorized collection with the modified terms as discussed.

Director of Finance Report:

General Manager Tim Brown rendered the finance report, which is attached herewith as exhibit "A", which dealt with Revenue Account Cash Flow Projection November 7, 2012. He indicated that Director of Administration and Finance Jo-Ann Gershkoff would be back on the 26th of November. Mr. Brown reports approximately $2,700,000.00 outstanding, and that holiday revenues remain slow. There have been shortages in cash flow. Mr. Brown reports aging balances with the 31-90 days overdue relatively the same.

Mr. Gallucci moved and seconded by Mr. Giorgio to accept the reports and attach the same as an exhibit and that the same be incorporated by reference and be made a part of these minutes.

Upon Motion duly made and seconded, it was unanimously,

VOTED: That the Revenue Account Cash Flow Projection November 7, 2012 attached as **"A"**, be approved as presented and be incorporated herein and are made a part hereof.

Point of Personal Privilege & Communication

Vice-Chair Masterson and Mr. Giorgio together congratulated Mr. Gallucci on his win in the election for Warwick City Council.

GENERAL MANAGER/CHIEF ENGINEER'S REPORT

GENERAL:

Restricted Operating – Preparation of Filing.

General Manager reports that Rate Counsel Watson is currently preparing the motion for filing. The motion should be filed by the end of November, 2012.

CCFD Receivership – KCWA Billings

General Manager Brown reports that Legal Counsel discussed this matter in Mr. Sullivan's

report.

Centre of New England Billing/Payments – Board Directed Agreement/Consent Judgment

General Manager Brown indicates this was discussed in Mr. Sullivan's report from Legal Counsel.

Division Hearing – Service Availability – Appeal

General Manager reports that this case involves a service issue on Deer Run concerning the availability of water and the authority's policies and regulations for serviceability. Mr. Brown indicates he is unhappy with the Division's case. He indicates that although the hearing has been concluded, the remaining briefs and reply briefs remain due. He further advises the board that a rule making may ultimately come out of this order and it will have a major impact upon KCWA and the ability to supply and/or be licensed to operate. There is a conflict between Division, Department of Health, the Environmental Protection Agency and the Plumbing Code Regulations. If the decision is unacceptable, there will be a twenty (20) day period in which to file an appeal, which Mr. Brown anticipates.

Approval Administrative Subdivision Curran Dam Property Acquisition

General Manager Brown indicates this subdivision application has to deal with the Curran Reservoir on Seven Mile Road in Cranston. RIDEM has already signed the document and this is required to keep the process moving for the sale of the property needed by RIDEM for dam replacement. Mr. Brown recommends approval by the board.

Mr. Giorgio moved and seconded by Mr. Gallucci to authorize the execution and signature of the administrative subdivision application.

Upon Motion duly made and seconded, it was unanimously,

VOTED: That the administrative subdivision application attached as **"B"**, be approved to be signed as presented and be incorporated herein and are made a part hereof.

642 Washington Street, Engagement of Engineering Services

General Manager Brown discussed the current renovation of the Shell Oil gasoline station in Coventry. He reports a contractor is moving forward with his plan to place gasoline lines over existing water lines. There was significant contaminated soil both excavated from the site as well as remaining on site surrounding the water line. Mr. Brown indicates that he received inadequate sampling results from the owner and expresses the need to engage an engineer to collect additional data and represent us with the Department of Health and/or DEM. Mr. Masterson inquires as to the age of the pipe. Mr. Brown responds that is was installed prior to 1930 as a result of the nearby mill requiring a hydrant. Mr. Brown reports that the property became a gasoline station around 1963. Mr. Brown distributed photographs of the site and warned that the owner could completely done with the renovations and could be pumping gasoline by December 1, 2012. He further indicates to the board that his other concern is that

large trucks have been driving over the old watetr line during the excavation.

Mr. Masterson asks what would be required to fix the condition. Mr. Brown responds that removal of the contaminated soil would be required and perhaps a temporary bypass. Eventually, the line should be replaced by moving the pipes to the Laurel Avenue Bridge. Mr. Brown is concerned about digging near the dam, as the elevation of the pond is high. Mr. Brown reports two (2) letters have been sent to the Department of Health, one from his office and one from legal counsel. The letter from Mr. Sullivan indicates to June Swallow from the Department of Health that they have been put on notice of a potential public health issue as required by the regulations.

Mr. Brown adds that the authority appears not to have an easement over the private lot, although legal counsel suggests there may be an easement by prescription. As a result, Mr. Brown recommends to hire a firm with a $5,000.00 budget to assist since time is now of the essence. He indicates that by engaging a consultant, it illustrates the authority's serious response to the situation and the authority's continued due diligence in moving forward.

Mr. Gallucci moved and seconded by Mr. Giorgio to accept the recommendation of the General Manager and engage a consultant immediately at a cost not to exceed $5,000.00 to assess the situation at 642 Washington St. in Coventry.

Upon Motion duly made and seconded, it was unanimously,

> VOTED: That the board accept the recommendation of the General Manager and engage a consultant immediately at a cost not to exceed $5,000.00 to assess the situation at 642 Washington St. in Coventry.

Tank Inspection and Cleaning Completed

The General Manager reports that five of the authority's active storage tanks have been inspected and cleaned. It is normally done every five or six years, and he reports that the flushing program is working well. Mr. Brown further reports that he is very pleased with what the inspections show, and the minor issues with the tank maintenance will be reviewed through the use of the videos and if needed, recommendation will follow for corrective action

CAPITAL PROJECTS:

CIP 1C Mishnock Well Treatment Plant and CIP 1B Mishnock Transmission

The General Manager reports the project is moving along quite well. He estimates, although the project is behind schedule, it is projected to be completed in April 2013. He went on to say he would not consider liquidated damages as of this point in time, and will examine if the Authority was truly damaged as a result of the extension of the schedule.

INFRASTRUCTURE PROJECTS

IFR 2009B (Construction Statue)

The General Manager reports that construction is virtually complete, absent paving, for this project. Paving will be conducted in the spring after the winter settling occurs.

IFR 2010A (Construction Status)

The General Manager reports that construction is moving along well on this project. The main installation is complete at this point, and it awaits final pressure testing. Meadow Road, Garden Lane and County Lane will have service activated this year and restoration of pavement next year. The O'Donnell Hill area in Warwick is under construction and should be finished by the winter of this year, with final paving next year.

IFR 2010B (Construction Statue)

The General Manager informs the board that contract signing should occur this month, with the work beginning in the Spring of 2013.

Quaker Lane Pumpstation Upgrade (Construction Status)

The General Manager reports that construction of the wall has been completed, and a revised schedule is being reviewed. With a delay of 24 weeks on the pump delivery, this project requires further review. Additionally discussion continues on the schedule and possible late winter startup.

Tech Park Storage Tank Painting

The General Manager reports to the board that this project should be rebid late winter.

Water Street Replacement (Construction Status)

The General Manager reports that the water line will be replaced by winter, as the temporary service must be removed so it doesn't freeze. He reports that the project should be complete this year, with paving next year. It is a joint project by the Authority and the Town of East Greenwich.

There being no further business before this meeting, on motion duly made by Mr. Giorgio, seconded by Mr. Gallucci and carried, the meeting was adjourned at 4:38 p.m.

Dated: November 25, 2012

Legal Counsel

EXHIBIT A

Kent County Water Authority
Revenue Account Cash Flow Projection
7-Nov-12

Beginning Balance	$	2,215,263
Transfers from Deposit Account		543,584
Transfer to Checking		(900,000)
WRB & General Treasurer Estimate		(40,298)
R&R Reserve for Capital Equipment		(8,333)
Infrastructure		(450,000)
2012 Debt Service Fund		(180,798)
2004 Debt Service Fund		(104,539)
Operating Revenue Allowance - Restricted (1 12th)		(24,305)
Total	$	1,050,575

Operating Revenue Allowance - Unrestricted May,2010- November, 2012(24,304.75*31 months)	$	753,447
Billing	$	1,733,516
Accounts Receivable		
0-30 days	$	1,672,686
31-60 days		767,805
61-90 days		156,153
91- days and over		222,009
Total	$	2,818,653

A

GENERAL MANAGER'S REPORT

Board Meeting
November 15, 2012

Restricted Operating Request for Use

Legal Counsel is now preparing the motion for filing. It is expected to be filed by the end of this month.

CCFD Receivership KCWA Billing

Central Coventry Fire Department currently owes $80,533.42 in hydrant fees. Our attorney will file a claim as a priority claim for the Authority to the receiver for payment of the hydrant fees. This will have an impact upon our revenues as well as any other potential municipality or fire district that so too has similar issues. We will be monitoring this as we are made aware of activities on claims filed.

Center of New England Billing and Payments

Our attorney has prepared the document directed by the Board and forwarded the same to Center of New England total currently owed is $108,000+. Our attorney will brief the Board on this. My recommendation remains the same as in the October 18, 2012 General Manager's Report.

Division Hearing Service Availability

As the Board is aware we have been involved in a service issue on Deer Run concerning the availability of water and our policies and regulations for serviceability. The hearing has now been concluded. Briefs and reply briefs are now due this month. This case has now taken on legs of its own and it looks as though a rule making may ultimately come out of this order. This will have a major impact upon Kent County Water Authority and our ability to supply and/or be licensed to operate. There is conflict between Division, Department of Health, Environmental Protection Agency and Plumbing Code Regulations and they have all been brought forward at the hearings. We will have 20 days in which to appeal this decision if it is not acceptable. Therefore, we will be prepared to appeal when and if it is necessary as this is an extremely

important issue for the Authorities operation. If there is a rule making that does come out of this order we certainly will be represented.

Approval Administrative Subdivision Curran Dam Property Acquisition

Board action required on the Cranston subdivision request for filing by RIDEM. I recommend Board approval to keep the process moving forward for the sale of property needed by RIDEM for Dam replacement. Attached as exhibit the document for action.

642 Washington Street, Engagement of Engineering Services

This property is located on Washington Street and supports a Shell Gas Station. Serious issues exist and attached as an exhibit is correspondence to date. We are in a dangerous position with the water main and the infrastructure that the station is installing. We must engage a qualified engineer to assist in the review and protection of Kent County Water Authority's rights. The Health Department must also be brought into this issue as it will affect our ability to provide a potable product and meet their Regulations. Board's action is requested.

Tank Inspection and Cleaning Completed

Five of our active storage tanks have been inspected and cleaned. This is usually done every 5 to 6 years for water quality and maintenance issues. We are very pleased with the minimal cleaning necessary. This points to our overall continuous maintenance practice within our system. With continued improvement and diligence it is hoped that we can extend the duration between these inspections for cost savings. With the next inspection (5 to 6 years) will give us a good track record to make that decision. Minor issues with tank maintenance will be reviewed through the videos and if needed recommendation will follow for corrective action.

Capital Projects

CIP 1C Mishnock Well Treatment Plant and CIP 1B Mishnock Transmission

Project is moving along fairly well. It is behind schedule and scheduled completion is April of next year. Indication is from the current scheduling that the beginning of next year through February will be process startup and training. At this point, I will not consider liquidated damages and will await the finalization of the project and whether Kent County Water Authority

has been truly damaged by the extension of the schedule. I am, however, pleased with the contractor and the work that they are doing and I hope it will result in a very high quality treatment facility for our use. Startup is scheduled for the beginning of next year. We will be training initially 2 employees as well as our new engineer operator. The high service transmission main has been tested and chlorinated. We expect it to be completed this month and dewatered awaiting future money to complete the other 2/3 of it on Mishnock Road.

Infrastructure Projects

IFR 2009B

Construction is virtually complete except for paving under 2009B. Paving will continue this year till winter shut down.

IFR 2010A

Construction is moving along well on this project. J.P. Murphy Highway main installation is complete awaiting final pressure testing. Pavement will not be completed until spring of next year. The O'Donnell Hill area in Warwick is under construction and should for all practical purposes be completed by the winter of this year with final paving spring of next year. Meadow Road, Garden Lane and County Lane will have service activated this year and restoration of pavement next year.

IFR 2010B

Awaiting contract signing this month. We do not expect work to begin till the spring construction season in 2013.

Quaker Lake Pump Station Upgrade

Construction of the wall has been completed, revised schedule is being reviewed and expectations of construction will continue with a delay of 24 weeks needed for pump delivery. Discussion continues on the schedule and possible late winter startup.

Water Street Replacement

Construction of the sewer has begun. Our water main is installed and testing is underway. This is a joint project between the Town of East Greenwich and Kent County Water Authority with Kent County funding the water portion and of course the sewer portion funded by the Town of East Greenwich.

CITY OF CRANSTON
ADMINISTRATIVE SUBDIVISION
APPLICATION FORM

PROJECT NAME Curran Dam Property Aquisition

Assessor's Plat(s) 31

Assessor's Lot(s) 19 + 25

Location (street) Seven Mile Road

OWNER'S NAME(S) Kent County Water Authority

Address 1072 Main St., West Warwick, RI 02863

Telephone Number (401) 821-9300

OWNER'S NAME(S) State of Rhode Island
Janet Coit, Director

Address RIDEM / Office of Director
235 Promenade St., 4th Floor
Providence, RI 02908

Telephone Number (401) 222-4700

SURVEYOR'S NAME & ADDRESS

Crossman Engineering
151 Centerville Rd.
Warwick, RI 02886

I (we) hereby apply for administrative subdivision of the above land.

Signature of Owner(s) _____ **Date** 10/12/12

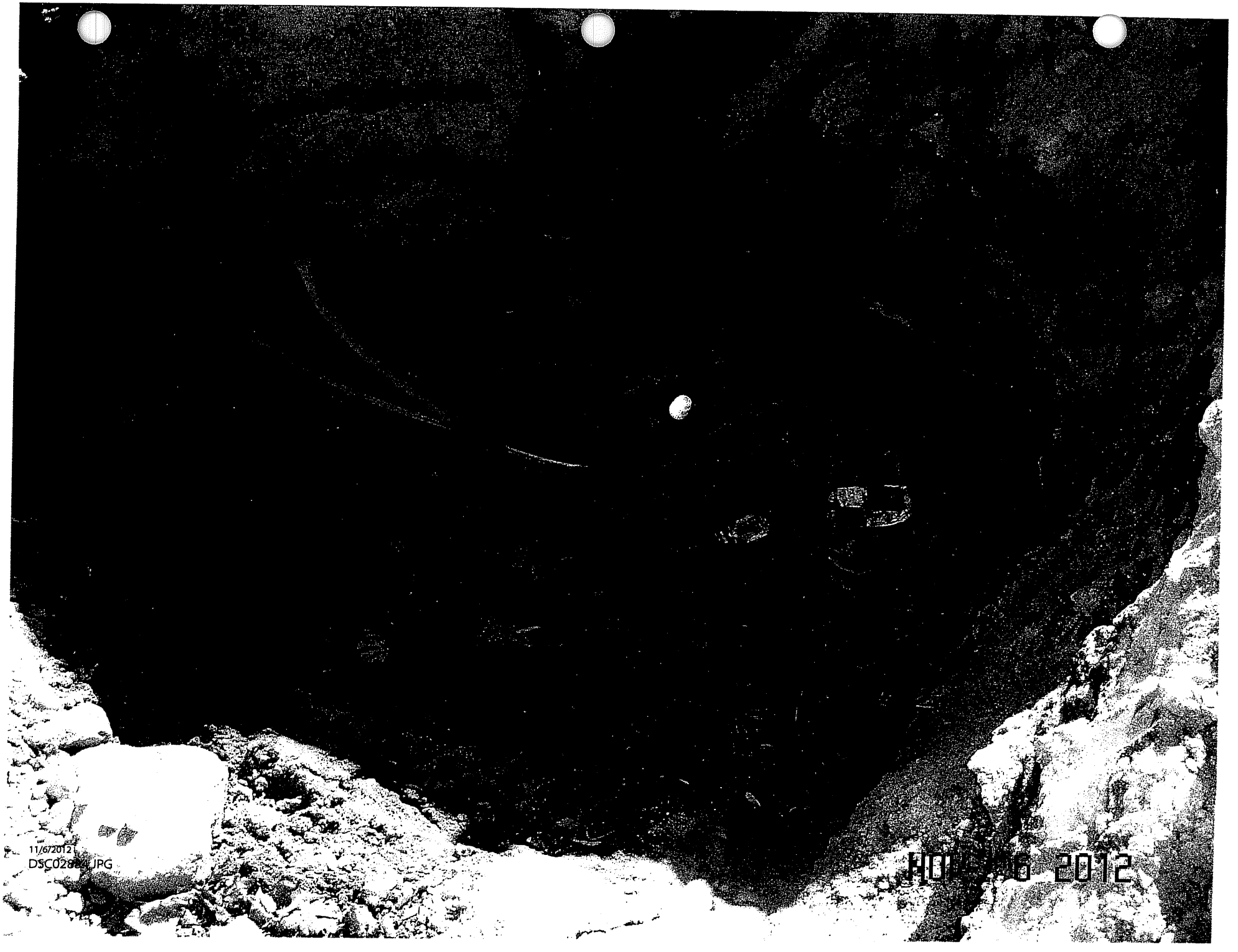
Signature of Owner(s) _____ **Date** _____

Signature of Owner(s) _____ **Date** _____

Signature of Owner(s) _____ **Date** _____

Signature of Owner(s) _____ **Date** _____

Signature of Owner(s) _____ **Date** _____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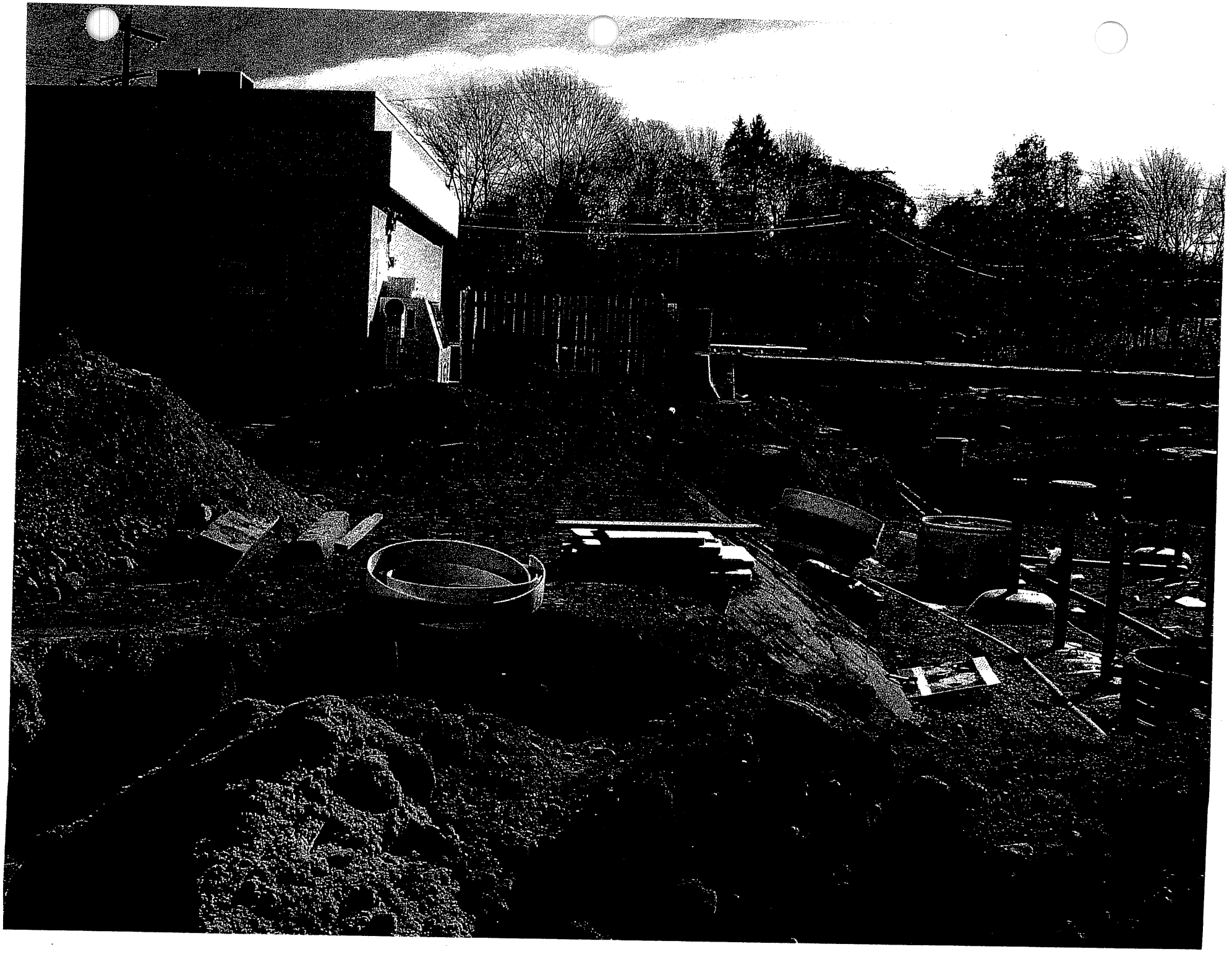
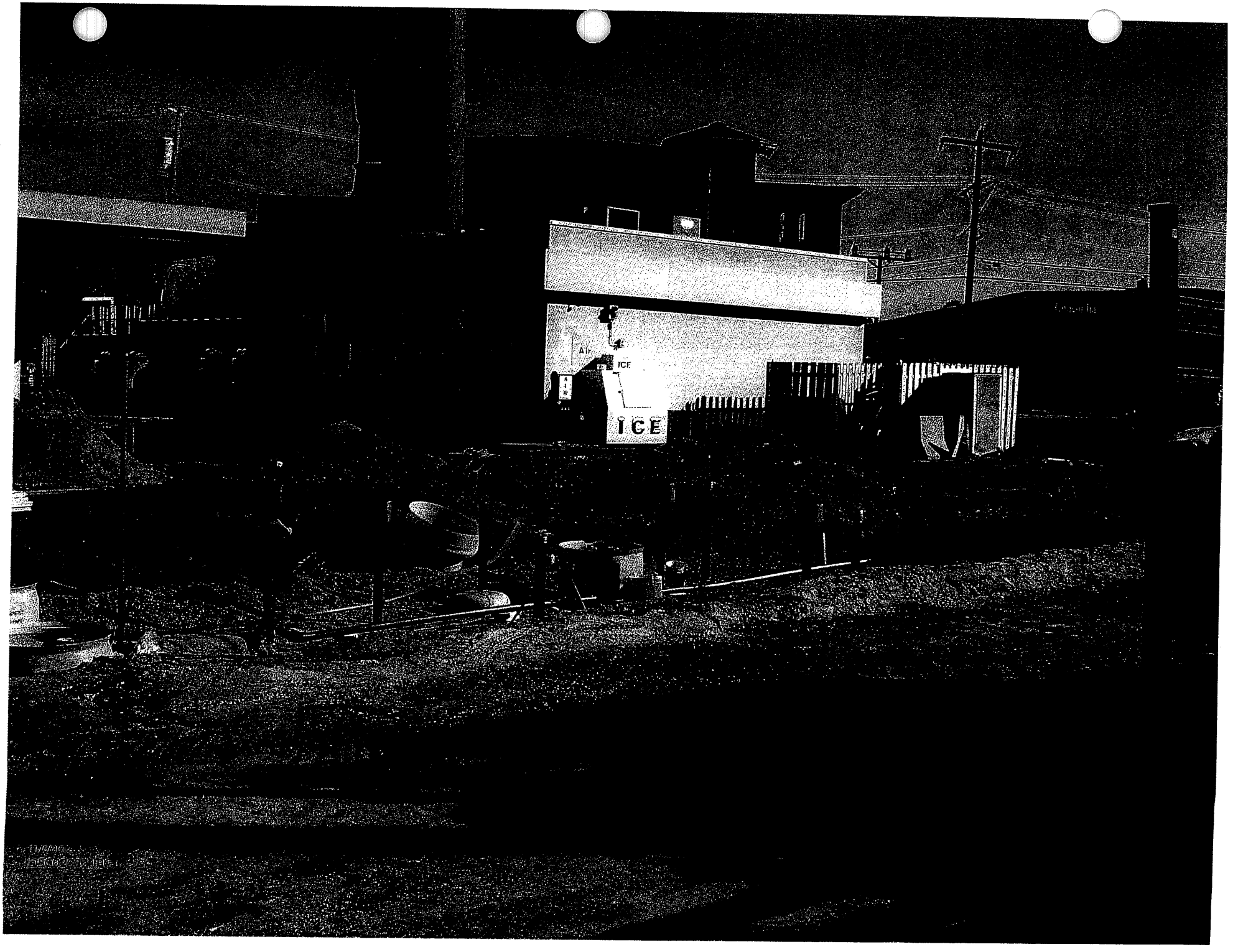



ICE

KCWA

Kent County Water Authority

October 16, 2012

Mr. Thomas W. Breckel
Vice President Operations/HS & E
Eastside Enterprises, LLC
2050 Plainfield Pike
Cranston, RI 02921

Re: Contaminated Soil Abatement. Underground Fuel Storage Tank Requirement
642 Washington Street, Coventry

Dear Mr. Breckel:

The Kent County Water Authority is very concerned that contaminated soil from leaking underground storage tanks and construction activities to replace the leaking tanks at the above referenced site compromises the perpetual integrity of the existing 12 inch public water main that transitions across the property between the building and the fuel storage tank. Based on our observation, excavation and removal of contaminated soil occurred in a manner that allowed contaminated soil to remain around the existing water main. This represents the potential for contamination of the public water system supply should a break occur in this area. The integrity of the cast iron water main has been further compromised by the construction methods used over the strip of property in the water main corrider. This area was extensively used as the construction route for heavy excavation equipment and 20 wheel hauling vehicles. Natural attenuation of the petroleum hydro carbons around this public water main is unacceptable. All of the soil must be removed from around the water main and replaced with clean gravel to mitigate the potential for contamination of the public water supply.

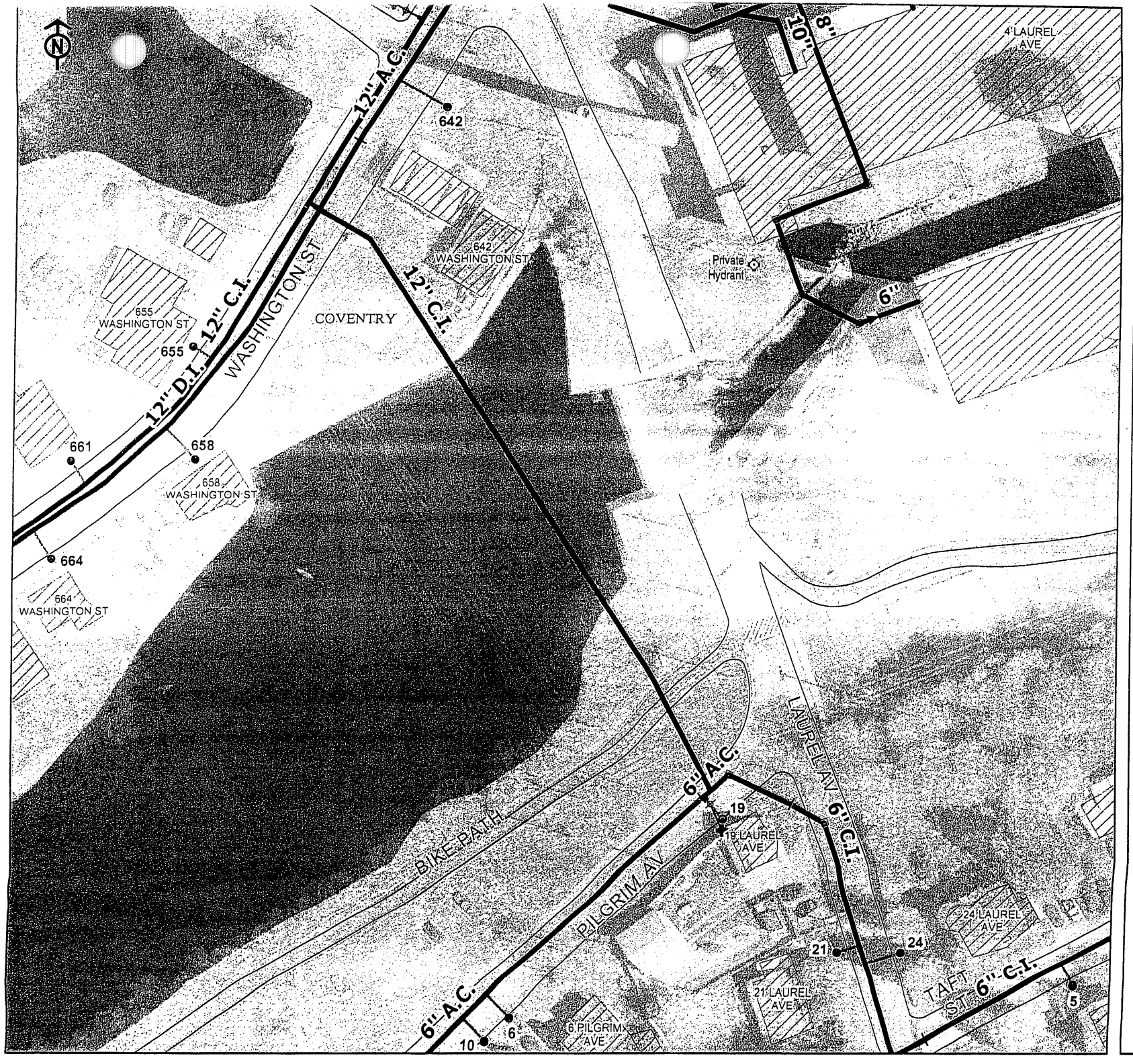
Also, please be advised that the Kent County Water Authority will not be responsible for any property damage that may in the future occur as a result of a main failure within this property due to these construction operations. Colbea Enterprises, LLC must take immediate action to mitigate the impending health hazards to the public water system regarding the contaminated soil. At that time the existing infrastructure can be inspected for damage resultant from the heavy equipment used in the underground tank replacement work. Your immediate attention to this matter is greatly appreciated. Please feel free to call us if you have any questions regarding this situations required remediation work in the vicinity of our infrastructure.

Very truly yours,
Kent County Water Authority

Timothy J. Brown, P.E.
General Manager/Chief Engineer

Cc: Board Members
Patrick J. Sullivan, Esq
Kevin Gillen, RIDEM, Office of Waste Management Underground Storage Tank Program
June Swallow, State of RI Department of Health, Office of Drinking Water Quality

PO Box 192
West Warwick, RI 02893-0192
401-821-9300
www.kentcountywater.org



Legend

- Service Boxes
- Meterpits

SERVICE LINES
- Active Line
- Fire Line
- Suspense
- Cut and Capped

FITTINGS
- Bend
- Cap / Plug
- Cross
- Reducer
- Tee

VALVES
- Air Release
- Blow Off
- Butterfly
- Gate
- Hydrant Valve
- Pressure Reducing

MAINS

Service Area
- South Zone High (500')
- Reduced High (500')
- North Zone High (500')
- Low (334')
- Low Service Reduced
- Bald Hill Pressure Gradient(23
- Oaklawn (231')
- Hope Road Booster Gradient
- Tiogue RP2 Pressure Gradien

- Hydrants
- Hydrant Lines

- WELLS
- TANKS
- PUMP STATIONS
- EASEMENTS

0 25 50 100 Feet

This Map Is for planning purposes only. Use caution when interpreting positional accuracy.

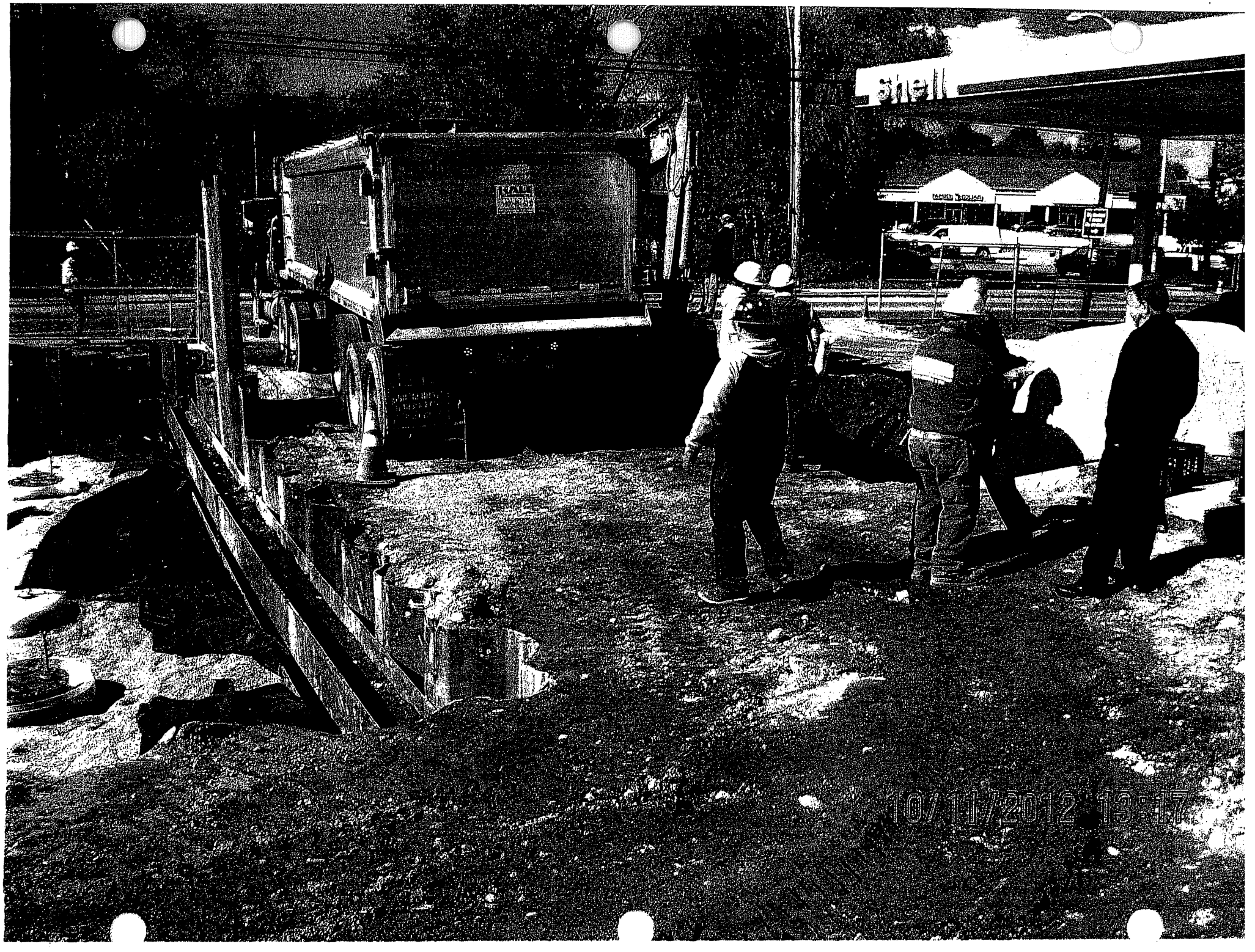
Author: DGoodrich
Printed: 10/15/2012

KCWA


09/20/2012 10:05


09/14/2012 10:1


10/11/2012 13:16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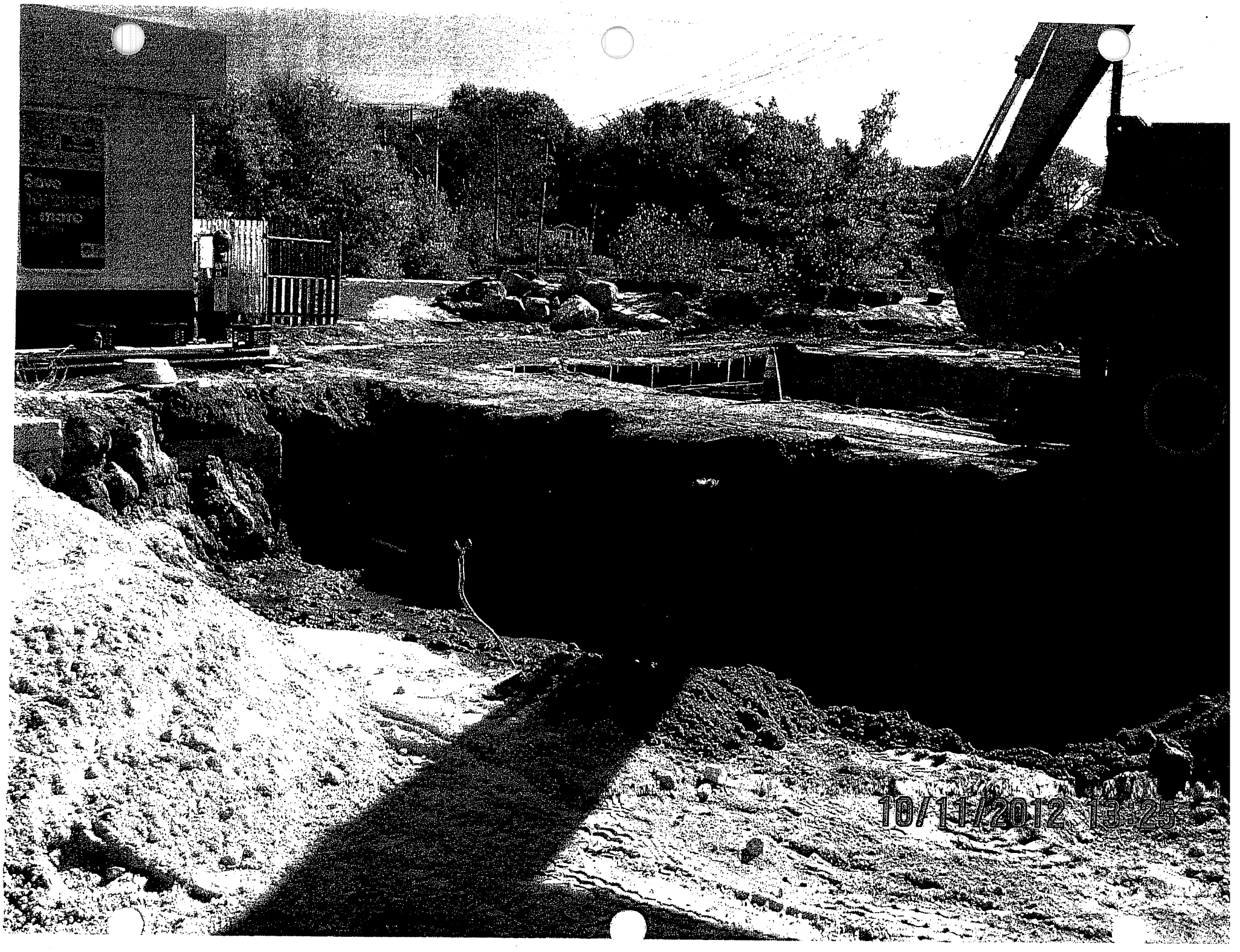
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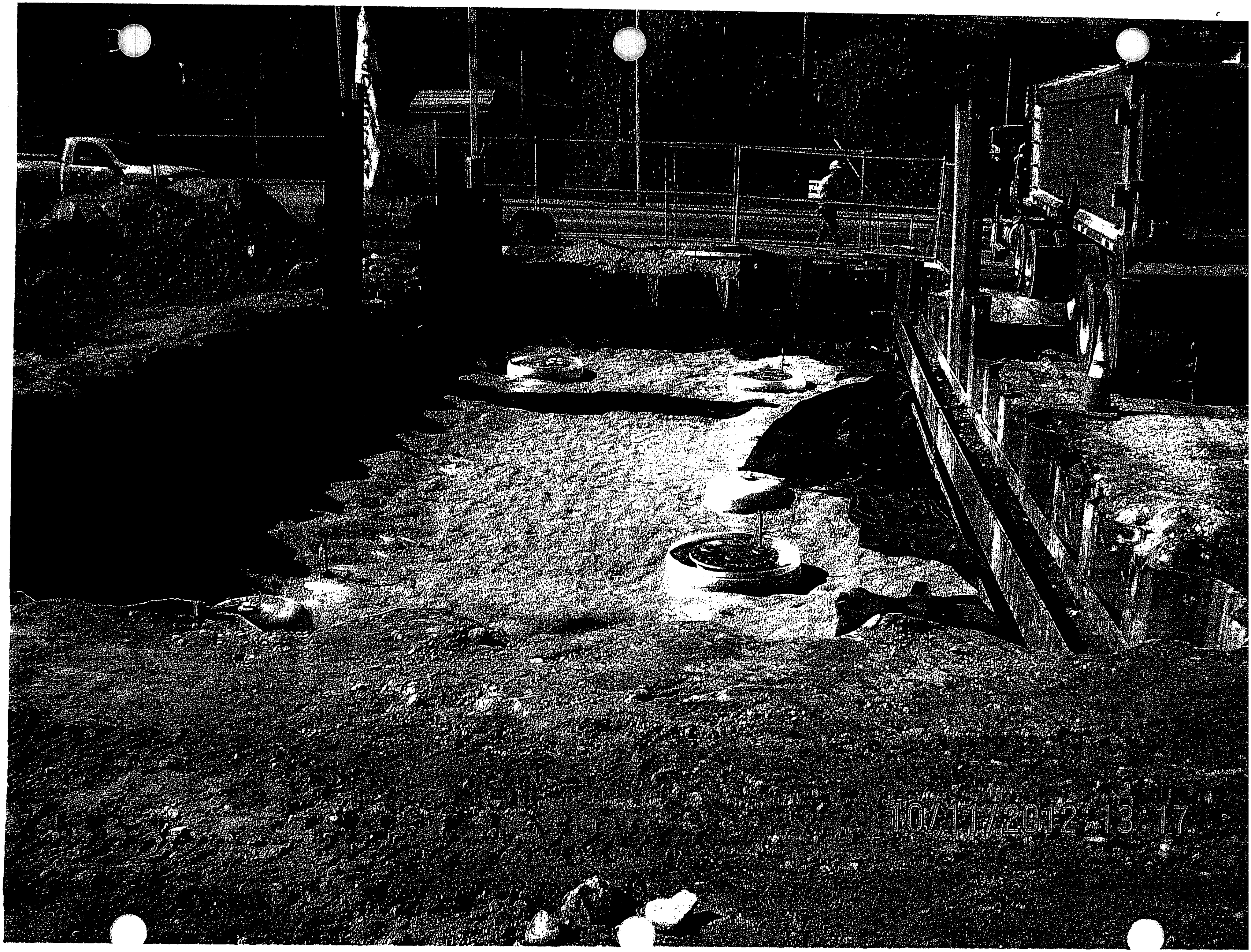

10/11/2012 13:17

Tel-Con Memo

To: File
Between: Tim Brown and Tom Greco
Subject: Colbea Enterprises, LLC, 642 Washington Street, Shell Gas Station Contamination, Water Main Issue
Date: November 1, 2012

I received a call today from Mr. Tom Greco from the Shell Gas Station, 642 Washington Street. He indicated to me that he was concerned with the service and that he wasn't going to cut up the floor to replace the service to the facility. He indicated that they had dug out material around the stop and the service pipe replacing it with clean material so that he could reestablish the service. I indicated to him that we recommended that the service be replaced because of the potential of hydrocarbon contamination within the service pipe and that it is extremely difficult to get out with flushing and chlorination. I also indicated to him that he really needed to discuss the whole issue because the service is connected to the main and the main itself needs to be reviewed and the contamination removed; in particular, with the fact that the loading of the trucks and the potential of sidewall movement because of that loading. He indicated to me that I wasn't working with him and he was willing to take the material off the top of the pipe and that we were not willing to replace the pipe at our cost. This is the first time I was told they were going to remove the overburden. I stated to him that we don't have the ability to do that at this point and he indicated that I'm not willing to work with him and that he will turn the matter over to his attorney. I stated to him if that is what he chose to do than he certainly could do that and he also indicated that this would become a public matter and that he would make it a public matter. So at this point since the Attorney Mr. John Russell has not set up a meeting as he indicated in our discussion on September 24, 2012 it leaves me no alternative but to turn this matter over to our attorney for resolution. I will contact our Attorney Mr. Sullivan and ask him to enter the picture and represent the Kent County Water Authority on this issue.

Received a call from Attorney Campalone and directed he call our Attorney Mr. Sullivan.

KCWA

Kent County Water Authority

November 5, 2012

Mr. Patrick J. Sullivan, Esq.
Sullivan & Sullivan
505 Tiogue Avenue, Suite B
Coventry, RI 02816

Sent via email: psullivan@sullivan-attorneys.com

Re: 642 Washington Street, Shell Gas Station
Coventry, Rhode Island

Dear Mr. Sullivan:

Thank you for your letter of November 2, 2012. Unfortunately, we believe there is more to the problem than indicated in your letter. This is an extremely difficult site to work with because of the dammed impoundment of water just behind the gas station where one connection would have to be made if the pipe is replaced. Furthermore, we are not aware of the extent of the contamination or the type of contamination that is on site which would dictate possibly the type of pipe or gasket material that would be required. Connection of that pipe and disinfection of that pipe is more entailed than just replacing the pipe. Furthermore, we are not aware that the Authority will purchase any pipe for that site as we do not believe we are responsible for any of the contamination. There is a question whether the pipe needs replacement at all. We have not found any easement on that site and believe it is prescriptive. We suspect it went with the sale of the property sometime in the early 1960's with the station construction. Therefore, we do not believe you will find an easement. We have offered to both attorneys in my discussions with them to meet at anytime and await their notice of a meeting with a date and time once they have contacted their client.

Very truly yours,
Kent County Water Authority

Timothy J. Brown, P.E.
General Manager/Chief Engineer

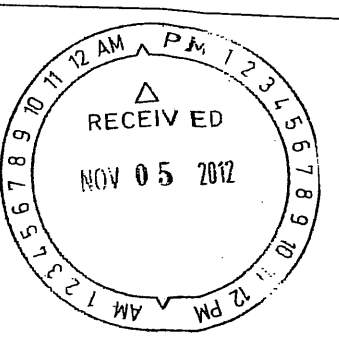
Cc: Board Members

TB/lms

PO Box 192
West Warwick, RI 02893-0192
401-821-9300
www.kentcountywater.org

SULLIVAN & SULLIVAN

505 Tiogue Avenue
Suite B
Coventry, Rhode Island 02816



Patrick J. Sullivan
Richard P. Sullivan, Of Counsel

November 2, 2012

Timothy J. Brown, P.E.
General Manager/Chief Engineer
PO Box 192
West Warwick, RI 02893-192

RE: 642 WASHINGTON ST., COVENTRY

Dear Mr. Brown:

Tim, per your letter and our conversation, I contacted Atty. Campellone, the new attorney handling this matter at Adler Pollock & Sheehan. He told me that John Russell, his predecessor, is out of the country, so now it is his case now. We discussed the issues surrounding the main, and the contaminated soil, and the disturbance. I told him we may need a meeting with all involved. He would like to get the matter resolved quickly so they can pour their cement, asphalt, etc...before the plants close. I'll leave the meeting up to you.

After discussion, they have offered (and I don't know if you are aware of this, but perhaps you are) to replace the water main, if we buy the pipe. They will remove the contaminated soil and replace the pipe to a point on their property before it goes under the river. I understand this will require a temporary service, and I do not know the other considerations (pressurization, customer notice, etc...) that we must consider. I think we need a meeting to either attempt to finalize this, or we need to resolve the issues in court.

As a final note, he claims there was no easement. I reminded him however, that dig safe was aware of it, so the likelihood of an easement is high. I will search for one on Monday. I will await to hear from you, or call me anytime on this matter.

Very truly yours,

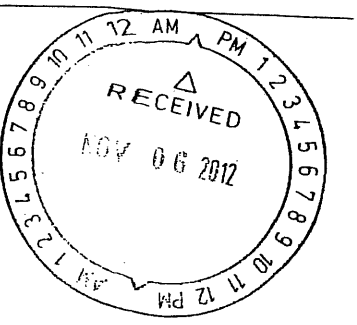
Patrick J. Sullivan, Esq.
Attorney at Law

PJS/bms

401.823.7991
401.823.4040 Facsimile
www.sullivan-attorneys.com

SULLIVAN & SULLIVAN

505 Tiogue Avenue
Suite B
Coventry, Rhode Island 02816



Patrick J. Sullivan
Richard P. Sullivan, Of Counsel

November 5, 2012

Timothy J. Brown, P.E.
General Manager Chief Engineer
PO Box 192
West Warwick, RI 02893-192

RE: 642 WASHINGTON ST., COVENTRY

Dear Mr. Brown:

I am in receipt of your letter dated November 5, 2012 regarding the above captioned matter. I have communicated your request for a meeting with Mr. Campellone to be set up this week. I will advise.

I also received a copy of a letter addressed to you from Mr. Campellone regarding the soil contamination. I have attached it. The letter from Clean Environment, Inc. indicates that they inspected the soil surrounding the pipe at the above location, and according to the letter, "no further excavation is required ". If I am reading this correctly, the soil samples were "visually and olfactory (sic) inspected", or shall I say viewed and smelled? There appears to be some scientifically analyzed data available as well. I don't know if this addresses your concern, however I think a meeting would be much more productive.

I will await a response from Mr. Campellone and advise you upon receipt. Should you have any questions or concerns, kindly contact me at your convenience.

Very truly yours,

Patrick J. Sullivan, Esq.
Attorney at Law

PJS/bms

401.823.7991
401.823.4040 Facsimile
www.sullivan-attorneys.com

Clean Environment Inc.
P.O. Box 40934 • Providence, RI 02940 • Tel: 401-295-0840 • Fax: 401-295-7968
Working for a Cleaner Environment

November 2, 2012

Mr.,Timothy J. Brown. P.E.
General Manager/Chief Engineer
Kent County Water Authority
P.O Box 192
West Warwick, RI 02893-0192

RE: ***Inspection of Soil Surrounding Water Pipe Excavations for the Shell Oil Property Located at 642 Washington Street, Coventry, Rhode Island***

Dear Mr. Brown:

Clean Environment Inc. (CEI) is please to submit this soil inspection letter for the property known as the Shell Oil Property located at 642 Washington Street in Coventry, RI (herein referred to as "the Site"). The soil inspection was performed on Thursday, November 1, 2012. The purpose of the soil inspection was to determine the condition of the soils surrounding the water pipe entering the Site from the water main located Washington Street and the soil surrounding the water pipe entering the Site's building.

CEI personnel collected soil samples from the two water pipe locations and these soil samples were field screened via head space analysis with a photo ionization detector (PID) for elevated levels of volatile organic compounds (VOCs).

The soil samples were also visually and olfactory observed for elevated levels of VOCs. The results of the visual, olfactory and head space analysis of the soil samples collected from the two water pipe locations were below Rhode Island Department of Environmental Management (RI DEM) regulations for a property located within a GA groundwater classification area.

Based upon this data, no further excavation of soil is required for these two water pipe locations.

Please call me at 295-0840 if you have any questions or if you need any additional information.

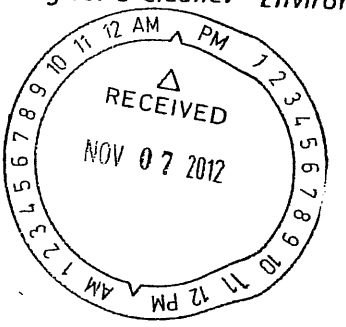
Sincerely,
CLEAN ENVIRONMENT INC.

John E. Lavoie, C.P.G.
President

cc Tom Breckel-Colbea

B

Clean Environment Inc.
Working for a Cleaner Environment
P.O. Box 40934 • Providence, RI 02940 • Tel: 401-295-0840 • Fax: 401-295-7968



November 6, 2012

Mr.,Timothy J. Brown. P.E.
General Manager/Chief Engineer
Kent County Water Authority
P.O Box 192
West Warwick, RI 02893-0192

RE: ***Inspection of Soil Surrounding Water Pipe Excavations for the Shell Oil Property Located at 642 Washington Street, Coventry, Rhode Island***

Dear Mr. Brown:

Tom Breckel of Colbea Enterprises, LLC asked me to describe to you the soil excavations in the area surrounding the water pipe entering the Site and the soil excavation around the area of the water pipe entering the Site's building.

The petroleum contaminated soil surrounding these two locations was excavated and disposed of at the Central Landfill. In the area where the water pipe enter Site, the soil was excavated to a depth of 10' to 12' below grade surface (bgs) and approximately three feet behind the water pipe and approximately 5' to 6' on each side of the water pipe.

Following the soil excavation, the Rhode Island Department of Environmental Management (RI DEM) required confirmatory soil samples of the soil remaining on the Site. The soil sample collected from the soil in the area of the water pipe entering the Site was submitted to the laboratory for volatile organic compounds (VOCs) via EPA Method 8260. The results of this analysis was below RI DEM regulatory limits for a property located within a GA groundwater classification area.. This analytical method is required by the RI DEM for gasoline compounds. Total petroleum hydrocarbons (TPH) analysis of soil samples is required by the RI DEM for fuel oil spills and therefore was not required for this Site. The soil sample collected from the area of the pipe entering the Site's building was also submitted to the laboratory for VOC analysis. The soil sample was also below RI DEM regulatory limits for a property located within a GA groundwater classification area. The Certificate of Analysis for these soil samples is attached to this Letter.

A total of ten confirmatory soil samples were collected following the petroleum contaminated soil excavation. The data for all soil results along with all soil disposal documentation will be included in the UST Closure Assessment Report which will be submitted to the RI DEM.

Please call me at 295-0840 if you have any questions or if you need any additional information.

Sincerely,
CLEAN ENVIRONMENT INC.

John E. Lavoie, C.P.G.
President

cc Tom Breckel-Colbea

NETLAB

REPORT OF ANALYTICAL RESULTS

NETLAB Case Number Y0927-10

Prepared for:

Attn: John Lavoie
Clean Environment
PO Box 40934
Providence, RI 02940

Report Date: October 4, 2012

Reviewed by:

Richard Warila
Laboratory Director

Lab # RI010

NEW ENGLAND TESTING LABORATORY, INC.
1254 Douglas Avenue, North Providence, RI 02904
(401) 353-3420

Total # of Pages: 19

SAMPLES SUBMITTED and REQUEST FOR ANALYSIS:

The samples listed in Table I were submitted to New England Testing Laboratory on September 27, 2012. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provided to us by the client which are indicated on the custody record. The case number for this sample submission is Y0927-10.

Custody records are included in this report.

Project: Shell – Coventry

TABLE I, Samples Submitted

Sample ID	Date Sampled	Matrix	Analysis Requested
SS-B-C	9/27/12	Soil	Table II
SS-B-N	9/27/12	Soil	Table II
SS-B-S	9/27/12	Soil	Table II

TABLE II, Analysis and Methods

ANALYSIS	PREPARATION METHOD	DETERMINATIVE METHOD
Volatile Organic Componds	5035	8260B

These methods are documented in:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd ed., USEPA.

CASE NARRATIVE:

Sample Receipt:

No trip blank was supplied unless it was identified in such a manner as to be un-interpretable by the laboratory. No field blank was supplied unless it was identified in such a manner as to be un-interpretable by the laboratory. (This does not qualify the analytical results but does prevent conducting these SW-846 {Chapter 1, Section 3.4} QA Audits).

The samples were all appropriately cooled and preserved upon receipt.

The samples were received in the appropriate containers.

The chain of custody was adequately completed and corresponded to the samples submitted.

Volatile Organic Compounds:

All samples were analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

RESULTS: VOLATILE ORGANIC COMPOUNDS

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Organics Analysis Department certifies that the samples included in this section have been prepared and analyzed using the procedures cited and that the results have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

VOLATILE ORGANICS ANALYSIS DATA SHEET

NETLAB

Case No.: Y0927-10
Method: 8260
Matrix: (soil/water) SOIL
Sample wt/vol: 28.1 (g/ml) G
% Moisture 8.41
Soil Extract Volume: _____ (uL)
Analyst's Initials: AM

Client Name: Clean Environment
Lab Sample ID: SS-B-C
Lab File ID: C100248.D
Date Sampled: 9/27/2012
Date Analyzed: 10/3/2012
Dilution Factor: 1.0
Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	UNITS: UG/KG	Q
75-01-4	Vinyl Chloride	19	U
74-83-9	Bromomethane	19	U
75-00-3	Chloroethane	19	U
67-64-1	Acetone	97	U
75-35-4	1,1-Dichloroethene	19	U
75-15-0	Carbon Disulfide	19	U
75-09-2	Methylene Chloride	19	U
1634-04-4	tert-Butyl methyl ether	19	U
156-60-5	trans-1,2 Dichloroethene	19	U
75-34-3	1,1-Dichloroethane	19	U
78-93-3	2-Butanone	97	U
594-20-7	2,2-Dichloropropane	19	U
156-59-2	cis-1,2-Dichloroethene	19	U
67-66-3	Chloroform	19	U
74-97-5	Bromochloromethane	19	U
71-55-6	1,1,1-Trichloroethane	19	U
563-58-6	1,1-Dichloropropene	19	U
56-23-5	Carbon Tetrachloride	19	U
71-43-2	Benzene	19	U
107-06-2	1,2-Dichloroethane	19	U
79-01-6	Trichloroethene	19	U
78-87-5	1,2-Dichloropropane	19	U
75-27-4	Bromodichloromethane	19	U
74-95-3	Dibromomethane	19	U
108-10-1	4-Methyl-2-pentanone	97	U
106-93-4	Ethylene Dibromide	19	U
10061-01-5	cis-1,3-Dichloropropene	19	U
108-88-3	Toluene	34	
10061-02-6	Trans-1,3-Dichloropropene	19	U
79-00-5	1,1,2-Trichloroethane	19	U
591-78-6	2-Hexanone	97	U
127-18-4	Tetrachloroethene	19	U
124-48-1	Chlorodibromomethane	19	U
108-90-7	Chlorobenzene	19	U
630-20-6	1,1,1,2-Tetrachloroethane	19	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

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Dilution Factor: 1.0
Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	UNITS: UG/KG	Q
100-41-4	Ethylbenzene	19	U
1330-20-7	m & p-Xylene	39	U
95-47-6	o-Xylene	19	U
100-42-5	Styrene	19	U
75-25-2	Bromoform	19	U
98-82-8	Isopropylbenzene	19	U
79-34-5	1,1,2,2-Tetrachloroethane	19	U
108-86-1	Bromobenzene	19	U
96-18-4	1,2,3-Trichloropropane	19	U
95-49-8	2-Chlorotoluene	19	U
103-65-1	n-Propylbenzene	19	U
108-67-8	1,3,5-Trimethylbenzene	19	U
106-43-4	4-Chlorotoluene	19	U
98-06-6	tert-Butylbenzene	19	U
95-63-6	1,2,4-Trimethylbenzene	19	U
135-98-8	sec-Butylbenzene	19	U
99-87-6	p-Isopropyltoluene	19	U
75-87-3	Chloromethane	19	U
75-65-0	tert butyl alcohol	19	U
541-73-1	1,3-Dichlorobenzene	19	U
109-99-9	Tetrahydrofuran	19	U
106-46-7	1,4-Dichlorobenzene	19	U
60-29-7	Diethyl Ether	19	U
104-51-8	n-Butylbenzene	19	U
95-50-1	1,2-Dichlorobenzene	19	U
96-12-8	1,2-Dibromo-3-chloropropane	19	U
120-82-1	1,2,4-Trichlorobenzene	19	U
87-68-3	Hexachlorobutadiene	19	U
91-20-3	Naphthalene	19	U
87-61-6	1,2,3-Trichlorobenzene	19	U
994-05-8	Tert-amyl Methyl Ether	19	U
75-71-8	Dichlorodifluoromethane	19	U
142-28-9	1,3-Dichloropropane	19	U
75-69-4	Trichlorofluoromethane	19	U
637-92-3	Ethyl Tert-butyl ether	19	U

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Date Analyzed: 10/3/2012
Dilution Factor: 1.0
Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	UNITS: UG/KG	Q
108-20-3	Diisopropyl Ether	19	U
123-91-1	1,4-Dioxane	4800	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

VOLATILE ORGANICS ANALYSIS DATA SHEET

NETLAB

Case No.: Y0927-10
Method: 8260
Matrix: (soil/water) SOIL
Sample wt/vol: 26.3 (g/ml) G
% Moisture 7.44
Soil Extract Volume: _____ (uL)
Analyst's Initials: AM

Client Name: Clean Environment
Lab Sample ID: SS-B-N
Lab File ID: C100247.D
Date Sampled: 9/27/2012
Date Analyzed: 10/3/2012
Dilution Factor: 1.0
Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	UNITS: UG/KG	Q
75-01-4	Vinyl Chloride	20	U
74-83-9	Bromomethane	20	U
75-00-3	Chloroethane	20	U
67-64-1	Acetone	100	U
75-35-4	1,1-Dichloroethene	20	U
75-15-0	Carbon Disulfide	20	U
75-09-2	Methylene Chloride	20	U
1634-04-4	tert-Butyl methyl ether	20	U
156-60-5	trans-1,2 Dichloroethene	20	U
75-34-3	1,1-Dichloroethane	20	U
78-93-3	2-Butanone	100	U
594-20-7	2,2-Dichloropropane	20	U
156-59-2	cis-1,2-Dichloroethene	20	U
67-66-3	Chloroform	20	U
74-97-5	Bromochloromethane	20	U
71-55-6	1,1,1-Trichloroethane	20	U
563-58-6	1,1-Dichloropropene	20	U
56-23-5	Carbon Tetrachloride	20	U
71-43-2	Benzene	20	U
107-06-2	1,2-Dichloroethane	20	U
79-01-6	Trichloroethene	20	U
78-87-5	1,2-Dichloropropane	20	U
75-27-4	Bromodichloromethane	20	U
74-95-3	Dibromomethane	20	U
108-10-1	4-Methyl-2-pentanone	100	U
106-93-4	Ethylene Dibromide	20	U
10061-01-5	cis-1,3-Dichloropropene	20	U
108-88-3	Toluene	20	U
10061-02-6	Trans-1,3-Dichloropropene	20	U
79-00-5	1,1,2-Trichloroethane	20	U
591-78-6	2-Hexanone	100	U
127-18-4	Tetrachloroethene	20	U
124-48-1	Chlorodibromomethane	20	U
108-90-7	Chlorobenzene	20	U
630-20-6	1,1,1,2-Tetrachloroethane	20	U

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New England Testing Laboratory, Inc.

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% Moisture 7.44
Soil Extract Volume: _____ (uL)
Analyst's Initials: AM

Client Name: Clean Environment
Lab Sample ID: SS-B-N
Lab File ID: C100247.D
Date Sampled: 9/27/2012
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Dilution Factor: 1.0
Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	UNITS: UG/KG	Q
100-41-4	Ethylbenzene	20	U
1330-20-7	m & p-Xylene	41	U
95-47-6	o-Xylene	20	U
100-42-5	Styrene	20	U
75-25-2	Bromoform	20	U
98-82-8	Isopropylbenzene	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U
108-86-1	Bromobenzene	20	U
96-18-4	1,2,3-Trichloropropane	20	U
95-49-8	2-Chlorotoluene	20	U
103-65-1	n-Propylbenzene	20	U
108-67-8	1,3,5-Trimethylbenzene	20	U
106-43-4	4-Chlorotoluene	20	U
98-06-6	tert-Butylbenzene	20	U
95-63-6	1,2,4-Trimethylbenzene	20	U
135-98-8	sec-Butylbenzene	20	U
99-87-6	p-Isopropyltoluene	20	U
75-87-3	Chloromethane	20	U
75-65-0	tert butyl alcohol	20	U
541-73-1	1,3-Dichlorobenzene	20	U
109-99-9	Tetrahydrofuran	20	U
106-46-7	1,4-Dichlorobenzene	20	U
60-29-7	Diethyl Ether	20	U
104-51-8	n-Butylbenzene	20	U
95-50-1	1,2-Dichlorobenzene	20	U
96-12-8	1,2-Dibromo-3-chloropropane	20	U
120-82-1	1,2,4-Trichlorobenzene	20	U
87-68-3	Hexachlorobutadiene	20	U
91-20-3	Naphthalene	20	U
87-61-6	1,2,3-Trichlorobenzene	20	U
994-05-8	Tert-amyl Methyl Ether	20	U
75-71-8	Dichlorodifluoromethane	20	U
142-28-9	1,3-Dichloropropane	20	U
75-69-4	Trichlorofluoromethane	20	U
637-92-3	Ethyl Tert-butyl ether	20	U

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New England Testing Laboratory, Inc.

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NETLAB

Case No.: Y0927-10
Method: 8260
Matrix: (soil/water) SOIL
Sample wt/vol: 26.3 (g/ml) G
% Moisture 7.44
Soil Extract Volume: _____ (uL)
Analyst's Initials: AM

Client Name: Clean Environment
Lab Sample ID: SS-B-N
Lab File ID: C100247.D
Date Sampled: 9/27/2012
Date Analyzed: 10/3/2012
Dilution Factor: 1.0
Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	UNITS: UG/KG	Q
108-20-3	Diisopropyl Ether	20	U
123-91-1	1,4-Dioxane	5100	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

VOLATILE ORGANICS ANALYSIS DATA SHEET

NETLAB

Case No.: Y0927-10
Method: 8260
Matrix: (soil/water) SOIL
Sample wt/vol: 28.5 (g/ml) G
% Moisture 10.25
Soil Extract Volume: _____ (uL)
Analyst's Initials: AM

Client Name: Clean Environment
Lab Sample ID: SS-B-S
Lab File ID: C100249.D
Date Sampled: 9/27/2012
Date Analyzed: 10/3/2012
Dilution Factor: 1.0
Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	UNITS: UG/KG	Q
75-01-4	Vinyl Chloride	19	U
74-83-9	Bromomethane	19	U
75-00-3	Chloroethane	19	U
67-64-1	Acetone	97	U
75-35-4	1,1-Dichloroethene	19	U
75-15-0	Carbon Disulfide	19	U
75-09-2	Methylene Chloride	19	U
1634-04-4	tert-Butyl methyl ether	19	U
156-60-5	trans-1,2 Dichloroethene	19	U
75-34-3	1,1-Dichloroethane	19	U
78-93-3	2-Butanone	97	U
594-20-7	2,2-Dichloropropane	19	U
156-59-2	cis-1,2-Dichloroethene	19	U
67-66-3	Chloroform	19	U
74-97-5	Bromochloromethane	19	U
71-55-6	1,1,1-Trichloroethane	19	U
563-58-6	1,1-Dichloropropene	19	U
56-23-5	Carbon Tetrachloride	19	U
71-43-2	Benzene	19	U
107-06-2	1,2-Dichloroethane	19	U
79-01-6	Trichloroethene	19	U
78-87-5	1,2-Dichloropropane	19	U
75-27-4	Bromodichloromethane	19	U
74-95-3	Dibromomethane	19	U
108-10-1	4-Methyl-2-pentanone	97	U
106-93-4	Ethylene Dibromide	19	U
10061-01-5	cis-1,3-Dichloropropene	19	U
108-88-3	Toluene	19	U
10061-02-6	Trans-1,3-Dichloropropene	19	U
79-00-5	1,1,2-Trichloroethane	19	U
591-78-6	2-Hexanone	97	U
127-18-4	Tetrachloroethene	19	U
124-48-1	Chlorodibromomethane	19	U
108-90-7	Chlorobenzene	19	U
630-20-6	1,1,1,2-Tetrachloroethane	19	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

VOLATILE ORGANICS ANALYSIS DATA SHEET

NETLAB

Case No.: Y0927-10
Method: 8260
Matrix: (soil/water) SOIL
Sample wt/vol: 28.5 (g/ml) G
% Moisture 10.25
Soil Extract Volume: _____ (uL)
Analyst's Initials: AM

Client Name: Clean Environment
Lab Sample ID: SS-B-S
Lab File ID: C100249.D
Date Sampled: 9/27/2012
Date Analyzed: 10/3/2012
Dilution Factor: 1.0
Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	UNITS: UG/KG	Q
100-41-4	Ethylbenzene	19	U
1330-20-7	m & p-Xylene	39	U
95-47-6	o-Xylene	19	U
100-42-5	Styrene	19	U
75-25-2	Bromoform	19	U
98-82-8	Isopropylbenzene	19	U
79-34-5	1,1,2,2-Tetrachloroethane	19	U
108-86-1	Bromobenzene	19	U
96-18-4	1,2,3-Trichloropropane	19	U
95-49-8	2-Chlorotoluene	19	U
103-65-1	n-Propylbenzene	19	U
108-67-8	1,3,5-Trimethylbenzene	19	U
106-43-4	4-Chlorotoluene	19	U
98-06-6	tert-Butylbenzene	19	U
95-63-6	1,2,4-Trimethylbenzene	19	U
135-98-8	sec-Butylbenzene	19	U
99-87-6	p-Isopropyltoluene	19	U
75-87-3	Chloromethane	19	U
75-65-0	tert butyl alcohol	19	U
541-73-1	1,3-Dichlorobenzene	19	U
109-99-9	Tetrahydrofuran	19	U
106-46-7	1,4-Dichlorobenzene	19	U
60-29-7	Diethyl Ether	19	U
104-51-8	n-Butylbenzene	19	U
95-50-1	1,2-Dichlorobenzene	19	U
96-12-8	1,2-Dibromo-3-chloropropane	19	U
120-82-1	1,2,4-Trichlorobenzene	19	U
87-68-3	Hexachlorobutadiene	19	U
91-20-3	Naphthalene	19	U
87-61-6	1,2,3-Trichlorobenzene	19	U
994-05-8	Tert-amyl Methyl Ether	19	U
75-71-8	Dichlorodifluoromethane	19	U
142-28-9	1,3-Dichloropropane	19	U
75-69-4	Trichlorofluoromethane	19	U
637-92-3	Ethyl Tert-butyl ether	19	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

VOLATILE ORGANICS ANALYSIS DATA SHEET

NELLAB

Case No.: Y0927-10
Method: 8260
Matrix: (soil/water) SOIL
Sample wt/vol: 28.5 (g/ml) G
% Moisture 10.25
Soil Extract Volume: _____ (uL)
Analyst's Initials: AM

Client Name: Clean Environment
Lab Sample ID: SS-B-S
Lab File ID: C100249.D
Date Sampled: 9/27/2012
Date Analyzed: 10/3/2012
Dilution Factor: 1.0
Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	UNITS: UG/KG	Q
108-20-3	Diisopropyl Ether	19	U
123-91-1	1,4-Dioxane	4900	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

VOLATILE ORGANICS ANALYSIS DATA SHEET

NETLAB

Case No.: Y0927-10
Method: 8260
Matrix: (soil/water) SOIL
Sample wt/vol: 10.0 (g/ml) G
% Moisture 0
Soil Extract Volume: _____ (uL)
Analyst's Initials: AM

Client Name: Clean Environment
Lab Sample ID: VBLK100212-2
Lab File ID: C100240.D
Date Sampled: 9/27/2012
Date Analyzed: 10/2/2012
Dilution Factor: 1.0
Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	UNITS: UG/KG	Q
75-01-4	Vinyl Chloride	50	U
74-83-9	Bromomethane	50	U
75-00-3	Chloroethane	50	U
67-64-1	Acetone	250	U
75-35-4	1,1-Dichloroethene	50	U
75-15-0	Carbon Disulfide	50	U
75-09-2	Methylene Chloride	50	U
1634-04-4	tert-Butyl methyl ether	50	U
156-60-5	trans-1,2 Dichloroethene	50	U
75-34-3	1,1-Dichloroethane	50	U
78-93-3	2-Butanone	250	U
594-20-7	2,2-Dichloropropane	50	U
156-59-2	cis-1,2-Dichloroethene	50	U
67-66-3	Chloroform	50	U
74-97-5	Bromochloromethane	50	U
71-55-6	1,1,1-Trichloroethane	50	U
563-58-6	1,1-Dichloropropene	50	U
56-23-5	Carbon Tetrachloride	50	U
71-43-2	Benzene	50	U
107-06-2	1,2-Dichloroethane	50	U
79-01-6	Trichloroethene	50	U
78-87-5	1,2-Dichloropropane	50	U
75-27-4	Bromodichloromethane	50	U
74-95-3	Dibromomethane	50	U
108-10-1	4-Methyl-2-pentanone	250	U
106-93-4	Ethylene Dibromide	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
108-88-3	Toluene	50	U
10061-02-6	Trans-1,3-Dichloropropene	50	U
79-00-5	1,1,2-Trichloroethane	50	U
591-78-6	2-Hexanone	250	U
127-18-4	Tetrachloroethene	50	U
124-48-1	Chlorodibromomethane	50	U
108-90-7	Chlorobenzene	50	U
630-20-6	1,1,1,2-Tetrachloroethane	50	U

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New England Testing Laboratory, Inc.

VOLATILE ORGANICS ANALYSIS DATA SHEET

NELTLAB

Case No.: Y0927-10
Method: 8260
Matrix: (soil/water) SOIL
Sample wt/vol: 10.0 (g/ml) G
% Moisture 0
Soil Extract Volume: _____ (uL)
Analyst's Initials: AM

Client Name: Clean Environment
Lab Sample ID: VBLK100212-2
Lab File ID: C100240.D
Date Sampled: 9/27/2012
Date Analyzed: 10/2/2012
Dilution Factor: 1.0
Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	UNITS: UG/KG	Q
100-41-4	Ethylbenzene	50	U
1330-20-7	m & p-Xylene	100	U
95-47-6	o-Xylene	50	U
100-42-5	Styrene	50	U
75-25-2	Bromoform	50	U
98-82-8	Isopropylbenzene	50	U
79-34-5	1,1,2,2-Tetrachloroethane	50	U
108-86-1	Bromobenzene	50	U
96-18-4	1,2,3-Trichloropropane	50	U
95-49-8	2-Chlorotoluene	50	U
103-65-1	n-Propylbenzene	50	U
108-67-8	1,3,5-Trimethylbenzene	50	U
106-43-4	4-Chlorotoluene	50	U
98-06-6	tert-Butylbenzene	50	U
95-63-6	1,2,4-Trimethylbenzene	50	U
135-98-8	sec-Butylbenzene	50	U
99-87-6	p-Isopropyltoluene	50	U
75-87-3	Chloromethane	50	U
75-65-0	tert butyl alcohol	50	U
541-73-1	1,3-Dichlorobenzene	50	U
109-99-9	Tetrahydrofuran	50	U
106-46-7	1,4-Dichlorobenzene	50	U
60-29-7	Diethyl Ether	50	U
104-51-8	n-Butylbenzene	50	U
95-50-1	1,2-Dichlorobenzene	50	U
96-12-8	1,2-Dibromo-3-chloropropane	50	U
120-82-1	1,2,4-Trichlorobenzene	50	U
87-68-3	Hexachlorobutadiene	50	U
91-20-3	Naphthalene	50	U
87-61-6	1,2,3-Trichlorobenzene	50	U
994-05-8	Tert-amyl Methyl Ether	50	U
75-71-8	Dichlorodifluoromethane	50	U
142-28-9	1,3-Dichloropropane	50	U
75-69-4	Trichlorofluoromethane	50	U
637-92-3	Ethyl Tert-butyl ether	50	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

VOLATILE ORGANICS ANALYSIS DATA SHEET

NELLAB

Case No.: Y0927-10
Method: 8260
Matrix: (soil/water) SOIL
Sample wt/vol: 10.0 (g/ml) G
% Moisture 0
Soil Extract Volume: _____ (uL)
Analyst's Initials: AM

Client Name: Clean Environment
Lab Sample ID: VBLK100212-2
Lab File ID: C100240.D
Date Sampled: 9/27/2012
Date Analyzed: 10/2/2012
Dilution Factor: 1.0
Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	UNITS: UG/KG	Q
108-20-3	Diisopropyl Ether	50	U
123-91-1	1,4-Dioxane	12000	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

2B

SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: New England Testing Laboratory Contract: Shell-Coventry

Lab Code: RI010 Case No.: Y0927-10 SAS No.: Clean SDG No.: Clean Envi

Level: (low/med) MED

	EPA SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	TOT OUT
01	VLCS100212-2	111	101	84	0
02	VBLK100212-2	92	104	95	0
03	SS-B-N	96	95	89	0
04	SS-B-C	89	94	94	0
05	SS-B-S	88	94	99	0

QC LIMITS

SMC1	=	4-Bromofluorobenzene	(70-130)
SMC2	=	Toluene-D8	(70-130)
SMC3	=	1,2-Dichloroethane-D4	(70-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

NELAC LAB

Volatile Organics Laboratory Control Spike

Date Analyzed:10/02/2012

Sample ID: VLCS100212

Compound	Spike Added	Spike Result	Recovery, %	Lower Control Limit, %	Upper Control Limit, %
1,1-Dichloroethene	50.0	57.5	115	70	129
Benzene	50.0	55.6	111	73	129
Trichloroethene	50.0	53.0	106	77	122
Toluene	50.0	56.3	113	75	123
Chlorobenzene	50.0	49.9	100	73	125

NE ENGLAND TESTING LABORATORY, INC.
1254 Douglas Avenue
North Providence, RI 02904
1-888-863-8522

40927-10

CHAIN OF CUSTODY RECORD

PROJ. NO.

PROJECT NAME/LOCATION: SHELL - COVENTRY

CLIENT: CEI

REPORT TO:

INVOICE TO:

DATE	TIME	COMP	GRAB	SAMPLE I.D.	AQUEOUS	SOIL	OTHER	NO. OF CONTAINERS	PRESERVATIVE	TESTS** 6010	REMARKS
9/26/12				SS-B-C ..		✓		2		✓	
				SS-B-N ..		✓		2		✓	
				SS-B-S ..		✓		2		✓	

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
John G. Russo	9/26/12		
Relinquished by: (Signature)	**Date/Time**	**Received by: (Signature)**	**Date/Time**
John G. Russo	9/27/12		
Relinquished by: (Signature)	**Date/Time**	**Received for Laboratory by: (Signature)**	**Date/Time**
			9/27/12 12:10

Laboratory Remarks:
Temp. received: 4°C
Cooled ☐

Special Instructions:
List Specific Detection Limit Requirements:

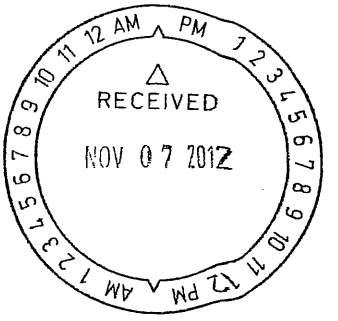
Turnaround (Business Days)_____

**Netlab subcontracts the following tests; Radiologicals, Radon, Asbestos, UCMRs, Perchlorate, Bromate, Bromide, Sieve, Salmonella, Carbamates

ACUREN

Division Headquarters

455 Main St. Bldg. 1 Suite AB
Deep River, CT 06417
Tel: (860) 526-2610
Fax: (860) 526-5018



November 5, 2012

John Duchesneau
Kent County Water Authority
1072 West Main Street
West Warwick, RI 02893

John;

I've enclosed three copies each of the water tank inspection reports produced for the Kent County Water Authority and one copy each of the inspection DVDs for the following(5) tanks;

3.0MG Setian Lane Welded Steel Reservoir- West Warwick, RI
1.5MG Read Schoolhouse Concrete Reservoir- Coventry, RI
1.5MG Frenchtown Road Concrete Reservoir- East Greenwich, RI
3.0 MG Carr Pond Standpipe- West Greenwich, RI
2.0MG Wakefield Standpipe- West Warwick, RI

Thank you for the opportunity to be of service. After you have had a chance to digest this information I would be happy to answer any questions you have.

Very truly yours,

Acuren Inspection

Ted Lund Division Manager

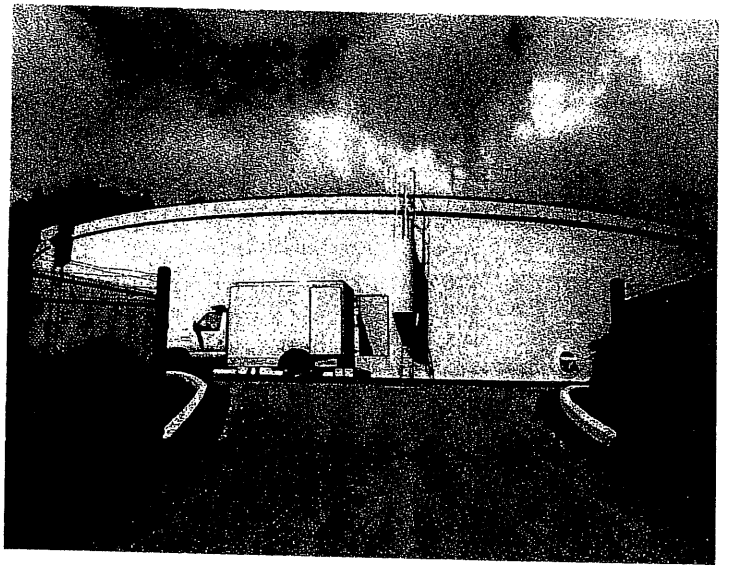
Enclosures

Water Tank Inspection Report

For

Kent County Water Authority

Of the



3.0MG Setian Lane Welded Steel Reservoir
West Warwick, RI

August 28, 2012

ACUREN

455 Main Street Bldg 1 Suite A-B
Deep River, CT 06417
Tel: (860) 526-2610 Fax:(860) 526-5018)
www.extechllc.com

INTRODUCTION

On August 30, 2012 Acuren representatives, Bill Iaquessa and Matt Weaver performed a condition assessment of the exterior and interior of a welded steel ground storage water tank for the KCWA. The inspection was conducted to establish the current condition of the tank's coatings, steel substrate, safety and sanitary equipment.

3.0 MG Welded Steel Ground Reservoir

The tank was inspected in accordance with the latest version of the AWWA D101-53 (86R) standard for water tank inspections as well as the AWWA M42 Tank Manual.

The tank interior was inspected while full and in operation with the TankRover remotely operated vehicle (ROV). The TankRover is the only piece of equipment like it in the United States and was developed by Acuren. By using the TankRover the tank was inspected with no special preparation, no additional disinfection, no confined space entry and no downtime.

The TankRover was prepared for the inspection by disinfecting in accordance with AWWA C652, by spray application of a 200 ppm chlorine solution prior to insertion to the tank.

The exterior portions of the tank were inspected by walking the roof and shell portions that could be inspected from the tank's base. The objectives of the assessment were to:

1. Perform field inspections and tests to assess the structural and coating integrity of the tank
2. Review the safety compliance of tank ladders and access.
3. Determine if sanitary screens on vents and pipes are intact.
4. Formulate a report to document the assessment findings.
5. Provide recommendations for rehabilitation.

EXECUTIVE SUMMARY

The condition and recommendations for the tank is briefly summarized in this section. For detailed information regarding detailed tank conditions and the specific recommendations please refer to the designated section for the tank.

The tank interior and exterior coatings are performing well with minimal failure and no serious corrosion. The tank sanitary protections on the vent, overflow and hatch all meet current industry standards.

The tank floor was cleaned as part of this inspection cycle.

The safety measures for climbers meet the current industry requirements except for the transition from the ladder railing to the area around the roof hatch. Some minor improvements in roof top fall protection are recommended.

The tank will not require interior or exterior repainting prior to the next 5-year inspection.

OBSERVATIONS

Interior and exterior photographs provided in the report were developed from a digital camera and were captured in digital format from the interior videotape. The interior images are as clear as our printing technology will allow. The interior videosnaps in the report provide a reference for our comments. Keep in mind that the videotape provides the greatest detail and should be viewed as part of the report. Each videosnap (VS) is marked with the time stamp from the videotape. This allows the reader to easily view the original footage for each feature.

Narration on the videotape is done in the field and some of the comments may be different than the written report. The written report is the official document and contains the formal opinion of Acuren.

Setian Lane Ground Reservoir

The ground reservoir is 20-ft high and 160-ft in diameter with a capacity of 3.0M gallons. The tank was constructed in 1969 and was last painted in 2006. The tank was last inspected and cleaned in 2009.

INTERIOR

The interior of the tank was accessed through a 24-inch roof hatch that has a 5-inch sanitary curb and a 2-inch hatch lip. There are a total of four roof hatches with identical dimensions and locks, see DP# 18, 21 and 22.

Roof (ceiling)

The roof is a self supporting dome with a radial array of channel style roof rafters extending from the center vent to the upper shell, see DP# 31&32. Typical light seam corrosion was seen on the roof plates edges and edge corrosion on the rafter top and bottom flanges, see VS# 1-3. The rafter ends and butt welded connections to the header beam were in good condition, see DP# 29.

Ladders

There is no interior ladder.

Shell

The interior shell has sporadic areas of localized corrosion tubercles that measure less than 1-inch in diameter but do not appear to have caused any major pitting at this point, see VS# 9. The coating is mostly intact with no widespread blistering, checking or delamination. Light corrosion was found around the sample lines, see VS# 9. The coating appears to have been damaged during welding on the exterior. Overall the coating is nearly 98 percent intact.

Floor

The floor had minimal sediment accumulation measuring between 1/8-1/4-inch in depth, see VS# 7&8. No corrosion cells were found on the floor plates and the coating appeared to be in very good condition. The floor to shell seam had several small corrosion cells with rust staining, see VS# 5.

Inlet/ Outlet

The tank has a separate inlet and outlet pipe that are located next to each other along the perimeter floor. The inlet and outlet pipes both have sediment rings, see VS# 4. No problems were found with either pipe.

Overflow

The tank is equipped with a 12-inch overflow pipe and an external weir box. The external pipe connects to a below grade storm drain, see DP# 5 and 6.

EXTERIOR

Roof

The exterior roof has dark mildew staining that covers approximately 40% of the coating, see DP# 16, 17&21. A small area of coating delamination down to the substrate, was found near the center of the roof where water routinely collects, see DP# 20. Overall the coating was nearly 100 percent intact.

The tank has a safety railing adjacent to both the perimeter roof hatches. The railings measure 42-inches high with a mid rail of 22-inches and a kick plate of 5-inches. A walkway railing with the same railing dimensions extends from the shell ladder to the vent hatches, see DP# 18, 22-24.

Dry film thickness readings were taken using a Posi Tector 6000 in 45 different locations on the roof. From the 45 total readings, there was a high reading of 18.9, a low reading of 5.8 and an overall average of 9.78

Vent

The tank is equipped with a center roof vent that has a 36-inch diameter collar and a vent cap to roof distance of 38-inches. There is a stainless coarse screen that is in good condition with no signs of tearing, see DP# 23-26.

Ladders and Railings

The tank is equipped with a shell ladder that extends from grade level to the roof. The ladder has a safety cage and an anti climb that was locked upon arrival to the site. The ladder rungs are 16-inches wide, have a 10-inch toe clearance and measure 12-inches apart. The safety cage and cable climb both appear to be in good working condition, see DP# 1-4.

Shell

The exterior shell is in overall good condition with no major areas of coating delamination or erosion. The shell consists of three shell courses that measure 7-feet tall with a stiffener ring at the top course see DP# 1, 8 & 9. There is a total of 4 manway hatches on the lower ring that are 24-inches in diameter, see DP# 7.

Dry film thickness readings were taken using a Posi Tector 6000 in 45 different locations on the roof. From the 45 total readings, there was a high reading of 16.0, a low reading of 6.8 and an overall average of 10.58.

Foundation

The tank is supported by a concrete ring wall foundation that is in good condition. There are no major areas of cracking or spalling in the concrete. The grouting between the chime plate and the foundation is also in good condition, with only minor sporadic cracking; see DP# 11-13.

Recommendations

Setian Lane Reservoir

There are no recommendations for maintenance or upgrades at this time.

If the heavy mildew staining is considered objectionable due to potential aesthetic concerns, power washing can be performed to remove any mildew accumulation. The application of a bio barrier can considerably slow the reformation of mildew growth. (Cost Estimate: $1,650)

The tank should be inspected again in 2017 according to AWWA recommendations.

Theodore W. Stevens

NACE Certified Coating Inspector #00050

GLOSSARY OF TERMS

Cathodic Protection - The use of a sacrificial metal or energized substance to polarize the structures surfaces and prevents corrosion.

Chalking - The degradation of a paint system when exposed to ultra-violet light which creates a loose residue on the surface.

Corrosion Cell - A concentrated localized site of accelerated corrosion that creates pitting.

Dry Film Thickness - Total thickness of a paint film when completely cured.

Finial Vent - The central roof vent on top of a water tank.

Holiday - A hole in a protective coating that may be invisible to the unaided eye that extends to the substrate.

Lead Abatement - The removal of a lead bearing paint system.

Lead Encapsulation - The covering over of a lead based paint by applying a compatible topcoat.

Osmotic Blister - Raised coating area created by build up of fluid under the coating. Fluid moves through coating in response to water/solvent concentrations between coating and tank water.

ROV - Remotely operated vehicle, underwater inspection device "TankRover".

Silt - Material that accumulates in the bottom of a water tank originating from treatment by products and distribution system debris.

Tubercle - Domed shaped build up of corrosion products over an active corrosion site. Promotes metal loss through pitting due to differential oxygen concentrations.

Ultrasonic Measurement - The use of high frequency sound waves passed through a material to measure the time required to return. The time required to pass through the material is correlated to the speed of sound in the substrate to yield an actual thickness at a specific location.

APPENDIX A

Digital Pictures
and
Underwater
Video Snaps

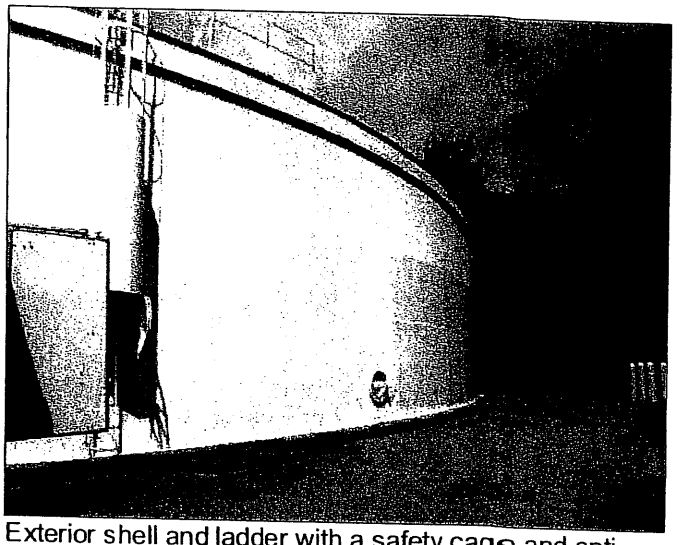
ACUREN

3.0MG Setian Lane Reservoir

DP#1

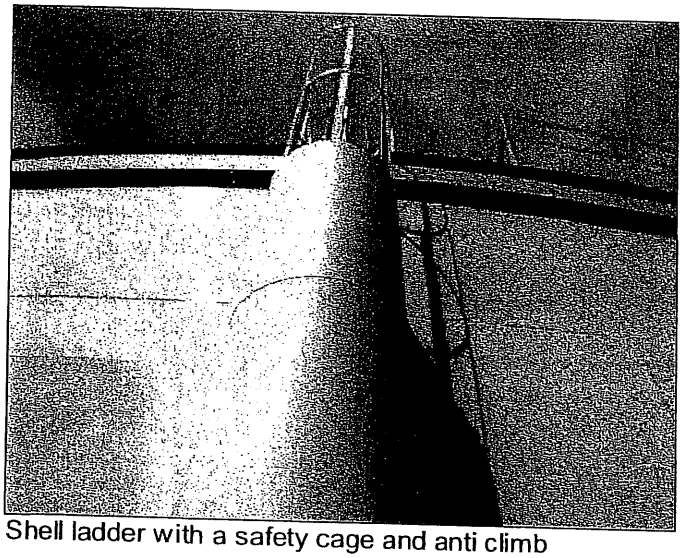
3.0MG Setian Lane Reservoir

DP#2



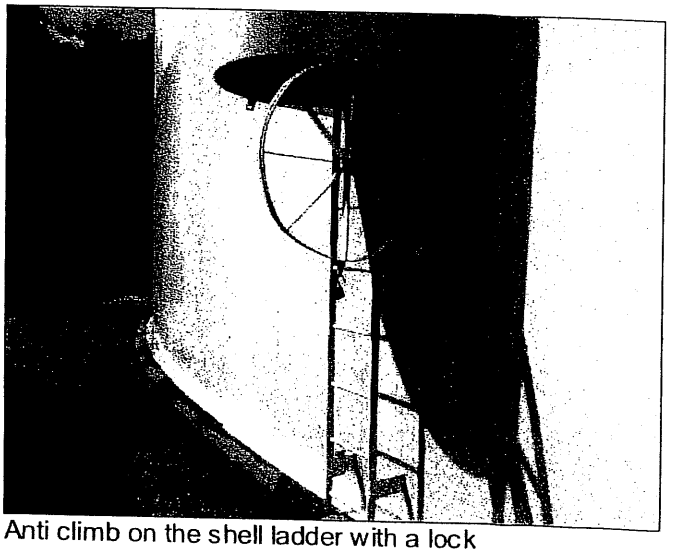
Exterior shell and ladder with a safety cage and anti climb

DP#3



Shell ladder with a safety cage and anti climb

DP#4



Anti climb on the shell ladder with a lock

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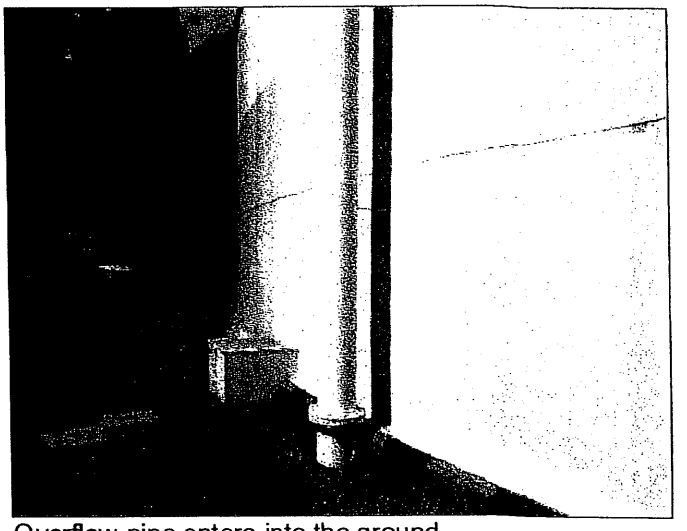
DP#5

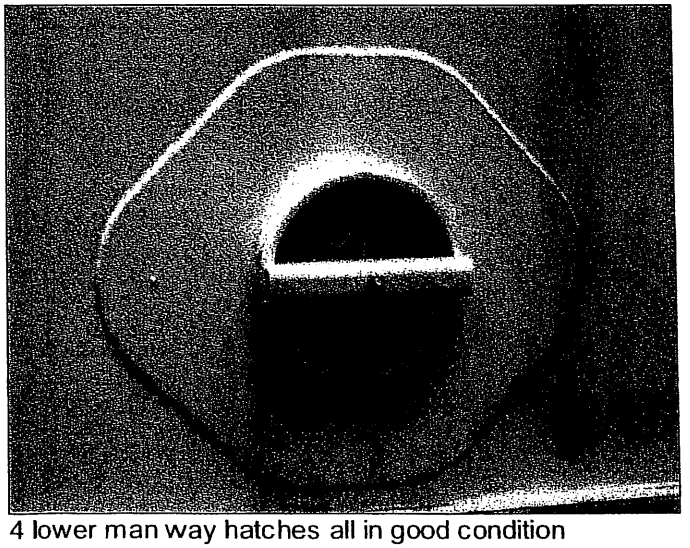
Overflow pipe with an exterior weir box

DP#6



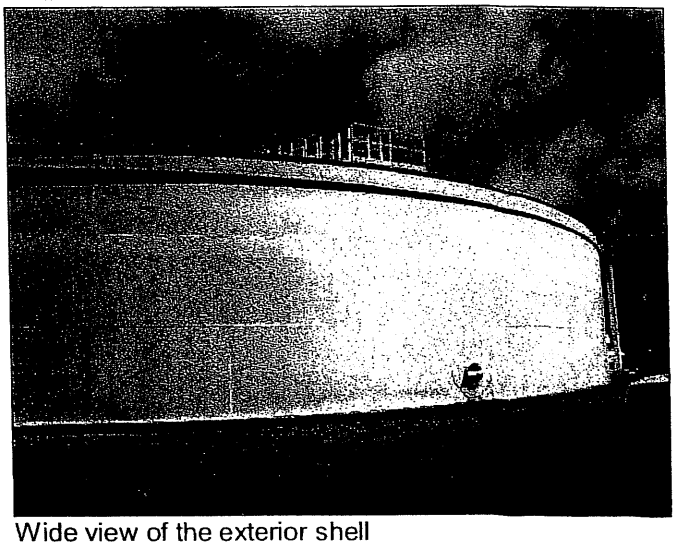
Overflow pipe enters into the ground

DP#7



4 lower man way hatches all in good condition

DP#8



Wide view of the exterior shell

C

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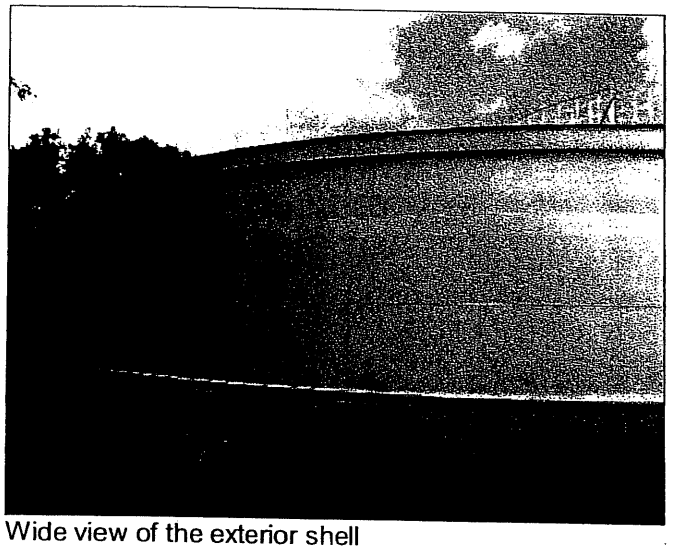
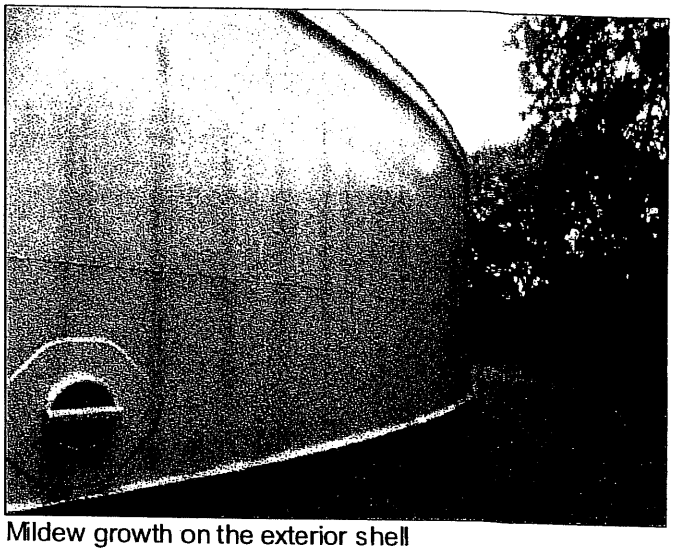
3.0MG Setian Lane Reservoir

DP#9



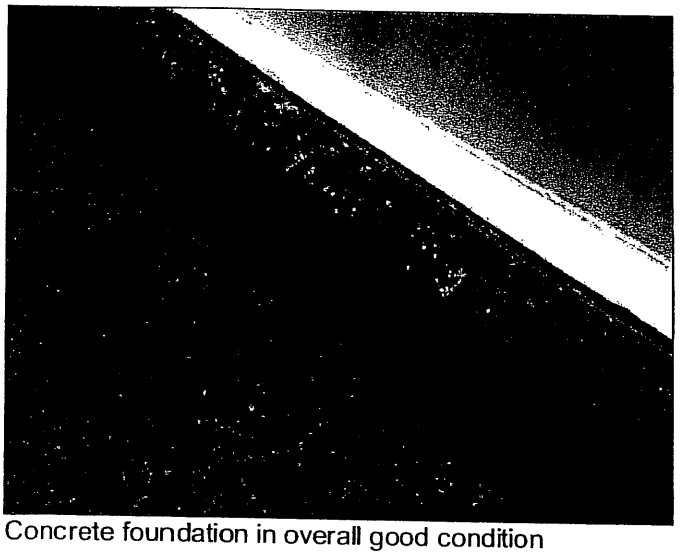
Wide view of the exterior shell

DP#10



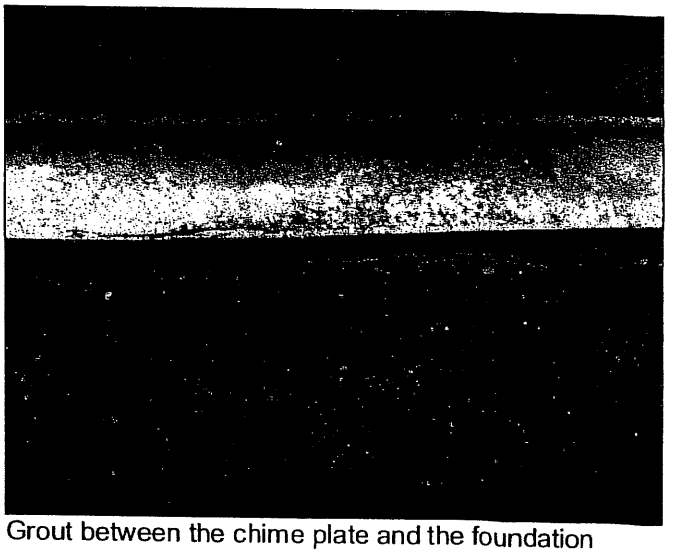
Mildew growth on the exterior shell

DP#11



Concrete foundation in overall good condition

DP#12



Grout between the chime plate and the foundation

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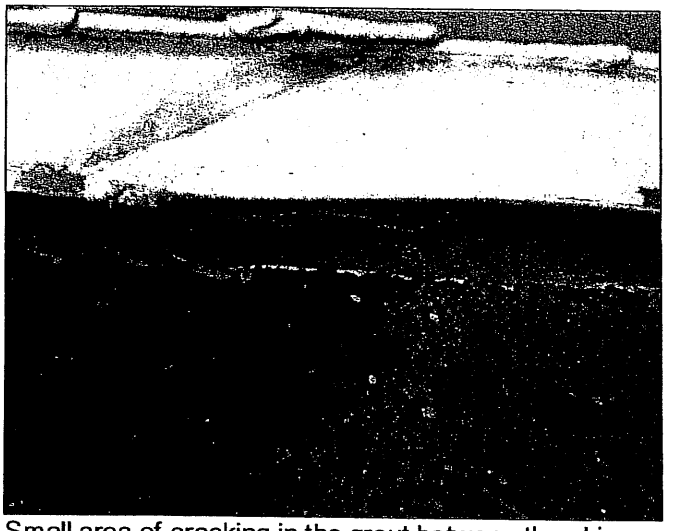
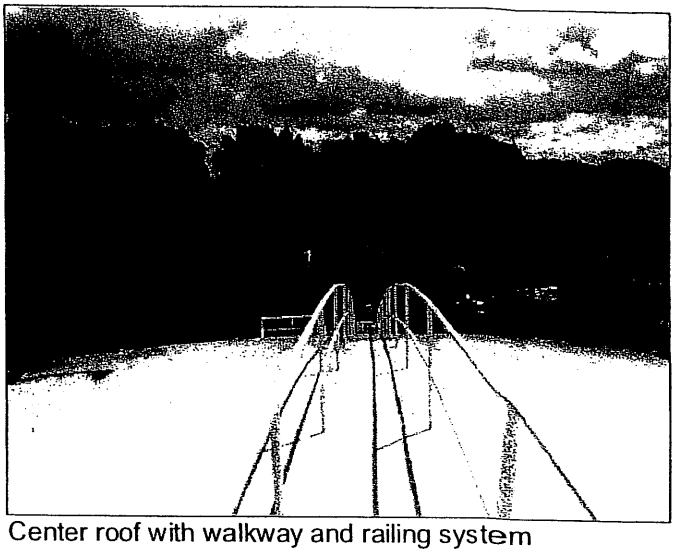
3.0MG Setian Lane Reservoir

DP#13



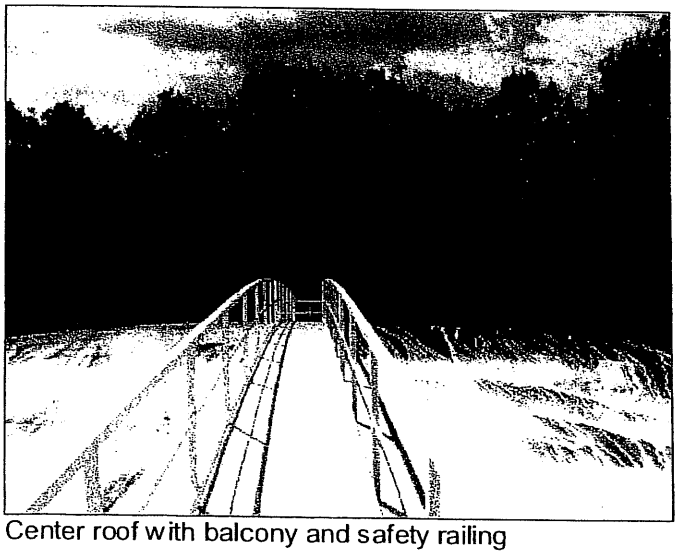
Small area of cracking in the grout between the chime plate and foundation

DP#14



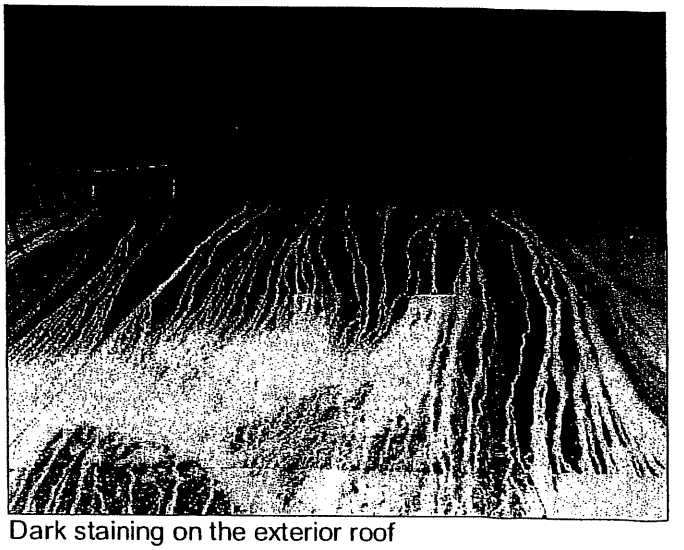
Center roof with walkway and railing system

DP#15



Center roof with balcony and safety railing

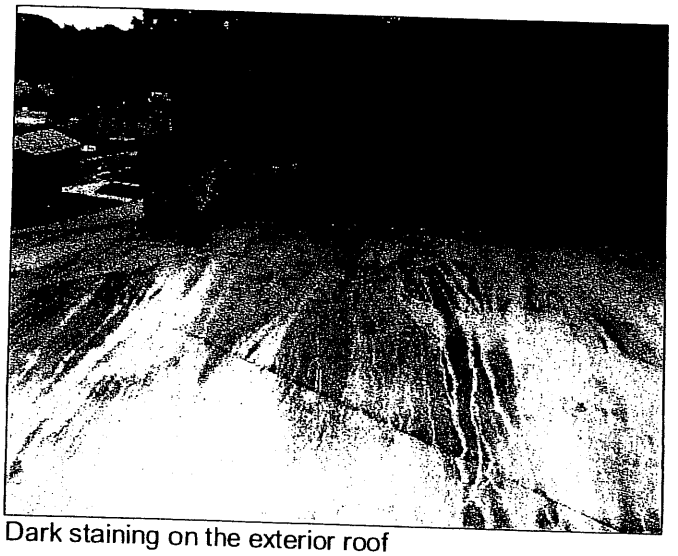
DP#16



Dark staining on the exterior roof

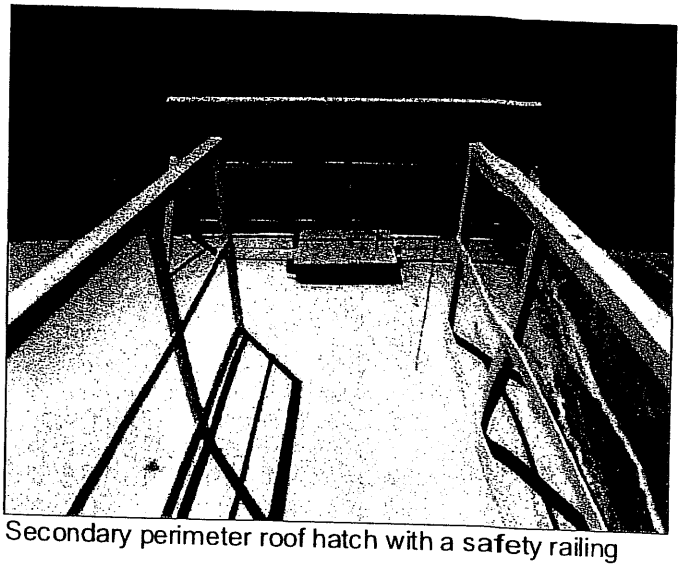
3.0MG Setian Lane Reservoir

DP#17



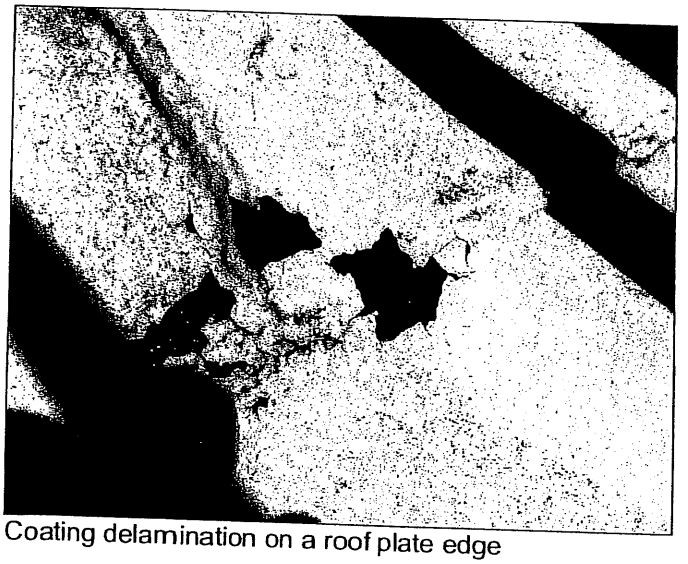
Dark staining on the exterior roof

DP#18



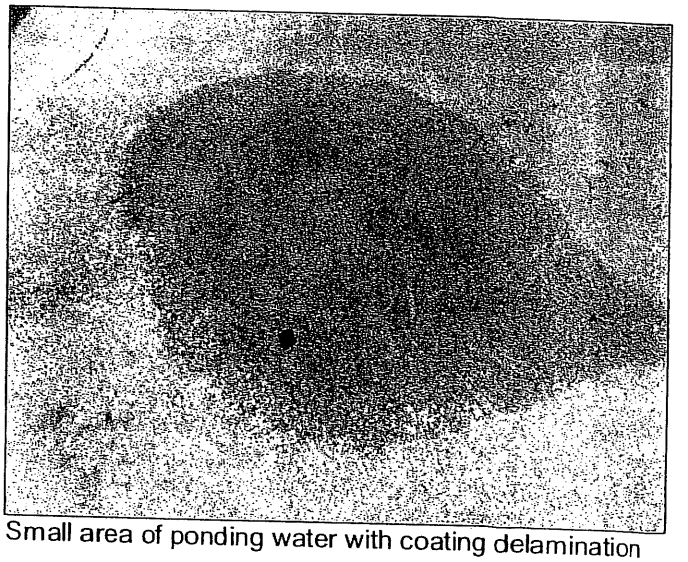
Secondary perimeter roof hatch with a safety railing

DP#19



Coating delamination on a roof plate edge

DP#20



Small area of ponding water with coating delamination

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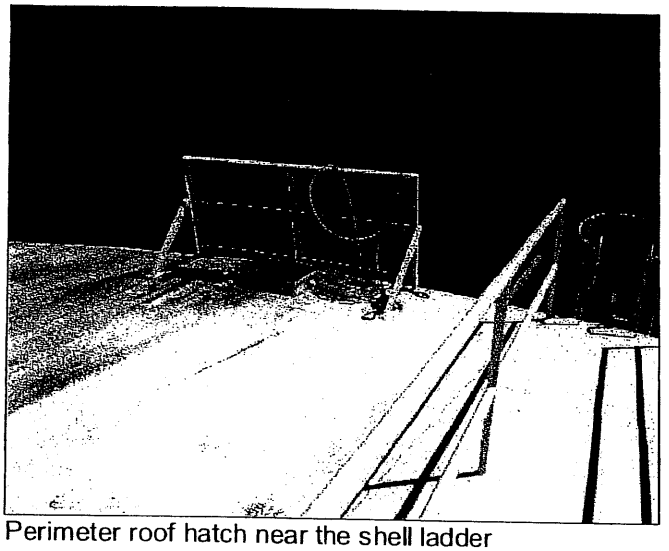
DP#21



Perimeter roof hatch near the shell ladder

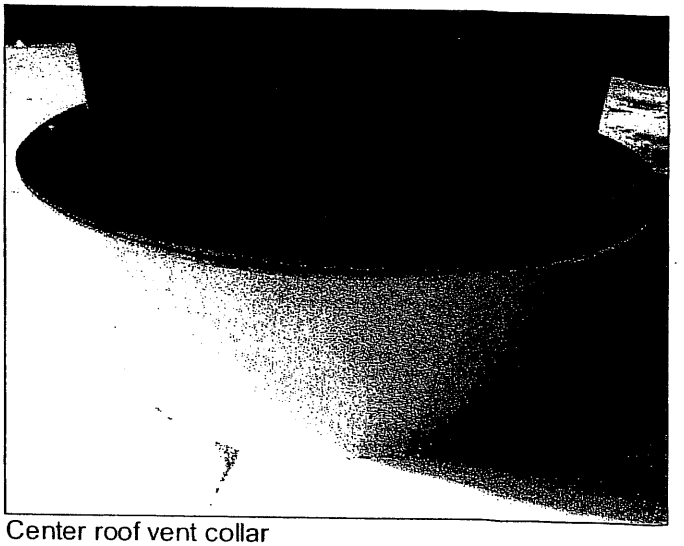
DP#22

Perimeter roof hatch with a safety railing

DP#23

Roof vent

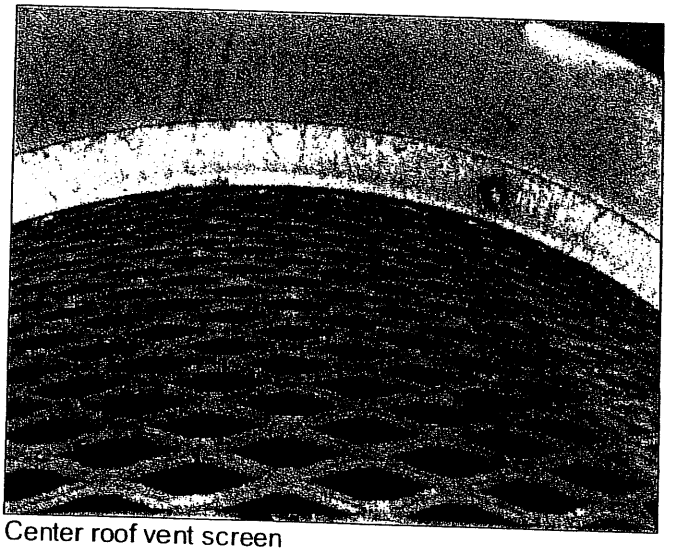
DP#24



Center roof vent collar

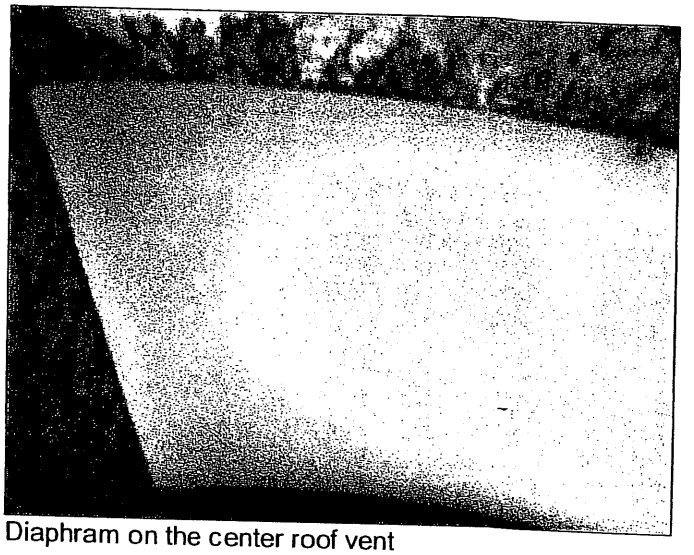
3.0MG Setian Lane Reservoir

DP#25



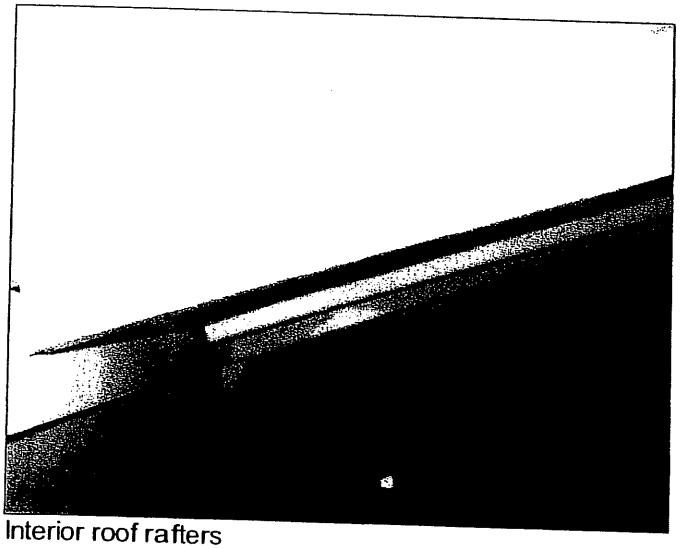
Center roof vent screen

DP#26



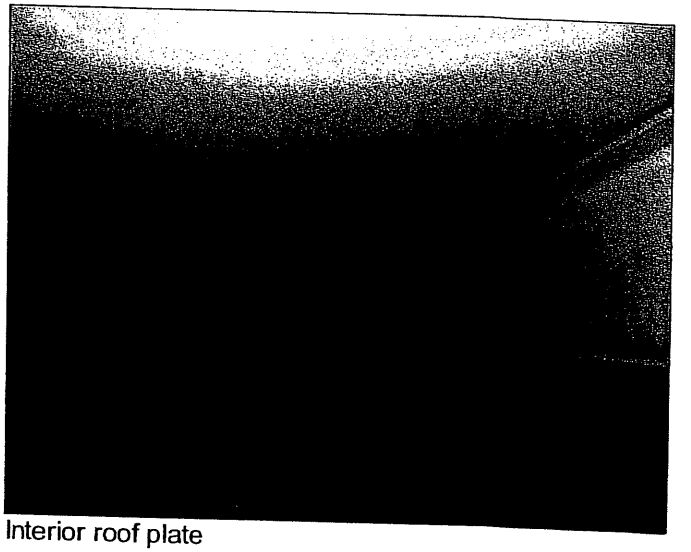
Diaphram on the center roof vent

DP#27



Interior roof rafters

DP#28



Interior roof plate

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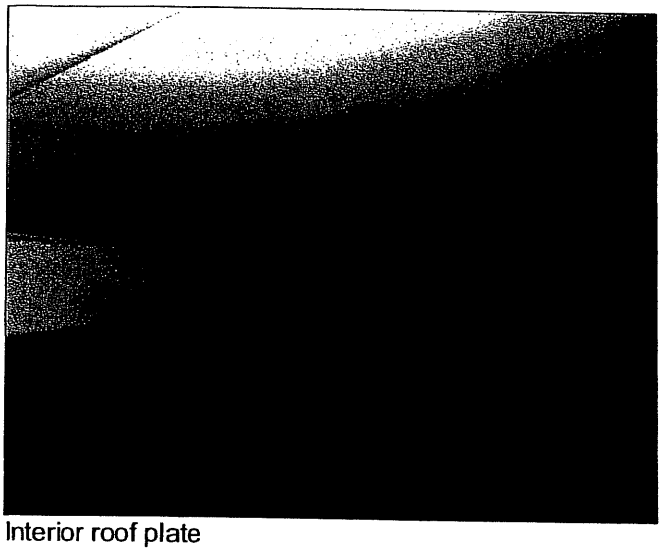
3.0MG Setian Lane Reservoir

DP#29



Interior roof plate

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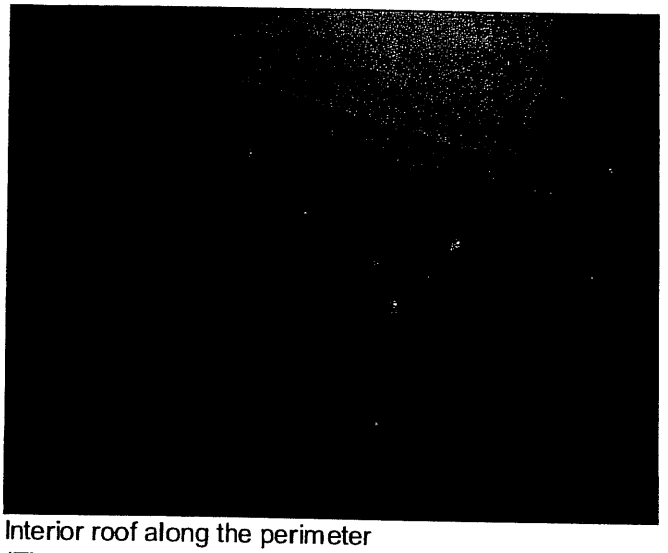
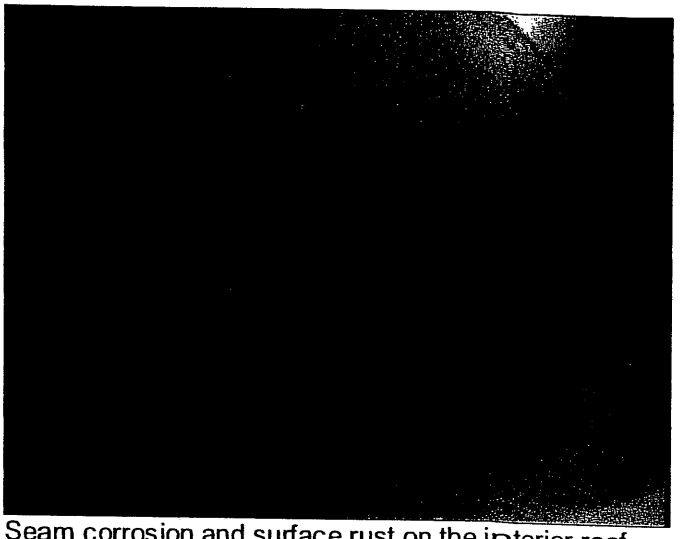
3.0MG Setian Lane Reservoir

VS#1



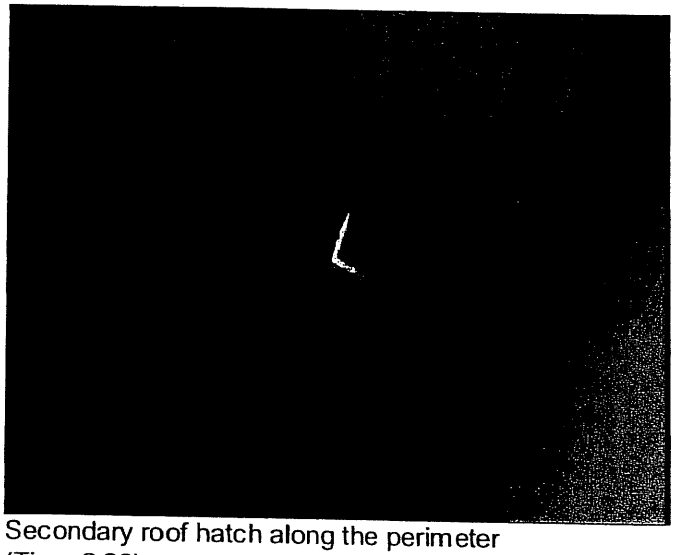
Interior roof along the perimeter
(Time :24)

VS#2



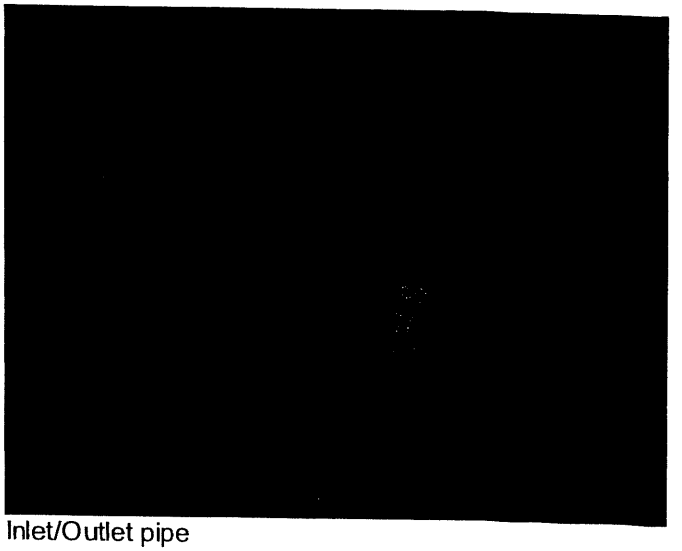
Seam corrosion and surface rust on the interior roof
(Time 1:55)

VS#3



Secondary roof hatch along the perimeter
(Time 2:28)

VS#4



Inlet/Outlet pipe
(Time 10:40)

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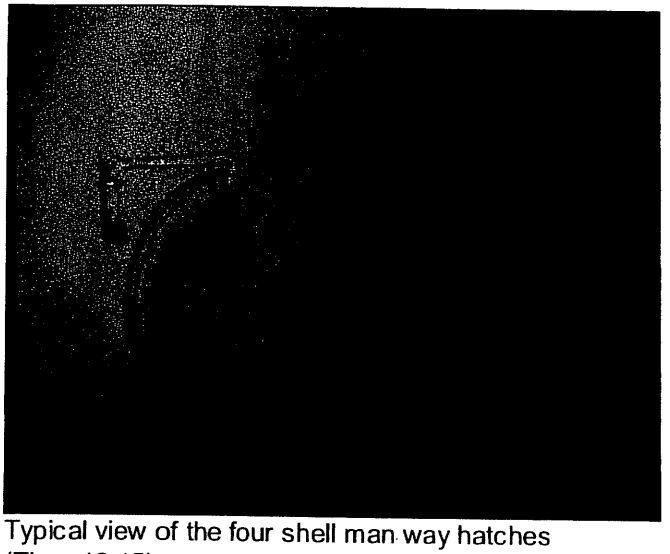
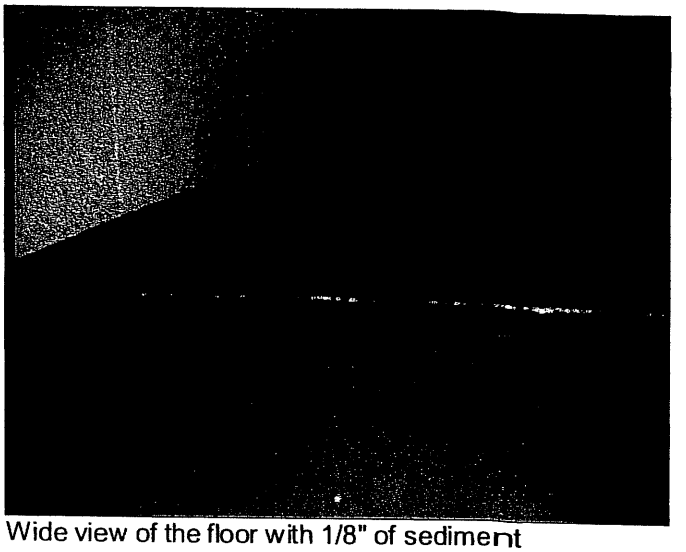
VS#5



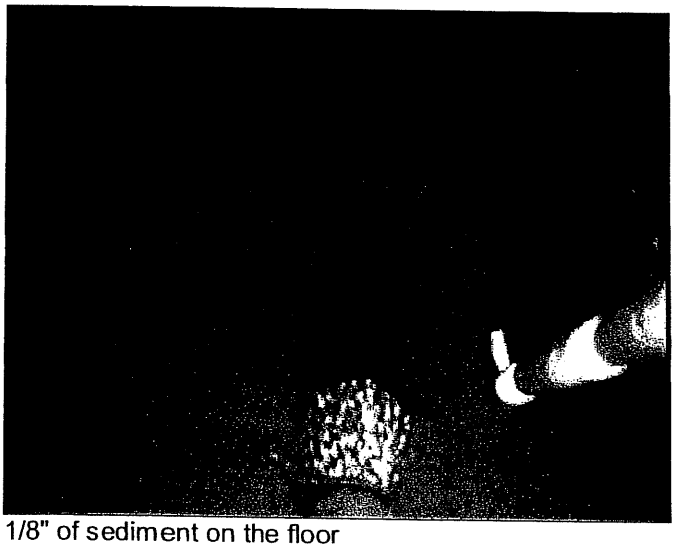
Typical view of the four shell man way hatches
(Time 12:15)

VS#6



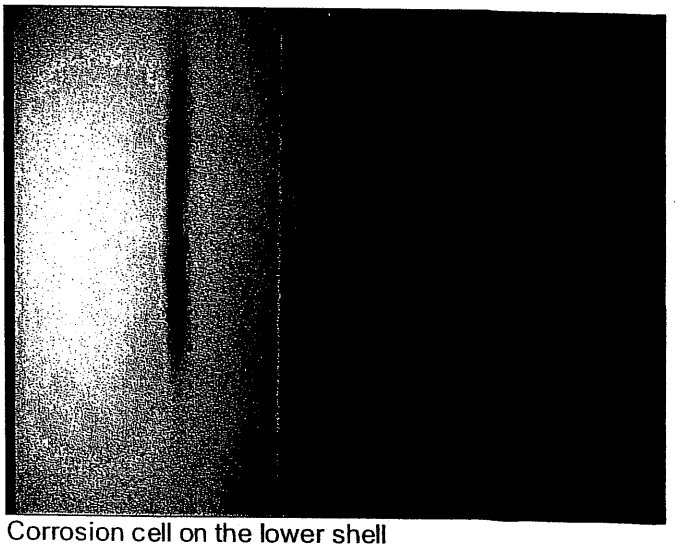
Wide view of the floor with 1/8" of sediment
(Time 13:46)

VS#7



1/8" of sediment on the floor
(Time 14:25)

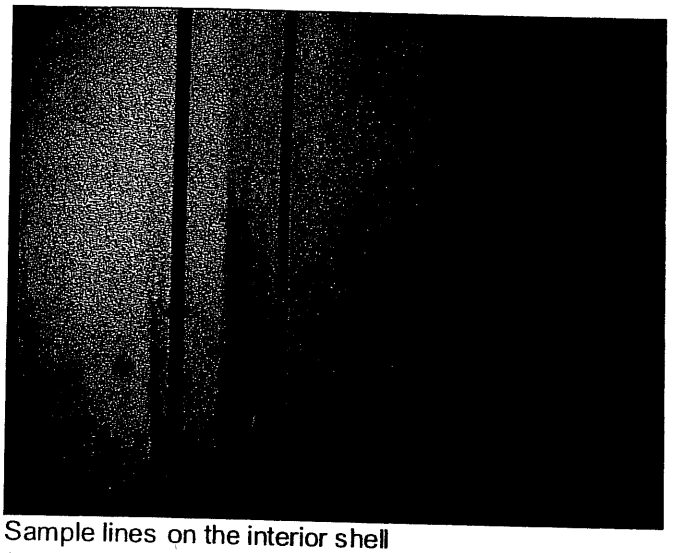
VS#8



Corrosion cell on the lower shell
(Time 15:04)

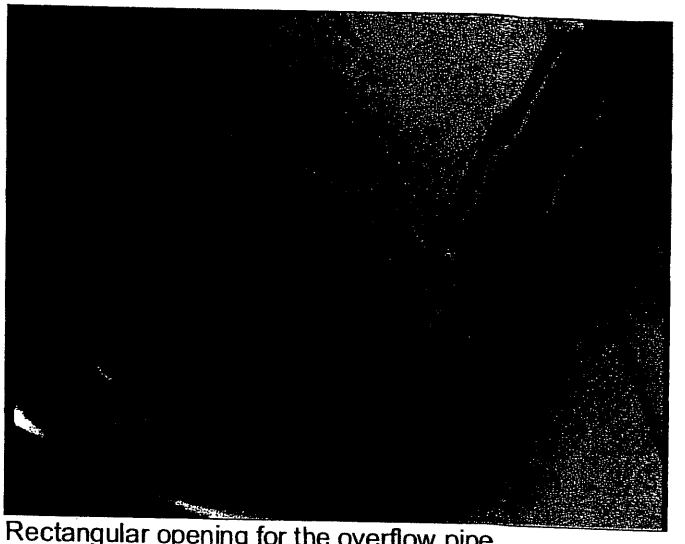
3.0MG Setian Lane Reservoir

VS#9



Sample lines on the interior shell
(Time 19:35)

VS#10



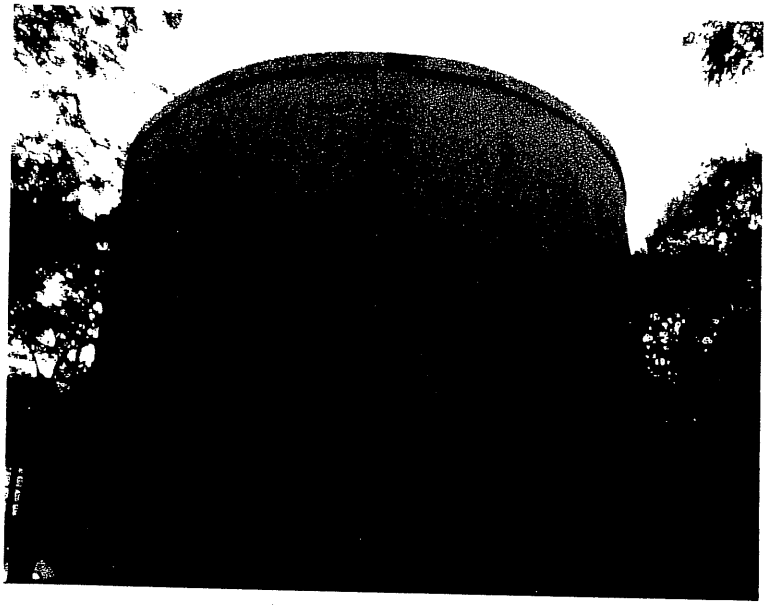
Rectangular opening for the overflow pipe
(Time 22:20)

Water Tank Inspection Report

For

Kent County Water Authority

Of the



1.5MG Frenchtown Rd Concrete Reservoir
East Greenwich, RI

August 28, 2012

ACUREN

455 Main Street Bldg 1 Suite A-B
Deep River, CT 06417
Tel: (860) 526-2610 Fax:(860) 526-5018)
www.extechllc.com

INTRODUCTION

On August 28, 2012 Acuren representatives, Bill Iaquessa and Matt Weaver performed a condition assessment of the exterior and interior of a pre-stressed concrete ground storage water tank for the KCWA. The inspection was conducted to establish the current condition of the tank's coating, concrete substrate, safety and sanitary equipment.

1.5 MG Concrete Ground Reservoir

The tank was inspected in accordance with the latest version of AWWA D110 standard for Pre-Stressed Wire Wound Concrete Water Tank inspections as well as the AWWA M42 Tank Manual.

The tank interior was inspected while full and in operation with the TankRover remotely operated vehicle (ROV). The TankRover is the only piece of equipment like it in the United States and was developed by Acuren. By using the TankRover the tank was inspected with no special preparation, no additional disinfection, no confined space entry and no downtime.

The TankRover was prepared for the inspection by disinfecting in accordance with AWWA C652, by spray application of a 200 ppm chlorine solution prior to insertion to the tank.

The exterior portions of the tank were inspected by walking the roof and shell portions that were accessible from the tank's base. The objectives of the assessment were to:

1. Perform field inspections and tests to assess the structural and coating integrity of the tank.
2. Review the safety compliance of tank ladders and access.
3. Determine if sanitary screens on vents and pipes are intact.
4. Formulate a report to document the assessment findings.
5. Provide recommendations for rehabilitation.

EXECUTIVE SUMMARY

The condition and recommendations for the tank is briefly summarized in this section. For detailed information regarding detailed tank conditions and the specific recommendations please refer to the designated section for the tank.

The tank is in good condition with typical map cracking on the exterior surfaces. No active spalls were visible on the exterior roof or shell. No active leaks were found during the inspection. The interior concrete is in good condition on both the roof and shell surfaces. No exposed reinforcement was found.

The tank had a thin sediment layer which was removed as part of this inspection. Based on the historical accumulation rate the tank should not require cleaning for 3-5 years.

The tank should be inspected again in 2017 according to AWWA recommendations.

OBSERVATIONS

Interior and exterior photographs provided in the report were developed from a digital camera and were captured in digital format from the interior videotape. The interior images are as clear as our printing technology will allow. The interior videosnaps in the report provide a reference for our comments. Keep in mind that the videotape provides the greatest detail and should be viewed as part of the report. Each videosnap (VS) is marked with the time stamp from the videotape. This allows the reader to easily view the original footage for each feature.

Narration on the videotape is done in the field and some of the comments may be different than the written report. The written report is the official document and contains the formal opinion of Acuren.

1.5 MG Frenchtown Road Tank

The ground reservoir is a 1.5 MG pre-stressed concrete structure that is 73 feet in diameter and 50 feet high. The tank was constructed in 1977 but the manufacturer information was not provided. The tank uses typical construction with a corrugated steel diaphragm and gunite coating. The tank was last inspected and cleaned in 2009.

INTERIOR

The interior of the tank was accessed through the 42-inch square roof hatch, see DP# 19. The roof hatch has a sanitary lip of 6-inches and a 2-inch hatch lip cover. The water level was indicated to be 44-feet during the inspection.

Roof (ceiling)

The concrete above the water line had no visible spalling or cracking was found throughout the roof surface or rust staining that would indicate exposed and rusting reinforcement, see VS# 1 and DP# 20-22. The roof to shell seam had no evidence of separations, see DP# 20.

Ladders

There is one interior ladder that extends from the perimeter roof hatch to the floor. The ladder is corroded but well anchored to the overflow pipe casing. The cable climb on the interior ladder is broken and lying on the floor next to the base of the ladder, see VS# 7 & 9. There is corrosion and sediment buildup on the entire wet portion of the ladder.

Shell

The tank walls are pre-formed concrete panels joined together and then tensioned with reinforcement wire. The concrete panels had no major spalls or cracks, see VS# 2, 3 and 5. Dark iron staining was observed on all submerged shell portions and in the fluctuation zone.

Floor

The floor of the tank had minimal sediment accumulation. The tank was cleaned about 3 years ago and had 1/8-inch of light brown material see VS# 9. The floor should not require cleaning before the next inspection cycle. No deterioration was found in the floor concrete.

Inlet/ Outlet

The tank has a single outlet pipe that enters through the floor into a shallow sump. The pipe has a 12-inch sediment ring, see VS# 8. The pipe has corrosion cells on the sediment ring but no significant metal loss.

Overflow

The tank is equipped with an internal overflow pipe that extends through the floor and runs underground and daylights in the woods. The pipe is 6-inches in diameter with a coarse protective screen, flapper valve and a splash pad, see VS# 7 and DP# 11-13.

EXTERIOR

Roof

The tank exterior roof is in good overall condition with almost no deterioration, see DP# 14. There was minor mildew staining on the roof perimeter see DP# 15&16. Minor surface cracks were found in the roof panels seams but no spalling or exposed reinforcement was found.

Vent

The tank is equipped with one center vent that measures 24-inches in diameter and has a vent cap to roof distance of 30-inches, see DP# 18. There is a fine mesh screen and a coarse screen on the vent that are in good condition with no visible air gaps or tears. The vent dome and body was in good condition, see DP# 17.

Ladders and Railings

The tank has an exterior shell ladder that extends from the roof hatch to 14-ft above grade with a safety cage and anti climb that was locked upon arrival to the site, see DP# 3. The ladder and cage were in good condition. The ladder measures 18-inches in width, has a 10-inch toe kick clearance and a 12-inch rung-to-rung spacing.

Shell

There is widespread, typical map cracking on the shell with light efflorescence visible directly around the cracks, see DP# 5. There were no visible active cracks or spalling. There is dark mildew staining and discoloration on the entire shell, see DP# 1-3.

Foundation

The tank foundation is not visible above grade and not inspected.

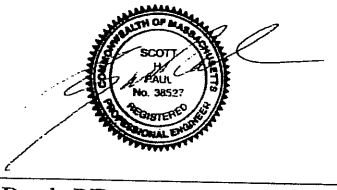
Recommendations

1.5M Gallon Frenchtown Concrete Ground Reservoir

There are no recommendations for maintenance or upgrades at this time.

The tank should be inspected again in 2017 according to AWWA recommendations.

NACE Certified Coating Inspector #00050



Scott Paul, PE

GLOSSARY OF TERMS FOR CONCRETE TANKS

ADHESION: State in which two surfaces are held together by interfacial forces which may consist off valence forces or interlocking action or both

AGGREGATE: Granular material, such as sand, gravel, crushed stone, crushed hydraulic-cement concrete, or iron blast-furnace slag used with a hydraulic cementing medium to produce either concrete or mortar.

BUGHOLES: Small regular or irregular cavities, usually not exceeding 15 mm in diameter, resulting from entrapment of air bubbles in the surface of formed concrete during placement and compaction.

CHEMICAL ATTACK: Decomposition of a coating or concrete due to the action of a chemical.

CONTRACTION JOINT: Formed, sawed, or tooled groove in a concrete structure to create a weakened plane and regulate the location of cracking resulting from the dimensional change of different parts of the structure.

DISBONDMENT: The loss of adhesion between a coating and the substrate.

EFFLORESENCE: A white crystalline or powdery deposit on the surface of concrete. Efflorescence results from leaching of lime or calcium hydroxide out of a permeable concrete mass over time by water, followed by reaction with carbon dioxide and acidic pollutants.

FINISH: The texture of a concrete surface after compaction and finishing operations have been performed.

GROUT, GROUTING: A plastic mixture of cementitious materials and water used as a filler for cracks, or other void spaces, in concrete surfaces to be coated.

HONEYCOMB: Voids left in concrete due to failure of the mortar to effectively fill the spaces among coarse aggregate particles.

HYDRAULIC, HYDROSTATIC PRESSURE: A force exerted on the concrete/coating interface due to the level of the ground water.

ISOLATION JOINT: A separation between adjoining parts of a concrete structure.

LAITANCE: A thin, weak brittle layer of cement and aggregate fines on a concrete surface. The amount of laitance is influenced by the degree of working or the amount of water in the concrete.

OSMOTIC PRESSURE: A force exerted on the concrete /coating interface through the capillaries in the concrete due to a moisture differential across the coating.

PINHOLES: Film defect characterized by small pore-like flaws in a coating which extend entirely through the applied film and have the general appearance of pin pricks, fine holes, or voids when viewed by reflected light.

PLASTIC CRACKING, PLASTIC SHRINKAGE CRACKING: Cracking that occurs in the surface of fresh concrete soon after it is placed and while it is still plastic,

POROSITY, SURFACE POROSITY: The ratio usually expressed as a percentage, of the volume of voids in a material to the total volume of the material, including the voids.

PROFILE, SURFACE PROFILE: Surface contour as viewed from the edge.

REFLECTIVE CRACKING: Cracking that develops in a coating directly over a dynamic crack in concrete.

SEALANT, JOINT SEALANT: Compressible material used to exclude water and solid foreign materials from joints.

STATIC CRACKS: A crack in the concrete surface whose width does not change.

VAPOR BARRIER: Waterproof membrane placed under concrete floor slabs that are placed on grade.

APPENDIX A

Digital Pictures
and
Underwater
Video Snaps

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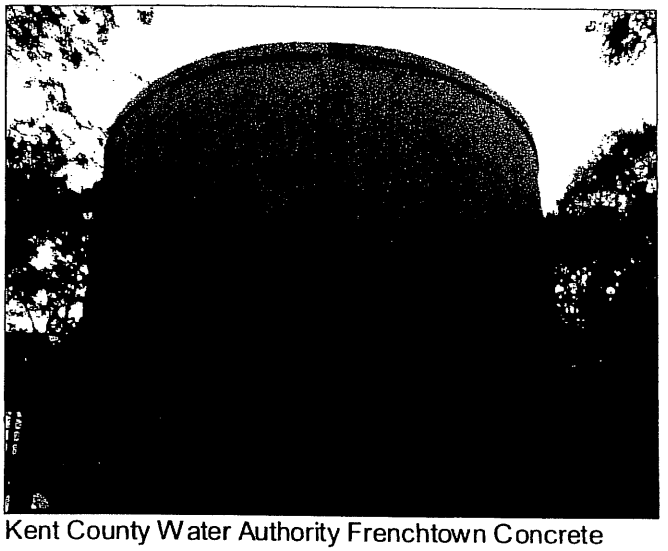
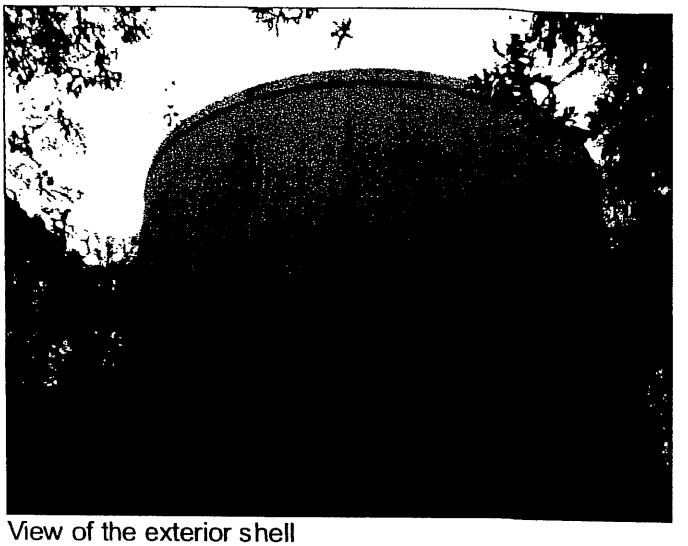
1.5MG Frenchtown Reservoir

DP#1



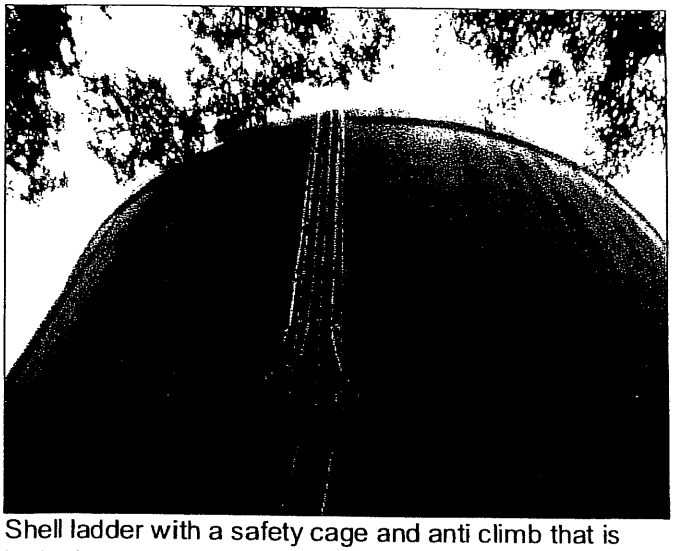
Kent County Water Authority Frenchtown Concrete Ground Reservoir

DP#2



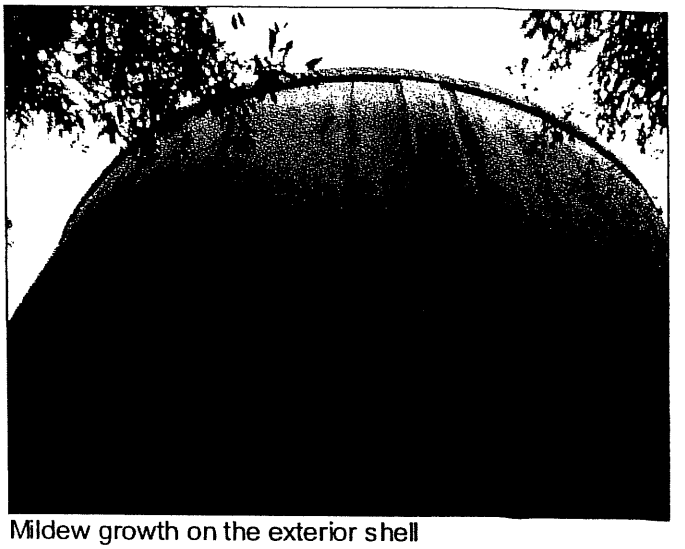
View of the exterior shell

DP#3



Shell ladder with a safety cage and anti climb that is locked

DP#4

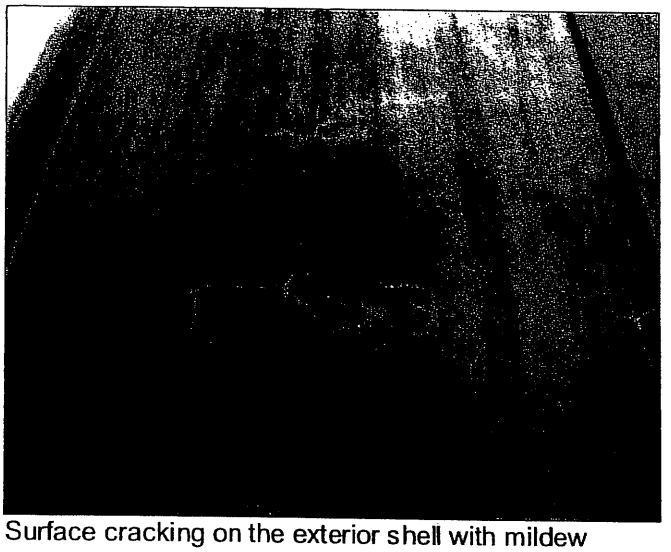


Mildew growth on the exterior shell

ACUREN

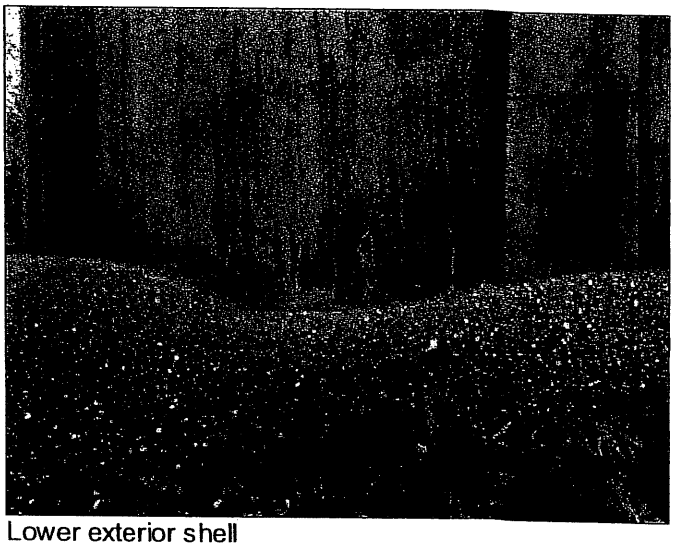
1.5MG Frenchtown Reservoir

DP#5



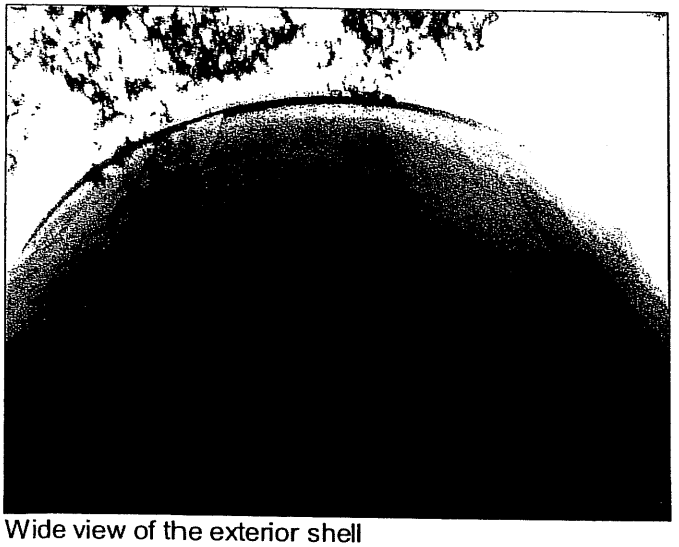
Surface cracking on the exterior shell with mildew growth

DP#6



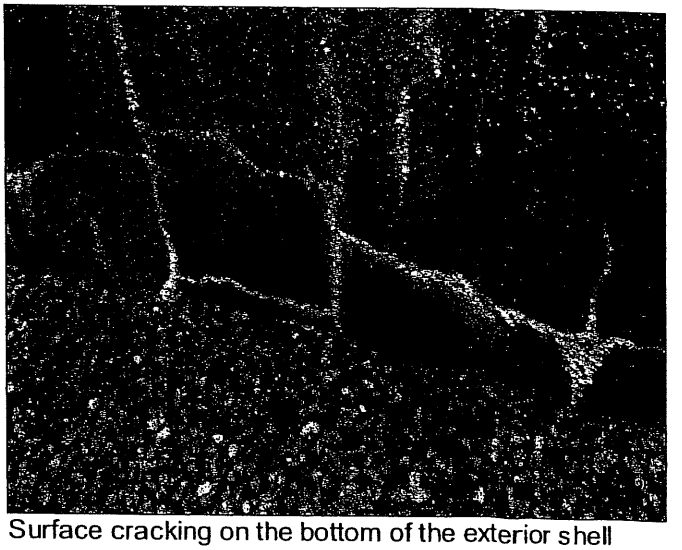
Lower exterior shell

DP#7



Wide view of the exterior shell

DP#8



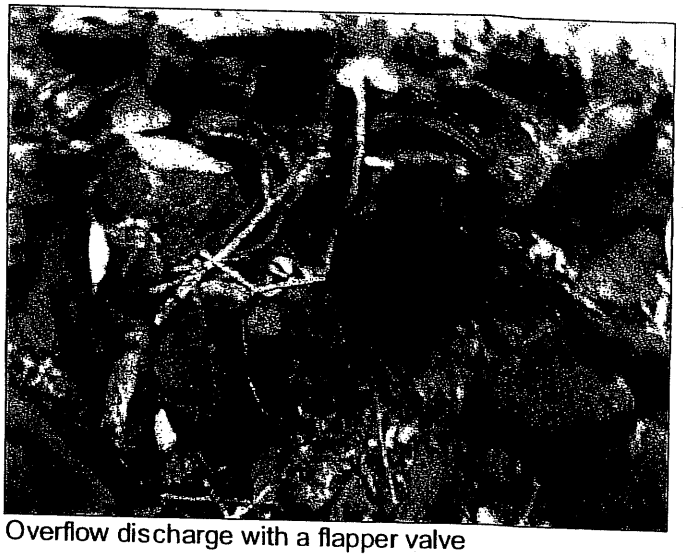
Surface cracking on the bottom of the exterior shell near the foundation

1.5MG Frenchtown Reservoir

DP#9

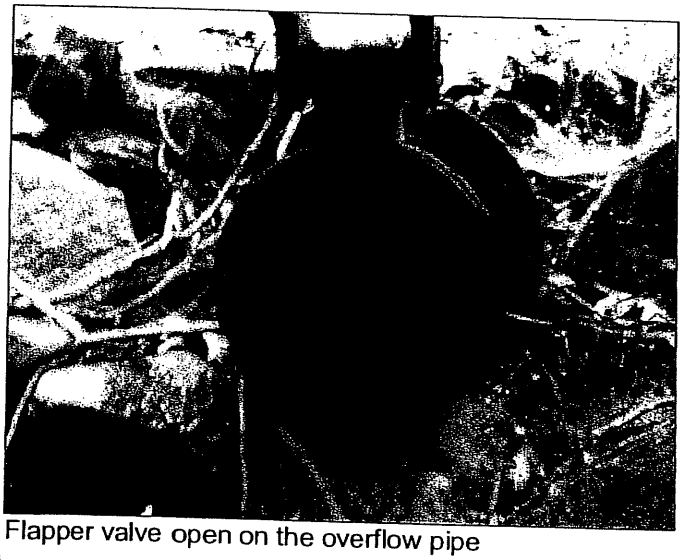
Oval shell hatch

DP#10



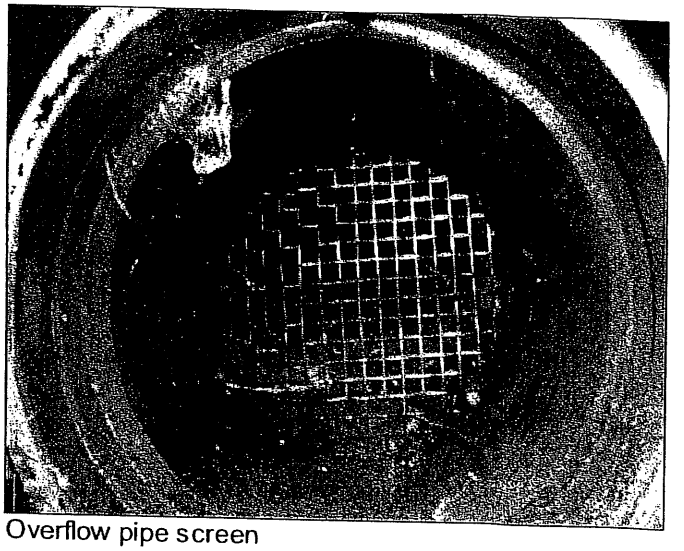
Overflow discharge with a flapper valve

DP#11



Flapper valve open on the overflow pipe

DP#12



Overflow pipe screen

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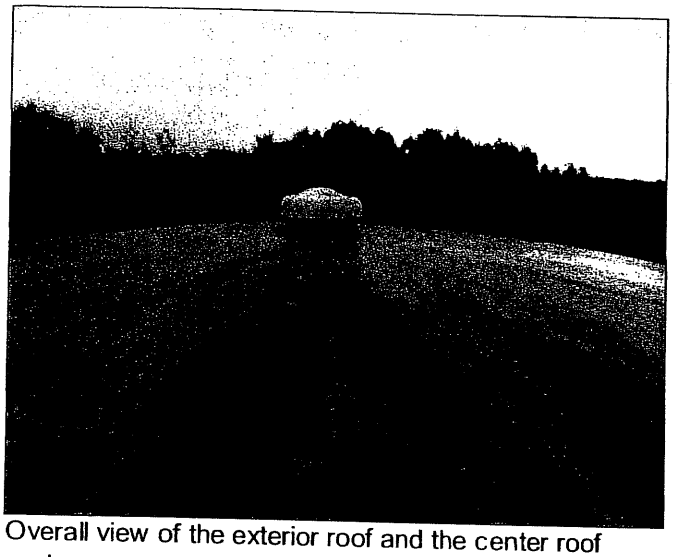
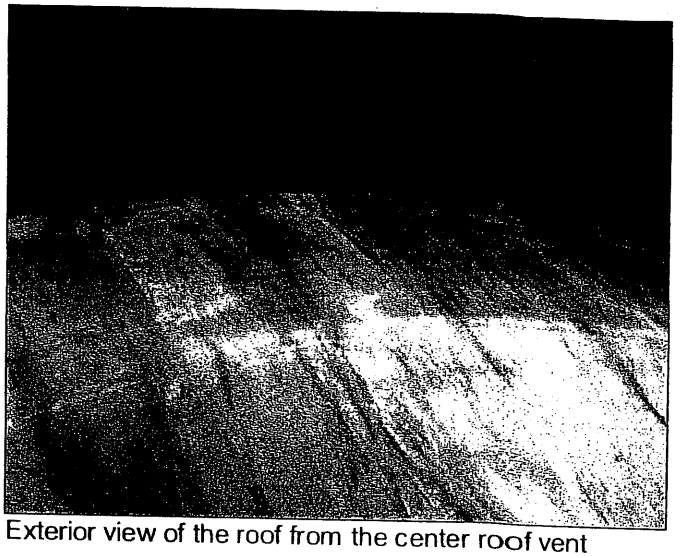
1.5MG Frenchtown Reservoir

DP#13



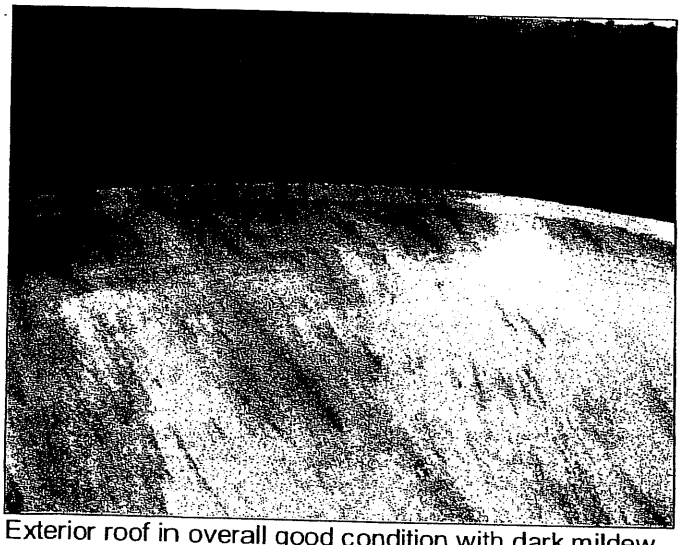
Overall view of the exterior roof and the center roof vent

DP#14



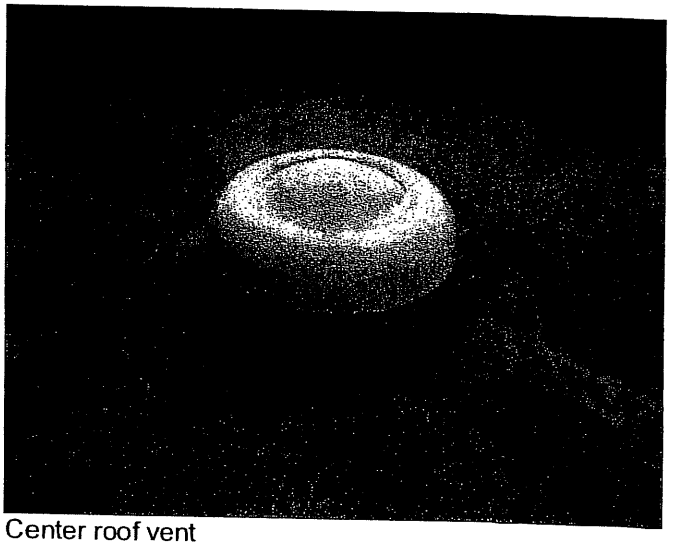
Exterior view of the roof from the center roof vent

DP#15



Exterior roof in overall good condition with dark mildew staining

DP#16



Center roof vent

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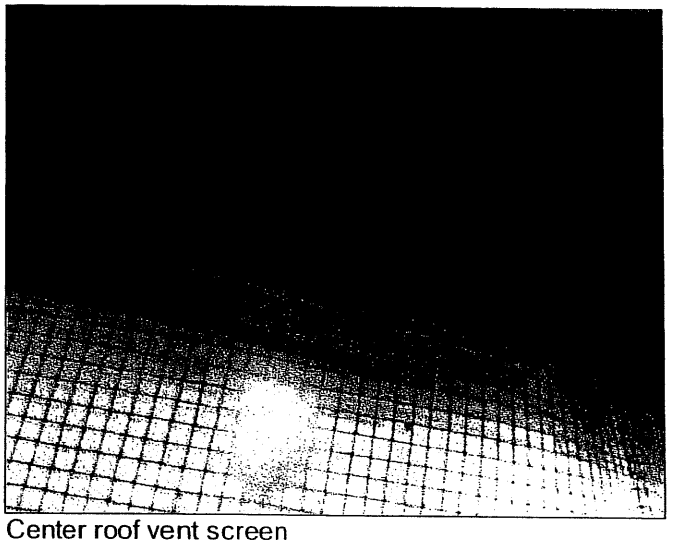
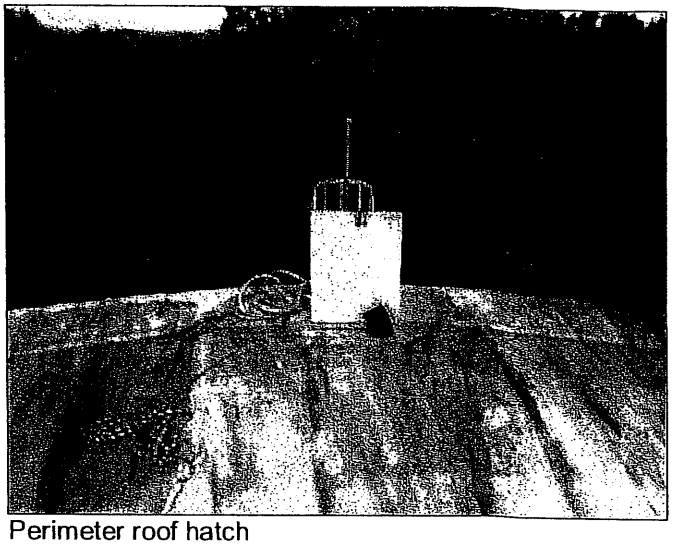
1.5MG Frenchtown Reservoir

DP#17



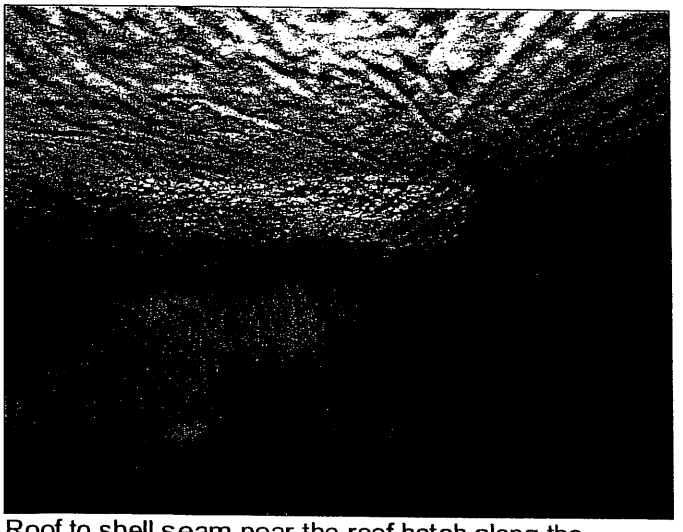
Center roof vent screen

DP#18



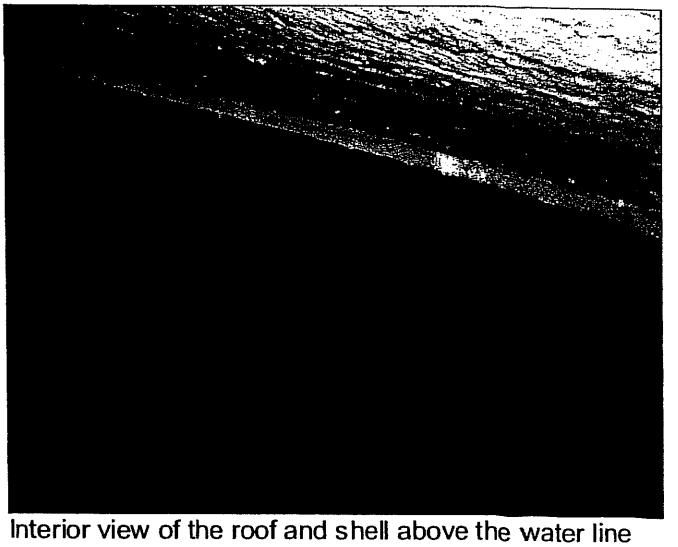
Perimeter roof hatch

DP#19



Roof to shell seam near the roof hatch along the perimeter

DP#20



Interior view of the roof and shell above the water line

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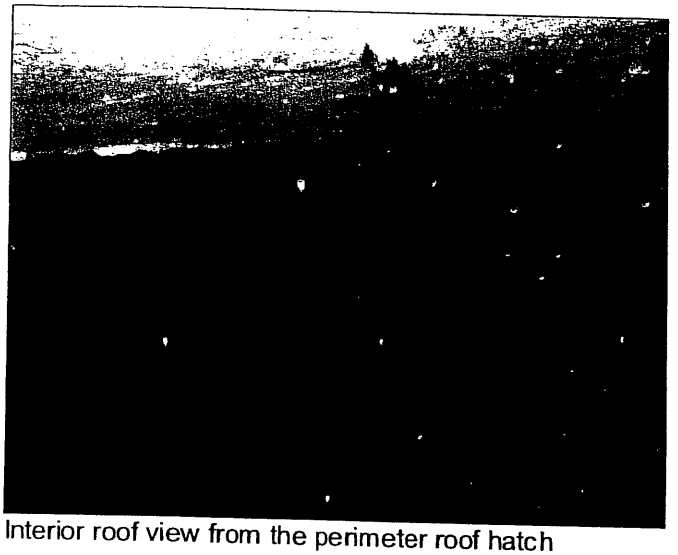
1.5MG Frenchtown Reservoir

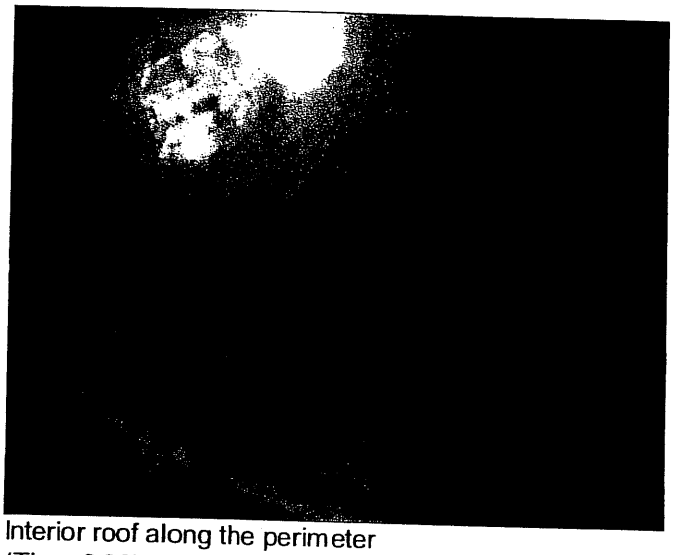
DP#21



Interior roof view from the perimeter roof hatch

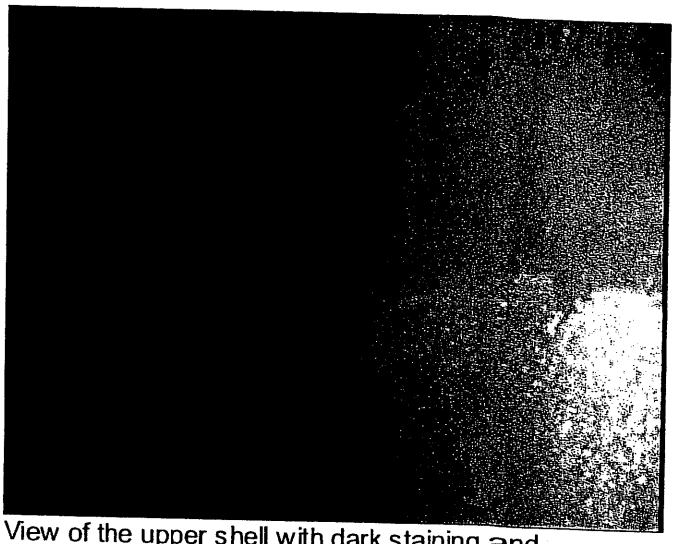
1.5MG Frenchtown Reservoir

VS#1



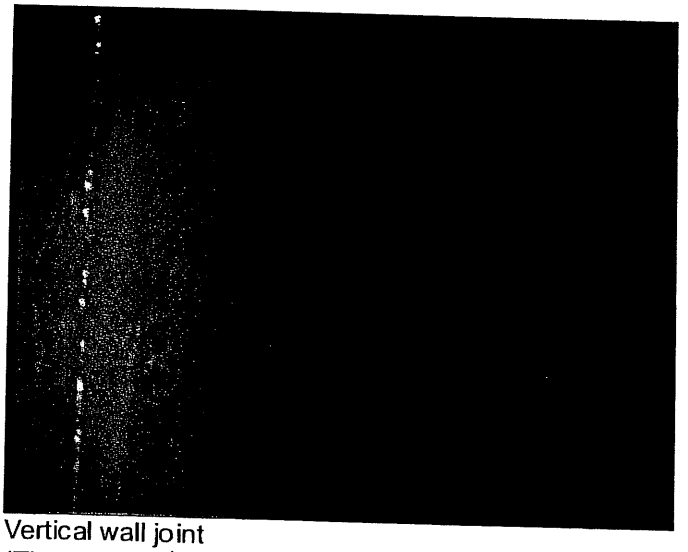
Interior roof along the perimeter
(Time 2:20)

VS#2



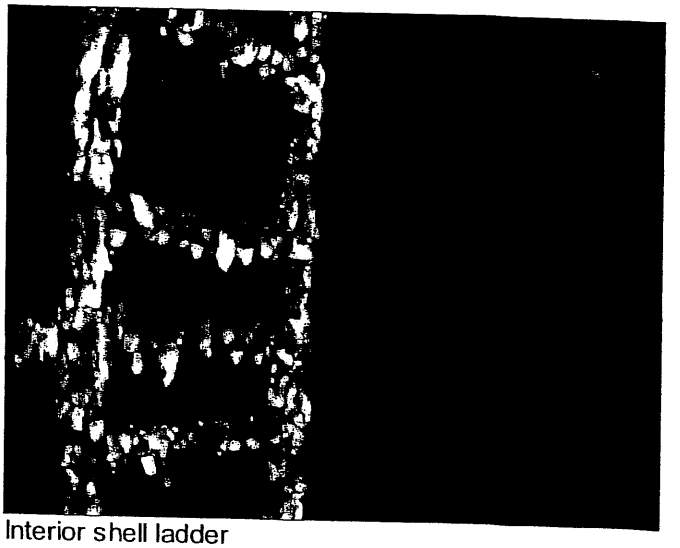
View of the upper shell with dark staining and sediment accumulation
(Time 5:10)

VS#3



Vertical wall joint
(Time 9:06)

VS#4

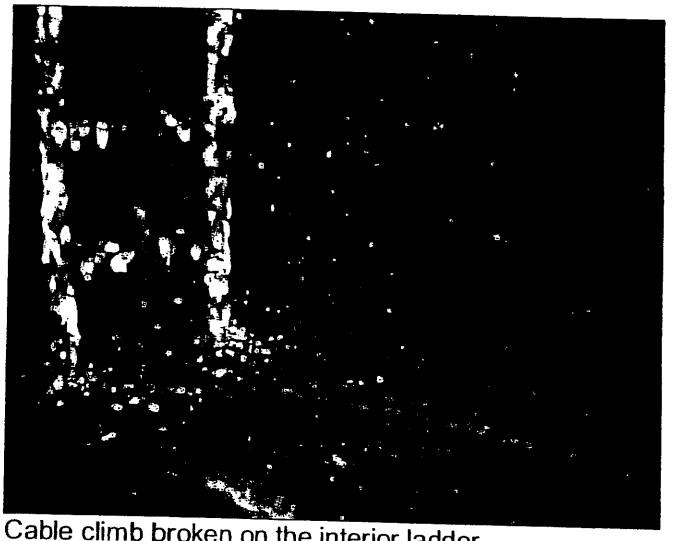


Interior shell ladder
(Time 9:29)

ACUREN

1.5MG Frenchtown Reservoir

VS#9



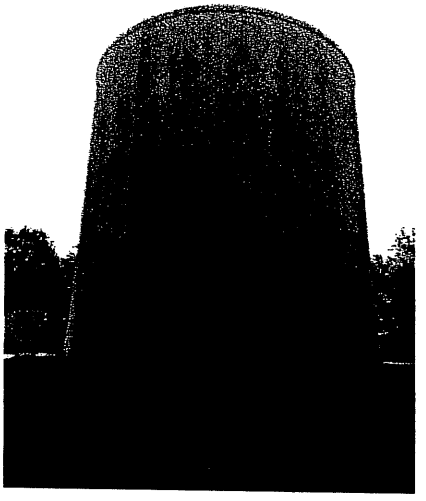
Cable climb broken on the interior ladder
(Time 18:22)

Water Tank Inspection Report

For

Kent County Water Authority

Of the



3.0MG Carr Pond Concrete Standpipe
West Greenwich, RI

August 30, 2012

ACUREN

455 Main Street Bldg 1 Suite A-B
Deep River, CT 06417
Tel: (860) 526-2610 Fax:(860) 526-5018)
www.extechllc.com

TABLE OF CONTENTS

Kent County Water Authority

West Greenwich, RI

INTRODUCTION

On August 30, 2012 Acuren representatives, Bill Iaquessa and Scott Leighton performed a condition assessment of the exterior and interior of a pre-stressed concrete ground storage water tank for the KCWA. The inspection was conducted to establish the current condition of the tank's coating, concrete substrate, safety and sanitary equipment.

3.0 MG Concrete Tank

The tank was inspected in accordance with the latest version of AWWA D110 standard for Pre-Stressed Wire Wound Concrete Water Tank inspections as well as the AWWA M42 Tank Manual.

The tank interior was inspected while full and in operation with the TankRover remotely operated vehicle (ROV). The TankRover is the only piece of equipment like it in the United States and was developed by Acuren. By using the TankRover the tank was inspected with no special preparation, no additional disinfection, no confined space entry and no downtime.

The TankRover was prepared for the inspection by disinfecting in accordance with AWWA C652, by spray application of a 200 ppm chlorine solution prior to insertion to the tank.

The exterior portions of the tank was inspected by walking the roof, shell portions that were accessible from the balcony and vertical ladder, and portions that could be inspected from the tank's base. The objectives of the assessment were to:

1. Perform field inspections and tests to assess the structural and coating integrity of the tank
2. Review the safety compliance of tank ladders and access.
3. Determine if sanitary screens on vents and pipes are intact.
4. Formulate a report to document the assessment findings.
5. Provide recommendations for rehabilitation.

EXECUTIVE SUMMARY

The condition and recommendations for the tank is briefly summarized in this section. For detailed information regarding tank conditions and the specific recommendations please refer to the designated section for the tank.

The tank is in good condition with typical map cracking on the exterior surfaces commonly found in this tank style. No active cracks or spalls were visible on the exterior roof and shell. No active leaks were found during the inspection.

The interior concrete and caulked seams remain in good condition with no significant deterioration.

The tank floor has only trace amounts of accumulated sediment. The tank should not require cleaning prior to the next scheduled inspection.

The tank should be inspected again in 2017 according to AWWA recommendations.

OBSERVATIONS

Interior and exterior photographs provided in the report were developed from a digital camera and were captured in digital format from the interior videotape. The interior images are as clear as our printing technology will allow. The interior videosnaps in the report provide a reference for our comments. Keep in mind that the videotape provides the greatest detail and should be viewed as part of the report. Each videosnap (VS) is marked with the time stamp from the videotape. This allows the reader to easily view the original footage for each feature. Narration on the videotape is done in the field and some of the comments may be different than the written report. The written report is the official document and contains the formal opinion of Acuren.

Carr Pond Concrete Standpipe

The standpipe is a 3.0 MG pre-stressed concrete structure that is listed to be 80 feet in diameter and 80 feet high. The tank was constructed in 2001 by Natgun. The tank uses typical construction with corrugated steel diaphragms and gunite coating. The tank was last inspected and cleaned in 2006.

INTERIOR

The interior of the tank was accessed through the 48-inch square roof hatch, see DP# 23. The water level was indicated to be 74.8-feet during the inspection.

Roof (ceiling)

The concrete above the water line was in good condition. No visible spalling or cracking was found throughout the roof surface or rust staining that would indicate exposed and rusting reinforcement, see DP# 26 & 29. The roof to shell seam was in excellent condition with no evidence of separations, see DP# 27. Joint seams had typical efflorescence buildup but no expanded joints, see DP# 29.

Ladders

There is one stainless steel interior ladder that extends from the roof hatch to the tank floor. The ladder is in good condition and well anchored into the wall, see VS# 3. Several bolts were carbon steel on the atmospheric portions of the ladder and have developed surface rust, see DP# 24.

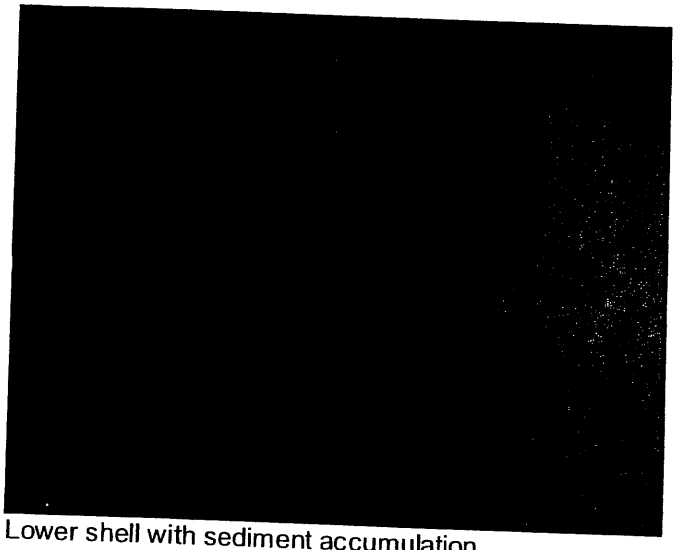
Shell

The tank walls are pre-formed concrete panels, jointed together and then tensioned with reinforcement wire. The concrete panels are in excellent condition with no major spalls or cracks, see DP# 4. Light iron staining was found below the water line but no major sediment accumulation has formed on the walls. The seam caulking was in good condition and appears to still be firmly adhered, see DP# 8. An exposed form tie was found adjacent to a vertical seam, see VS # 5&6. No concrete delamination was found around the corrosion area.

ACUREN

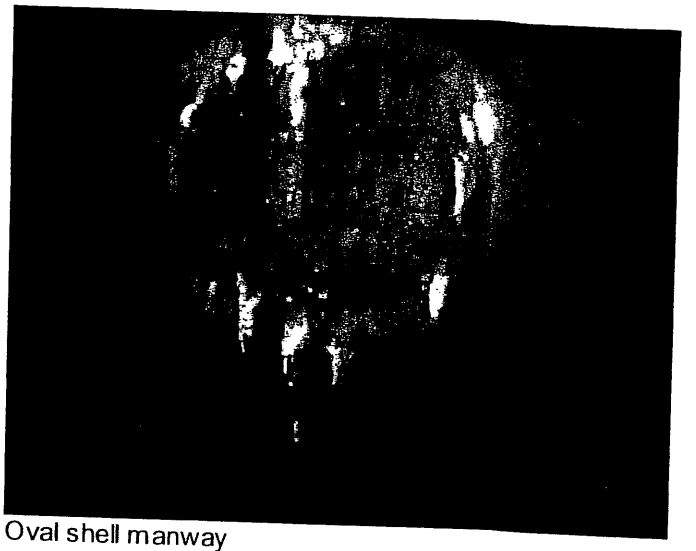
1.5MG Frenchtown Reservoir

VS#5



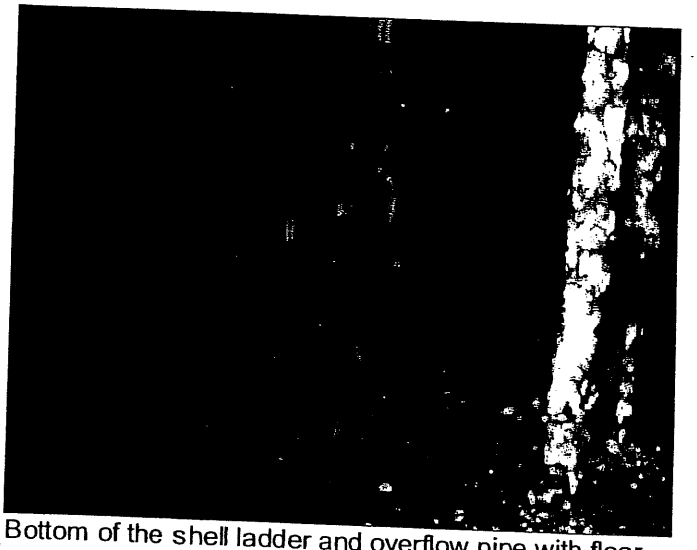
Lower shell with sediment accumulation
(Time 13:31)

VS#6



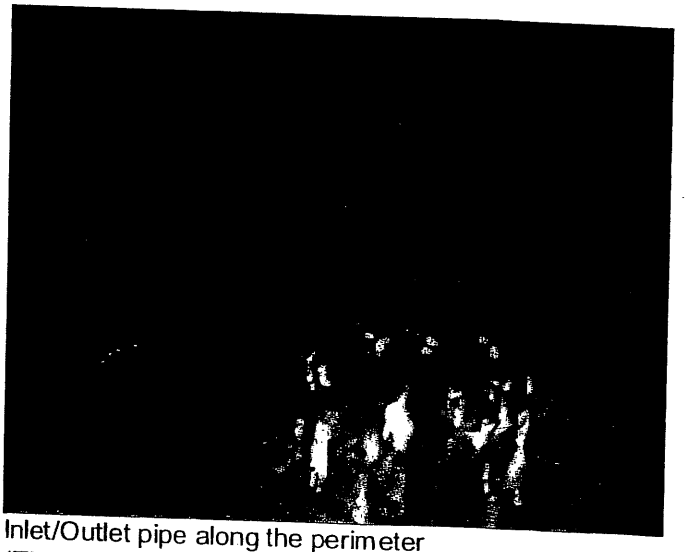
Oval shell manway
(Time 16:55)

VS#7



Bottom of the shell ladder and overflow pipe with floor penetration
(Time 17:20)

VS#8



Inlet/Outlet pipe along the perimeter
(Time 21:05)

D

Floor

The floor of the tank had minimal sediment accumulation. The tank was cleaned about 6 years ago and has only a trace amount of light brown material see VS# 11. No deterioration was found in the floor concrete.

Inlet/ Outlet

The tank has a single outlet pipe that enters through the floor into a shallow sump. The pipe has a 12-inch sediment ring, see VS# 12. The pipe has small corrosion cells on both sides of the sediment ring. A small piece of material was found lying on top of the sediment ring.

Overflow

The tank is equipped with an internal overflow pipe that discharges through the lower part of the shell. The pipe is 12-inches in diameter and discharges next to the tank onto a rock splash pad, see DP# 3. The outlet is equipped with a tide flex, duckbill style check valve see DP# 5.

EXTERIOR

Roof

The tank roof is in good condition overall see DP# 12-16. Several minor surface cracks were found in the surface veneer see DP# 17. No low spots or exposed reinforcement were found on the exterior roof. Minor darkening of the concrete has occurred due to light mildew staining along the perimeter.

Vent

The tank is equipped with one center vent that measures 48-inches on the concrete outside diameter and the screened portion measuring 36-inches in outside diameter see DP# 18. There is a fine mesh screen on the vent that is in good condition with no visible air gaps or tears. The vent cap to roof distance measured 22-inches.

Ladders and Railings

The tank has an exterior shell ladder that terminates 20-ft above grade with a safety cage and anti climb that was locked upon arrival to the site see DP# 2 and 3. The ladder and cage were in good condition. The ladder measures 18-inches in width, has a 10-inch toe kick clearance and a 12-inch rung to rung spacing.

Shell

The exterior surface has typical widespread spider cracking in the surface applied shotcrete. The formation of spider cracks in these tanks is normal. Atmospheric moisture enters in through the concrete and a combination of drying and freeze/thaw actions produce the cracking, see DP# 1 &

2. No active cracks or leakage was found on the shell. Minor mildew staining and discoloration was found on the exterior shell, see DP# 8&9.

Foundation

The tank foundation is not visible above grade and not inspected.

Recommendations

3MG Carrs Pond Tank

The tank exterior concrete remains in good condition despite the widespread map cracking. No active cracks or spalls were found.

The tank interior concrete was visibly in good condition. No major spalling or cracking was found in the roof or shell surfaces.

The tank floor had only trace amounts of sediment accumulation and should not require cleaning prior to the next anticipated inspection cycle.

The carbon steel bolts should be replaced with stainless steel bolts due to accelerated corrosion. It is important to verify that both the bolts and nuts are constructed from stainless steel prior to assembly.

The tank should be inspected again in 2017.

NACE Certified Coating Inspector #00050

Scott Paul, P.E

GLOSSARY OF TERMS FOR CONCRETE TANKS

ADHESION: State in which two surfaces are held together by interfacial forces which may consist off valence forces or interlocking action or both

AGGREGATE: Granular material, such as sand, gravel, crushed stone, crushed hydraulic-cement concrete, or iron blast-furnace slag used with a hydraulic cementing medium to produce either concrete or mortar.

BUGHOLES: Small regular or irregular cavities, usually not exceeding 15 mm in diameter, resulting from entrapment of air bubbles in the surface of formed concrete during placement and compaction.

CHEMICAL ATTACK: Decomposition of a coating or concrete due to the action of a chemical.

CONTRACTION JOINT: Formed, sawed, or tooled groove in a concrete structure to create a weakened plane and regulate the location of cracking resulting from the dimensional change of different parts of the structure.

DISBONDMENT: The loss of adhesion between a coating and the substrate.

EFFLORESENCE: A white crystalline or powdery deposit on the surface of concrete. Efflorescence results from leaching of lime or calcium hydroxide out of a permeable concrete mass over time by water, followed by reaction with carbon dioxide and acidic pollutants.

FINISH: The texture of a concrete surface after compaction and finishing operations have been performed.

GROUT, GROUTING: A plastic mixture of cementitious materials and water used as a filler for cracks, or other void spaces, in concrete surfaces to be coated.

HONEYCOMB: Voids left in concrete due to failure of the mortar to effectively fill the spaces among coarse aggregate particles.

HYDRAULIC, HYDROSTATIC PRESSURE: A force exerted on the concrete/coating interface due to the level of the ground water.

ISOLATION JOINT: A separation between adjoining parts of a concrete structure.

LAITANCE: A thin, weak brittle layer of cement and aggregate fines on a concrete surface. The amount of laitance is influenced by the degree of working or the amount of water in the concrete.

OSMOTIC PRESSURE: A force exerted on the concrete /coating interface through the capillaries in the concrete due to a moisture differential across the coating.

PINHOLES: Film defect characterized by small pore-like flaws in a coating which extend entirely through the applied film and have the general appearance of pin pricks, fine holes, or voids when viewed by reflected light.

PLASTIC CRACKING, PLASTIC SHRINKAGE CRACKING: Cracking that occurs in the surface of fresh concrete soon after it is placed and while it is still plastic,

POROSITY, SURFACE POROSITY: The ratio usually expressed as a percentage, of the volume of voids in a material to the total volume of the material, including the voids.

PROFILE, SURFACE PROFILE: Surface contour as viewed from the edge.

REFLECTIVE CRACKING: Cracking that develops in a coating directly over a dynamic crack in concrete.

SEALANT, JOINT SEALANT: Compressible material used to exclude water and solid foreign materials from joints.

STATIC CRACKS: A crack in the concrete surface whose width does not change.

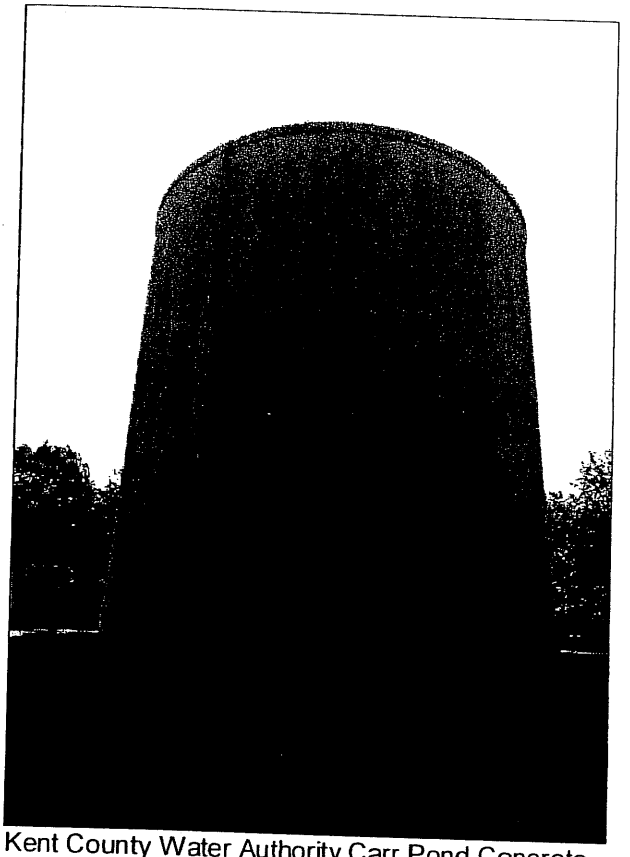
VAPOR BARRIER: Waterproof membrane placed under concrete floor slabs that are placed on grade.

APPENDIX A

Digital Pictures and Underwater Video Snaps

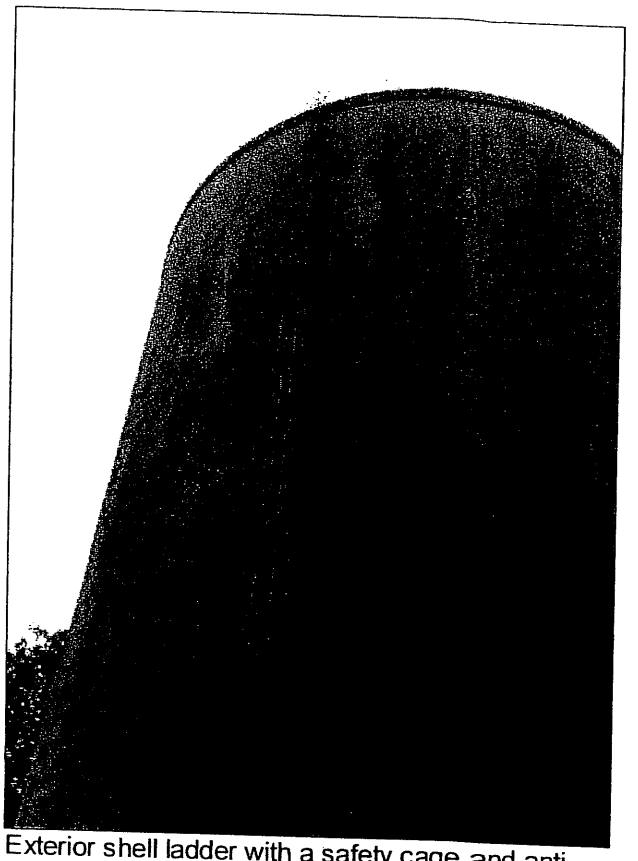
3.0MG Carr Pond Standpipe

DP#1



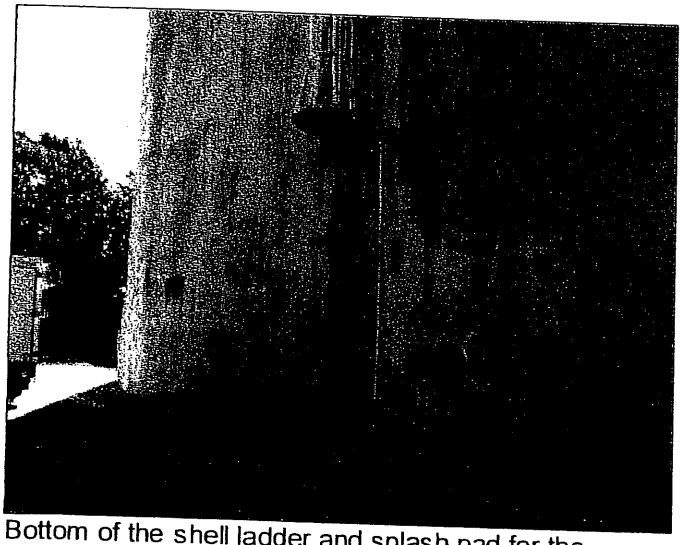
Kent County Water Authority Carr Pond Concrete Standpipe

DP#2



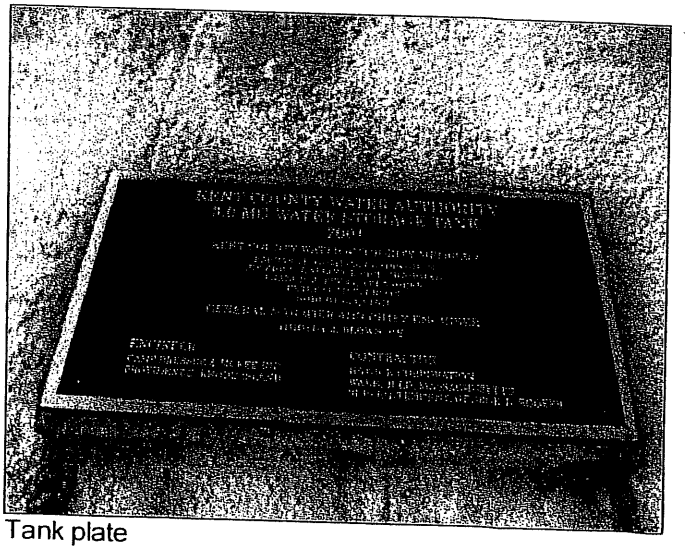
Exterior shell ladder with a safety cage and anti climb that is locked

DP#3



Bottom of the shell ladder and splash pad for the overflow pipe

DP#4

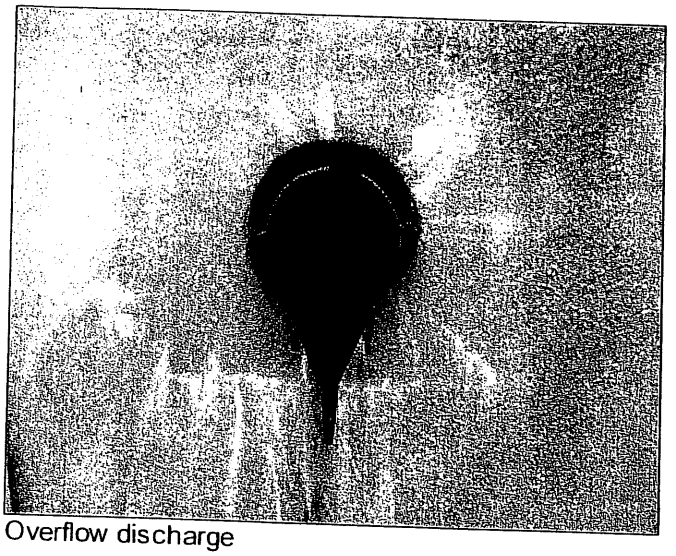


Tank plate

ACUREN

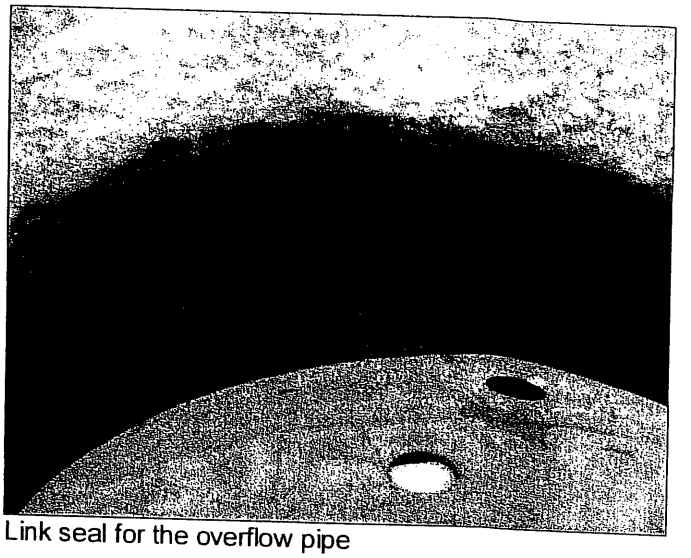
3.0MG Carr Pond Standpipe

DP#5



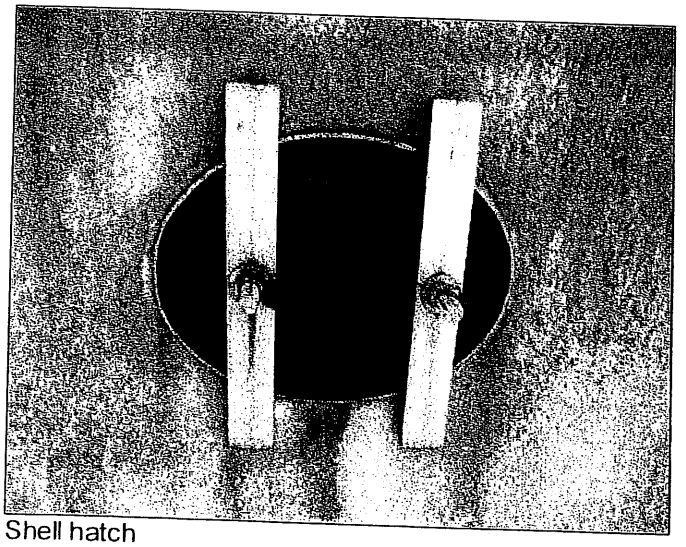
Overflow discharge

DP#6



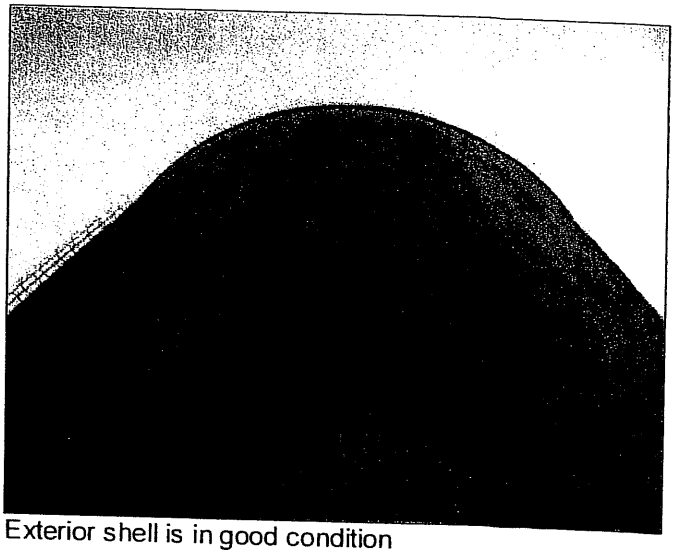
Link seal for the overflow pipe

DP#7



Shell hatch

DP#8

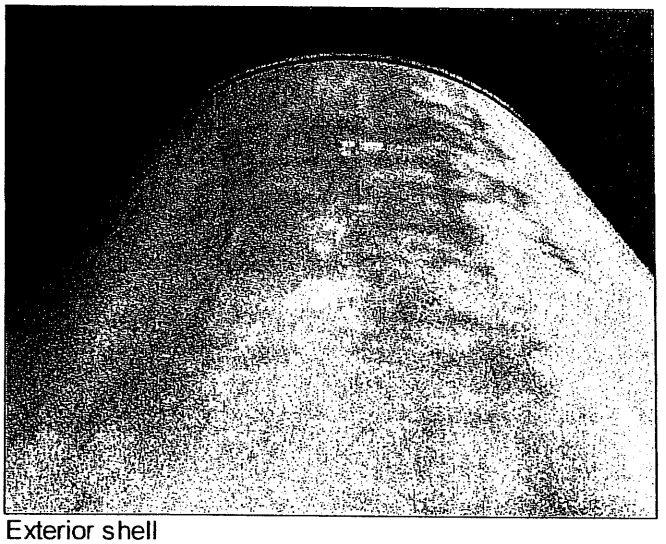


Exterior shell is in good condition

ACUREN

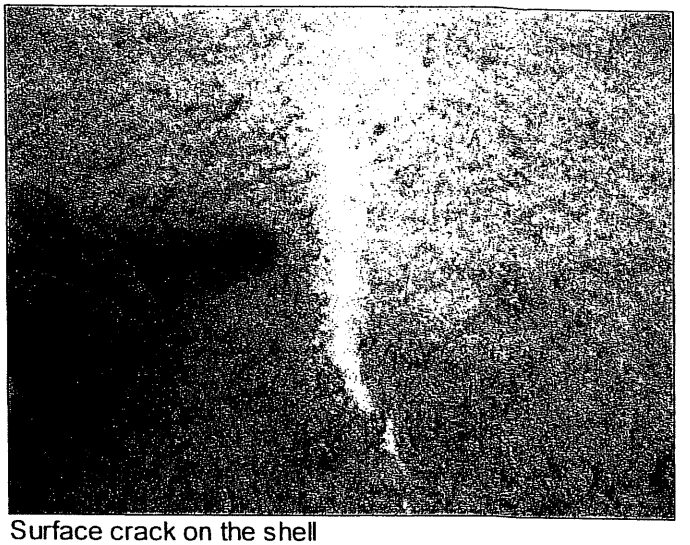
3.0MG Carr Pond Standpipe

DP#9



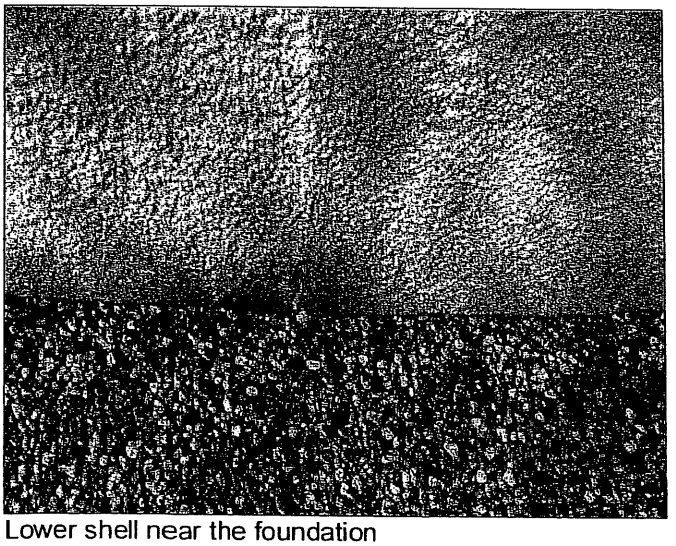
Exterior shell

DP#10



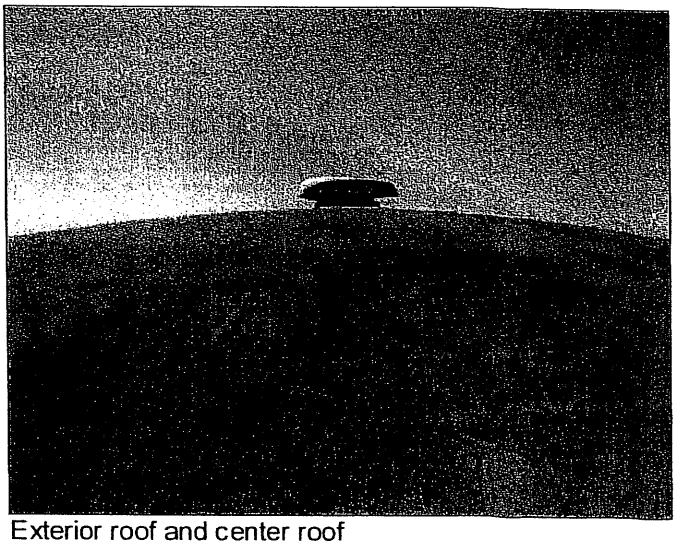
Surface crack on the shell

DP#11



Lower shell near the foundation

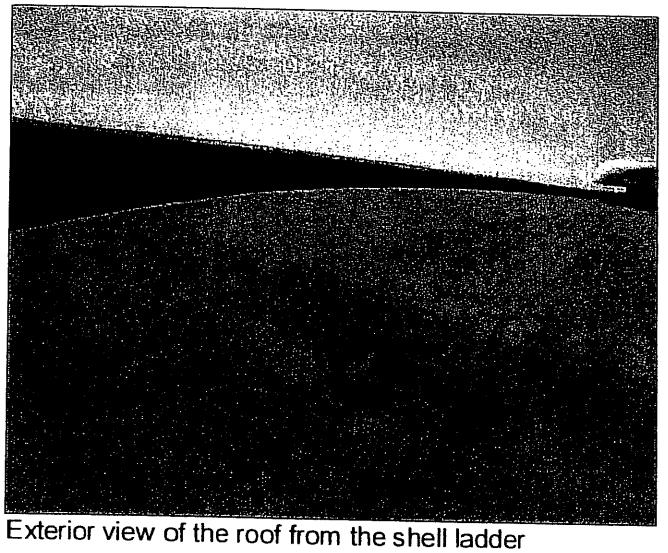
DP#12



Exterior roof and center roof

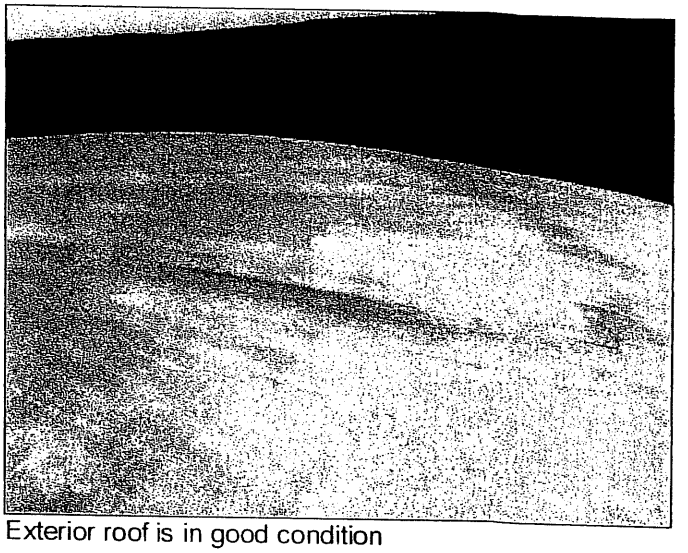
3.0MG Carr Pond Standpipe

DP#13



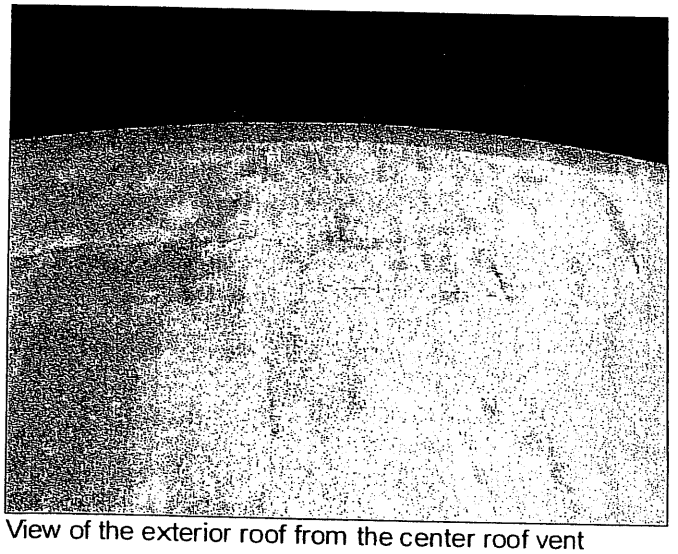
Exterior view of the roof from the shell ladder

DP#14



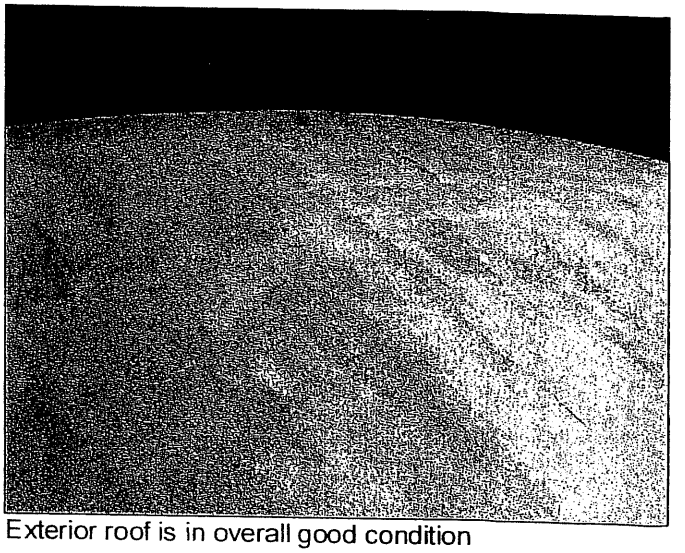
Exterior roof is in good condition

DP#15



View of the exterior roof from the center roof vent

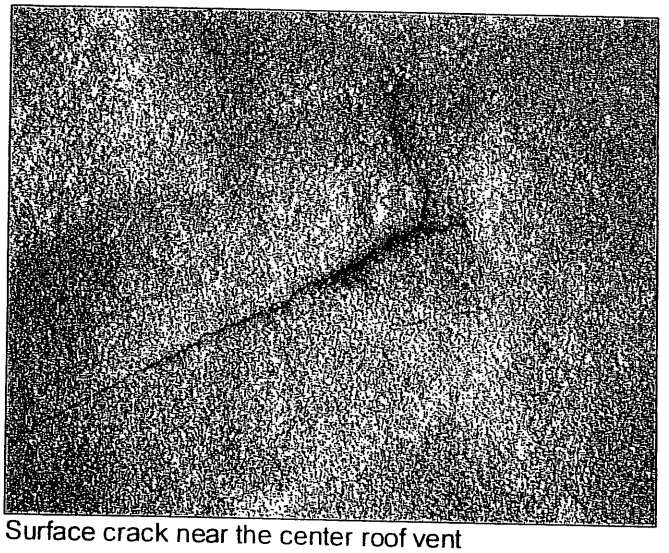
DP#16



Exterior roof is in overall good condition

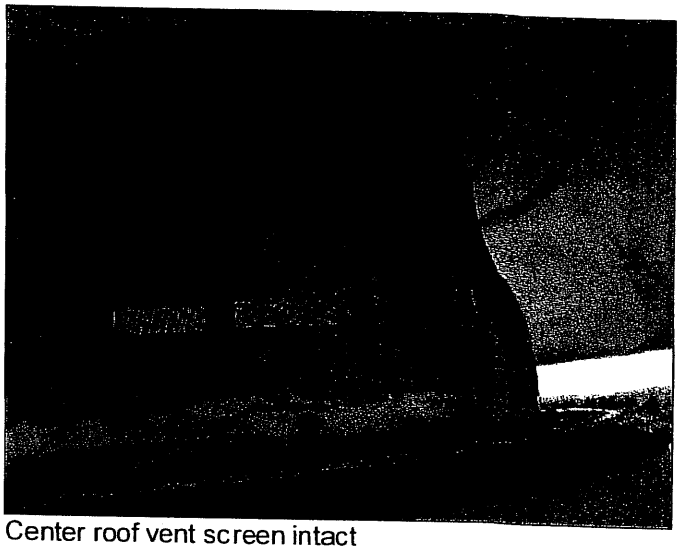
3.0MG Carr Pond Standpipe

DP#17



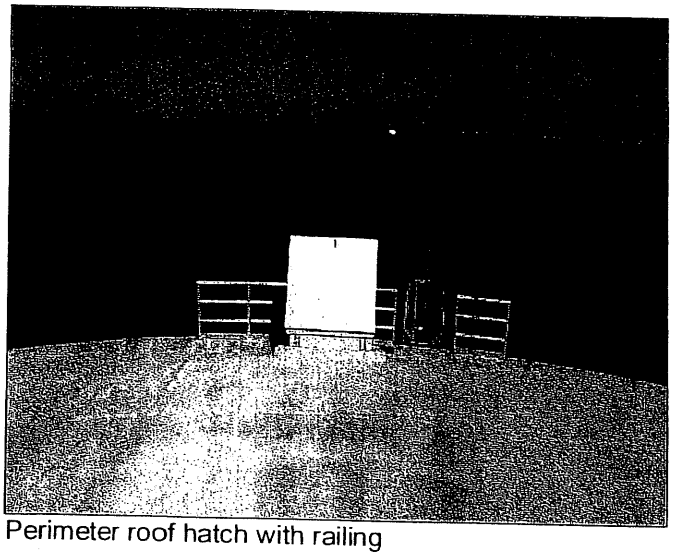
Surface crack near the center roof vent

DP#18



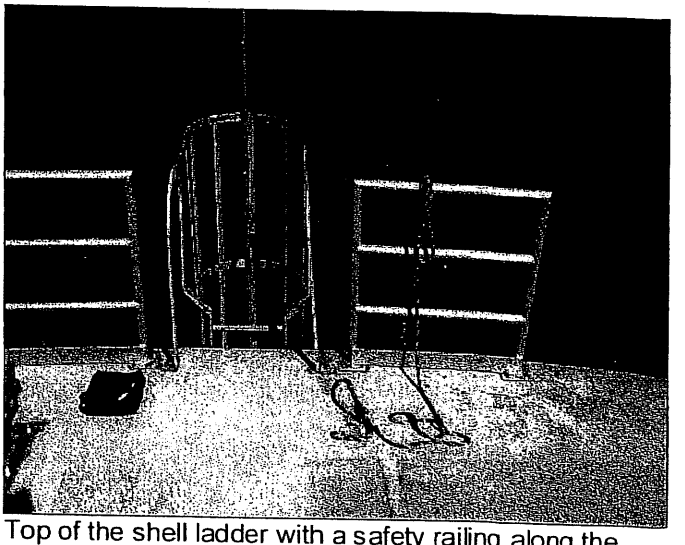
Center roof vent screen intact

DP#19



Perimeter roof hatch with railing

DP#20



Top of the shell ladder with a safety railing along the perimeter

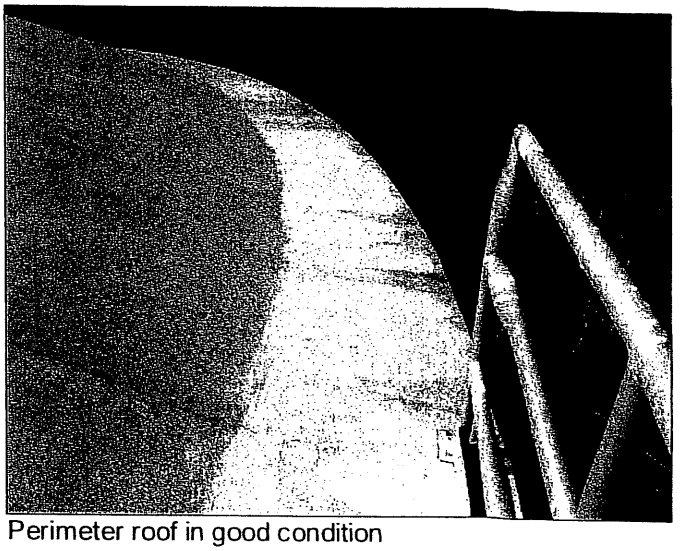
ACUREN

3.0MG Carr Pond Standpipe

DP#21

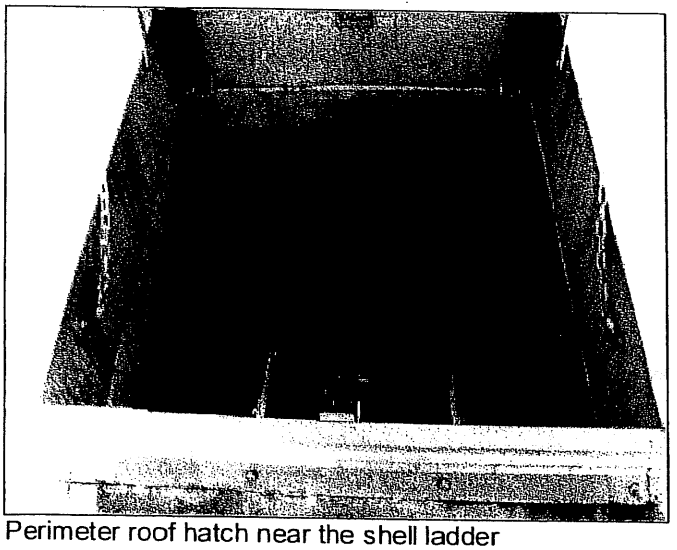
Perimeter roof hatch with a safety railing

DP#22



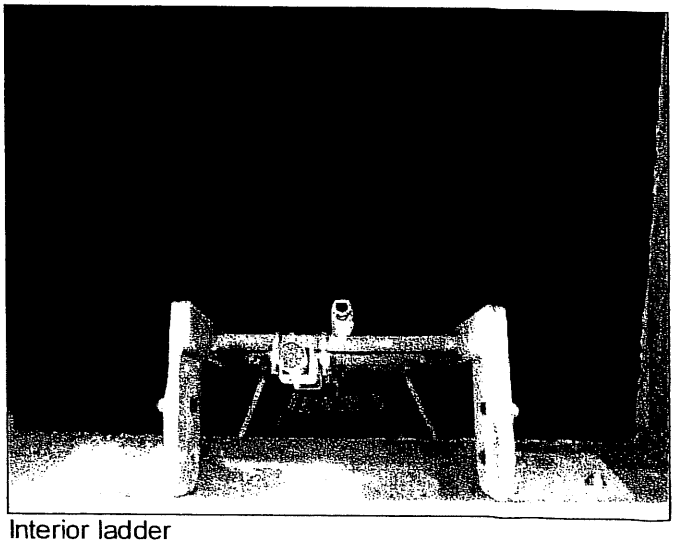
Perimeter roof in good condition

DP#23



Perimeter roof hatch near the shell ladder

DP#24



Interior ladder

ACUREN

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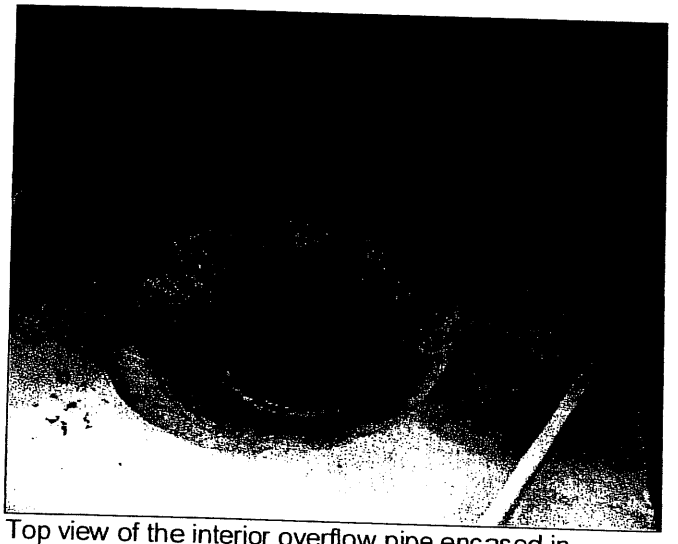
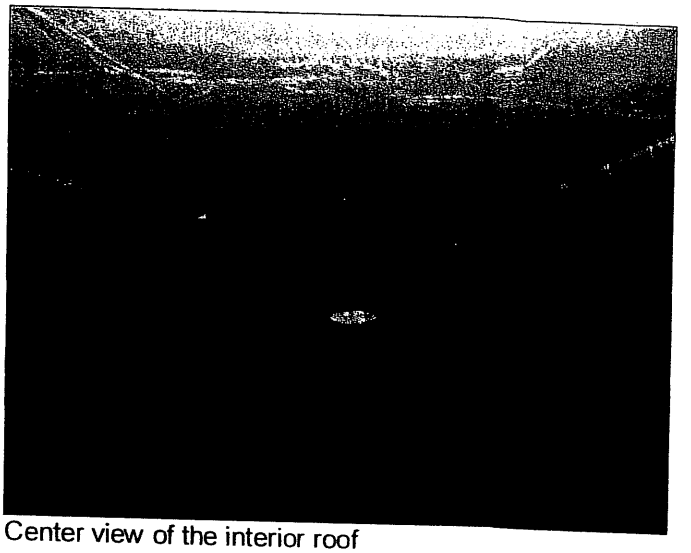
DP#25



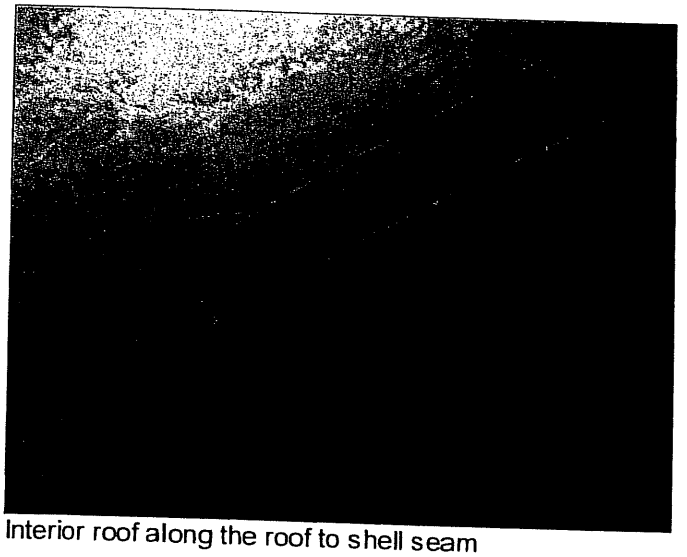
Top view of the interior overflow pipe encased in concrete

DP#26



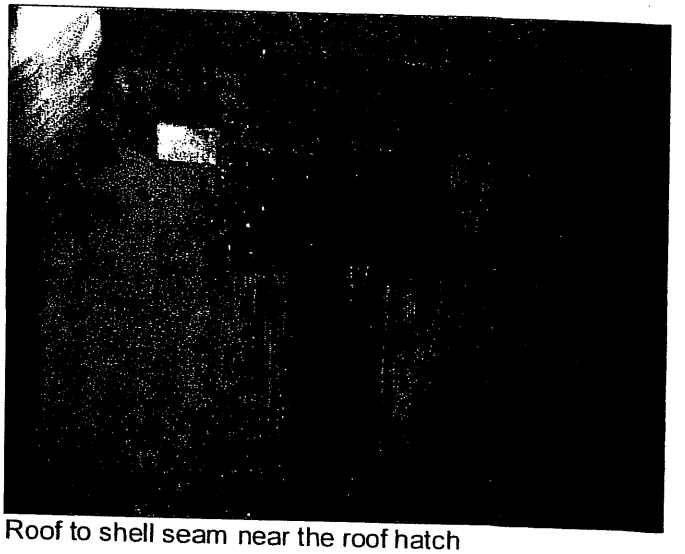
Center view of the interior roof

DP#27



Interior roof along the roof to shell seam

DP#28

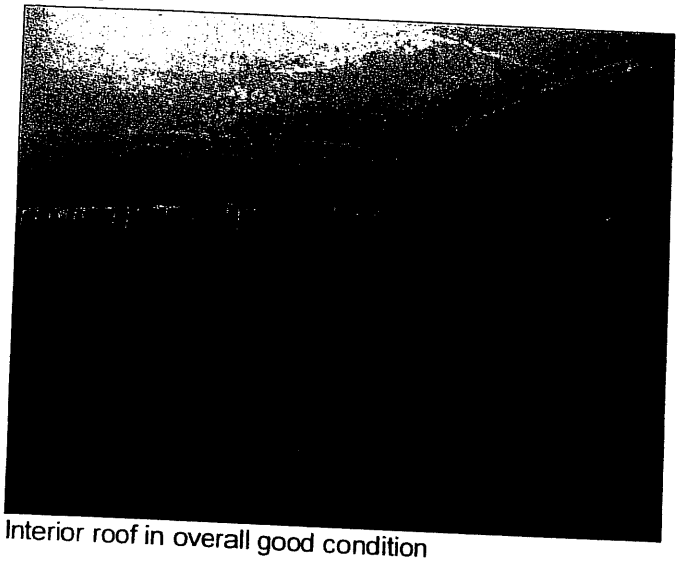


Roof to shell seam near the roof hatch

ACUREN

3.0MG Carr Pond Standpipe

DP#29



Interior roof in overall good condition

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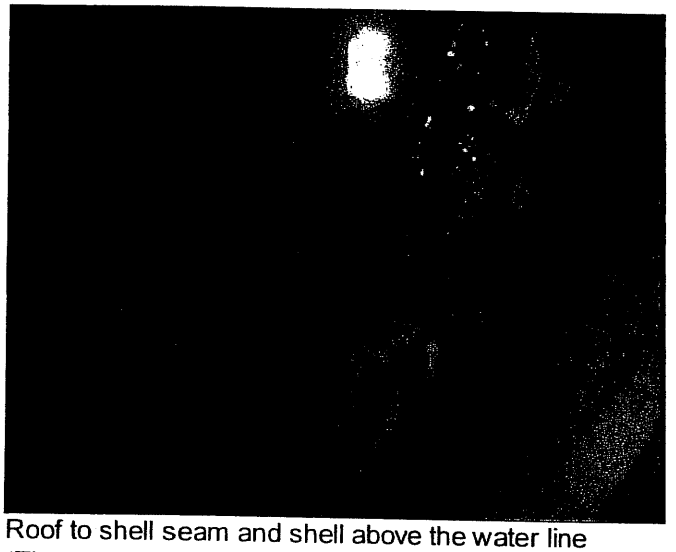
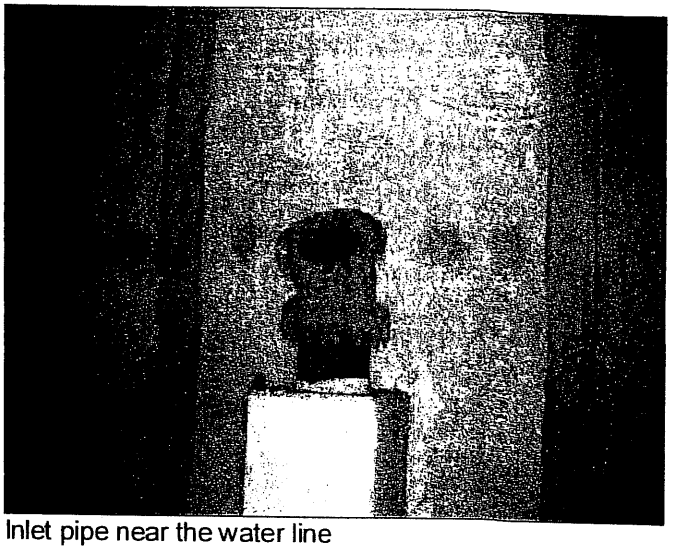
3.0MG Carr Pond Standpipe

VS#1



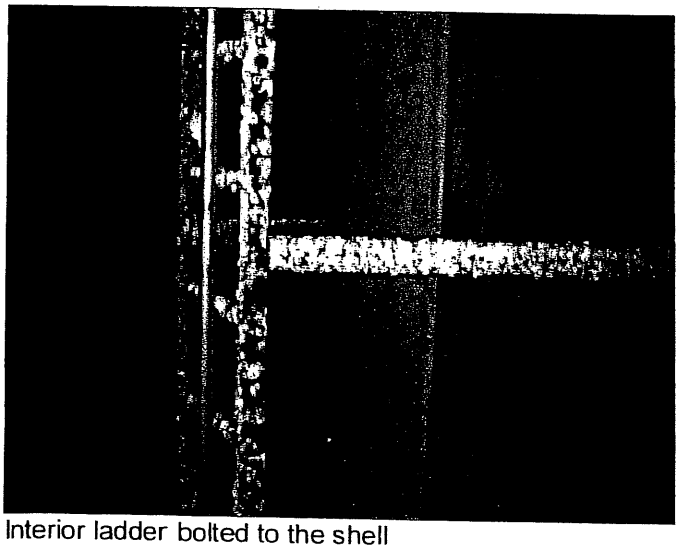
Roof to shell seam and shell above the water line
(Time 1:00)

VS#2



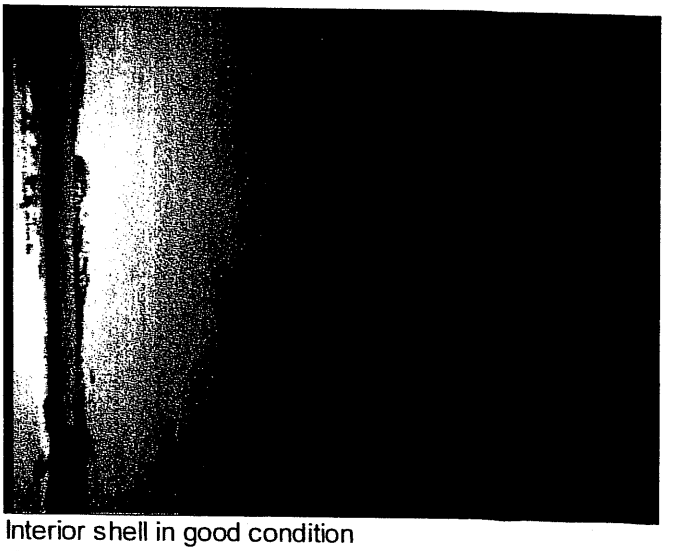
Inlet pipe near the water line
(Time 3:39)

VS#3



Interior ladder bolted to the shell
(Time 4:43)

VS#4



Interior shell in good condition
(Time 6:46)

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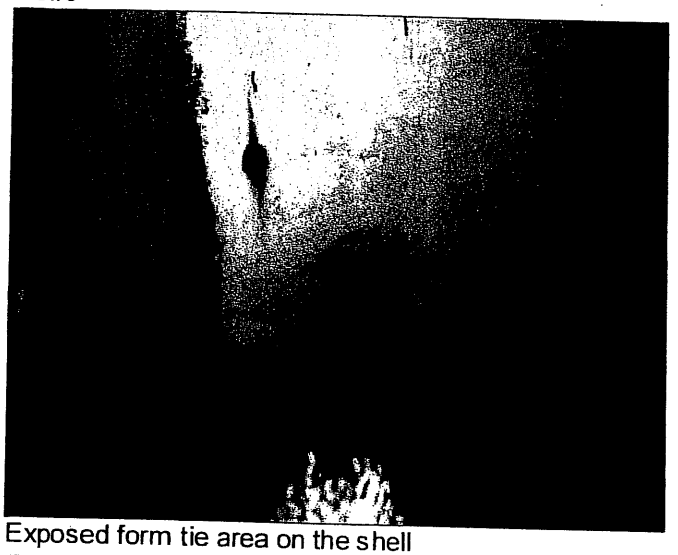
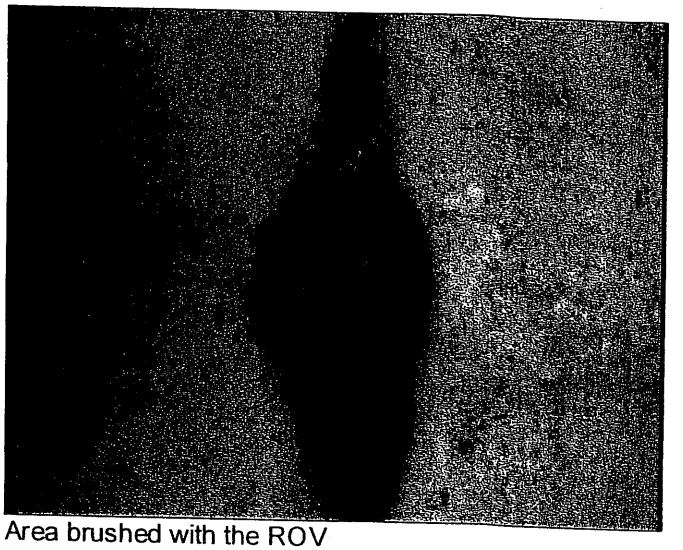
3.0MG Carr Pond Standpipe

VS#5



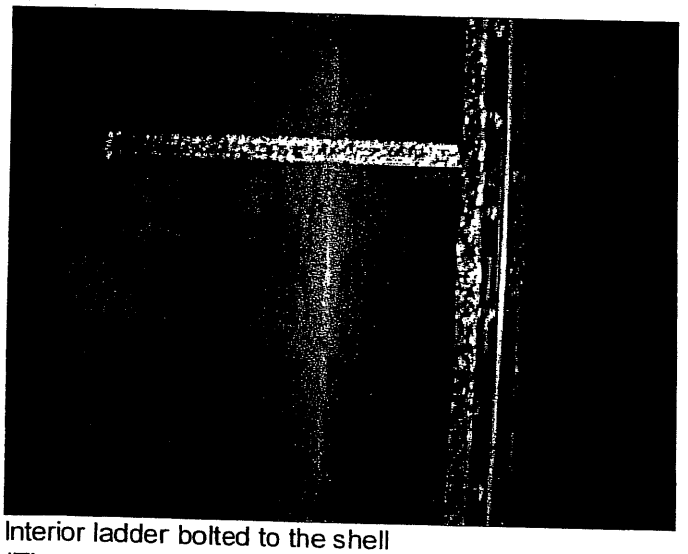
Exposed form tie area on the shell
(Time 7:34)

VS#6



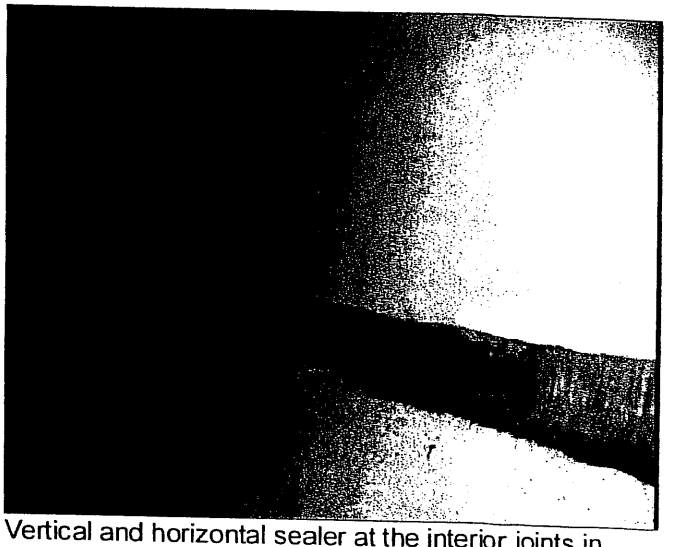
Area brushed with the ROV
(Time 8:26)

VS#7



Interior ladder bolted to the shell
(Time 10:00)

VS#8

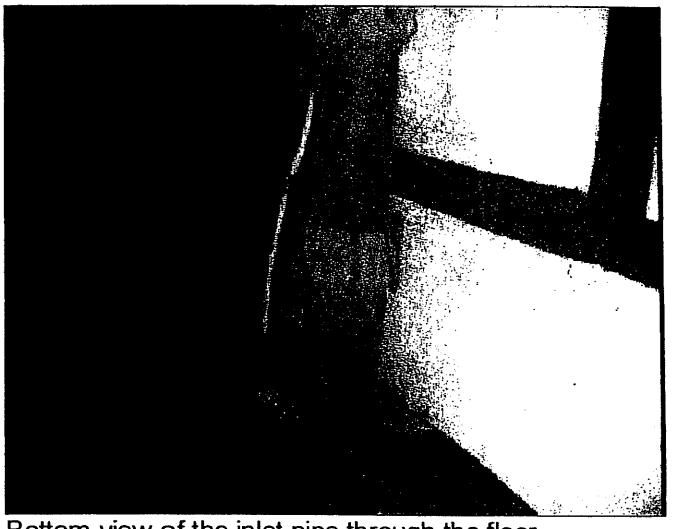


Vertical and horizontal sealer at the interior joints in good condition
(Time 17:26)

ACUREN

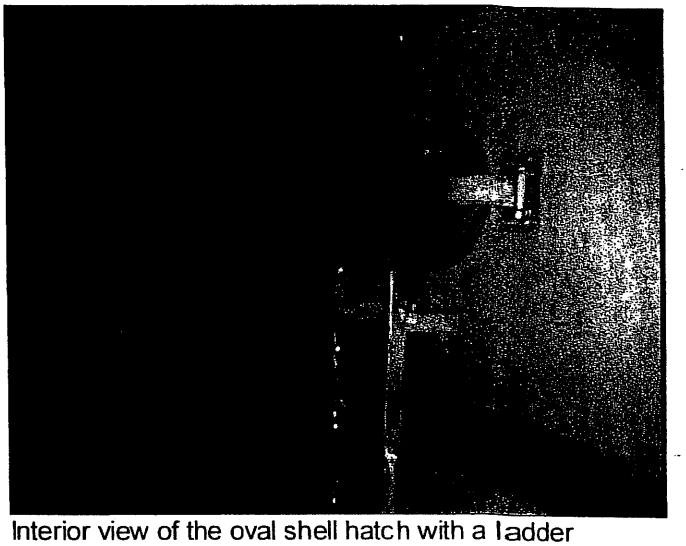
3.0MG Carr Pond Standpipe

VS#9



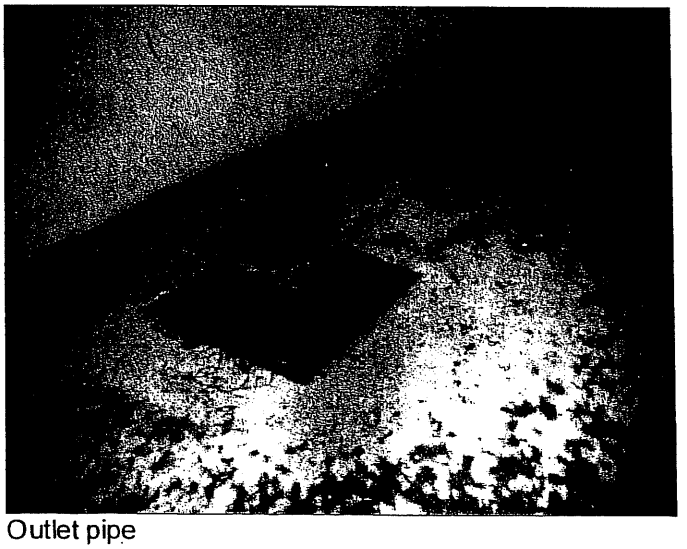
Bottom view of the inlet pipe through the floor
(Tim 18:37)

VS#10



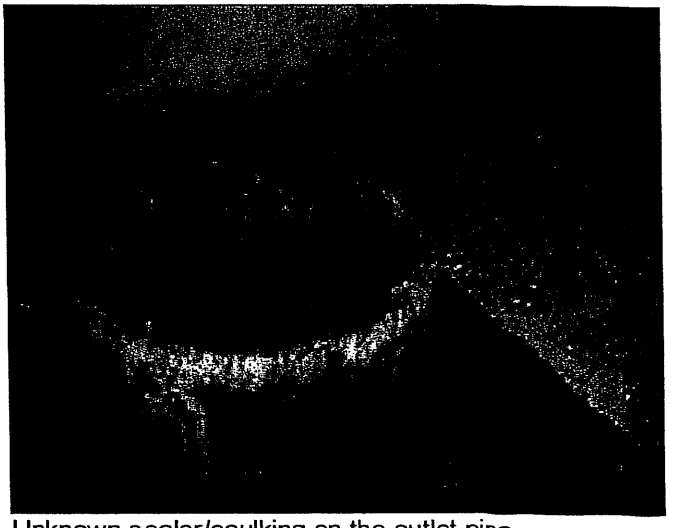
Interior view of the oval shell hatch with a ladder
(Time 18:59)

VS#11



Outlet pipe
(Time 21:45)

VS#12



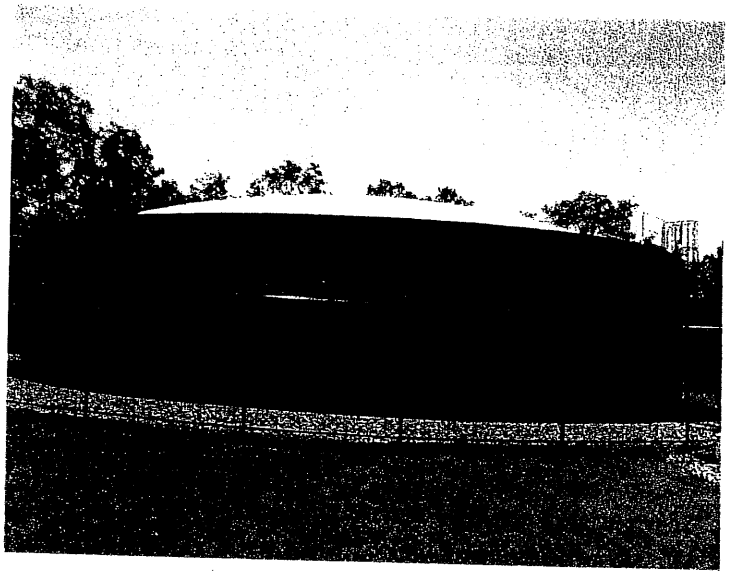
Unknown sealer/caulking on the outlet pipe
(Time 21:55)

Water Tank Inspection Report

For

Kent County Water Authority

Of the



1.5MG Read Schoolhouse Concrete Reservoir
Coventry, RI

August 29, 2012

ACUREN

455 Main Street Bldg 1 Suite A-B
Deep River, CT 06417
Tel: (860) 526-2610 Fax:(860) 526-5018)
www.extechllc.com

TABLE OF CONTENTS

Kent County Water Authority

West Greenwich, RI

INTRODUCTION

On August 29, 2012 Acuren representatives, Bill Iaquessa and Matt Weaver performed a condition assessment of the exterior and interior of a pre-stressed concrete ground storage water tank for the KCWA. The inspection was conducted to establish the current condition of the tank's coating, concrete substrate, safety and sanitary equipment.

1.5 M Gallon Concrete Ground Reservoir

The tank was inspected in accordance with the latest version of AWWA D101, AWWA D110 standard for Pre-Stressed Wire Wound Concrete Water Tank inspections as well as the AWWA M42 Tank Manual.

The tank interior was inspected while full and in operation with the TankRover remotely operated vehicle (ROV). The TankRover is the only piece of equipment like it in the United States and was developed by Acuren. By using the TankRover, the tank was inspected with no special preparation, no additional disinfection, no confined space entry and no downtime.

The TankRover was prepared for the inspection by disinfecting in accordance with AWWA C652, by spray application of a 200 ppm chlorine solution prior to insertion to the tank.

The exterior portions of the tank were inspected by walking the roof, the vertical ladder, and portions that could be inspected from the tank's base. The objectives of the assessment were to:

1. Perform field inspections and tests to assess the structural and coating integrity of the tank
2. Review the safety compliance of tank ladders and access.
3. Determine if sanitary screens on vents and pipes are intact.
4. Formulate a report to document the assessment findings.
5. Provide recommendations for rehabilitation.

EXECUTIVE SUMMARY

The condition and recommendations for the tank is briefly summarized in this section. For detailed information regarding detailed tank conditions and the specific recommendations please refer to the designated section for the tank.

The tank has no active cracks or spalls visible on the exterior roof and shell. No active leaks were found during the inspection.

The interior concrete had no significant deterioration. An area on the floor had a small accumulation of concrete that had fallen from the roof. The concrete appears to be from a small spall on the roof surface on the perimeter.

The tank had a thin layer of sediment which was removed as part of this inspection cycle.

The tank should be inspected again in 2017 according to AWWA recommendations.

OBSERVATIONS

Interior and exterior photographs provided in the report were developed from a digital camera and were captured in digital format from the interior videotape. The interior images are as clear as our printing technology will allow. The interior videosnaps in the report provide a reference for our comments. Keep in mind that the videotape provides the greatest detail and should be viewed as part of the report. Each videosnap (VS) is marked with the time stamp from the videotape. This allows the reader to easily view the original footage for each feature.

Narration on the videotape is done in the field and some of the comments may be different than the written report. The written report is the official document and contains the formal opinion of Acuren.

Read Schoolhouse Reservoir

The reservoir is a 1.5 M gallon pre-stressed concrete structure that is listed to be 100 feet in diameter and 25 feet high. The tank was constructed in 2009 and this is the first inspection. The tank uses typical construction with a corrugated steel diaphragm and gunite coating.

INTERIOR

The interior of the tank was accessed through the 48-inch square roof hatch, see DP# 23. The water level was approximately 5-feet below the manway hatch during the inspection.

Roof (ceiling)

The self supporting concrete roof had no visible spalling or cracking found throughout the roof surface or rust staining that would indicate exposed and rusting reinforcement, see DP# 23&24. The roof to shell seam had no evidence of separation, see VS# 1. Joint seams had almost no efflorescence buildup, see DP# 26 & 27.

Ladders

There is one stainless steel interior ladder that extends from the roof hatch to the tank floor, see DP# 20. The ladder is in good condition and well anchored into the wall, see VS# 2. Typical iron staining was found below the water line but no ladder damage was found.

Shell

The tank walls are pre-cast concrete panels that are reinforced with tensioned steel wire. The concrete walls had no major spalls or cracks, see VS# 6. Light iron staining was found below the water line but no major sediment accumulation has formed on the walls, see DP# 25. The shell to floor seam had no evidence of deterioration, see VS# 7.

Floor

The tank floor had a light, uniform dusting of sediment see VS# 7. No deterioration was found in the floor concrete. A small area of concrete debris was found along the perimeter of the floor that appears to have fallen from the roof or shell, see VS# 8.

Inlet/ Outlet

The tank uses a Tideflex style mixing system with a pipe extending along the floor leading to multiple openings, see VS# 9-12. The duckbill style check valves are in good condition and properly installed. The outlet opening is screened and in good condition, see VS# 10.

Overflow

The tank is equipped with an internal 10-inch diameter overflow pipe that discharges through the lower part of the shell with a tideflex duckbill style check valve, see DP# 9. The overflow outlets just above grade over a concrete splash pad. No problems were noted with the overflow pipe.

EXTERIOR

Roof

The concrete roof is in good condition overall, see DP# 12. No problems were found with the exterior roof.

Vent

The tank is equipped with one octagon style aluminum vent body that measures 24-inches, see DP# 15. The outside diameter of the concrete base is 32-inches. The vent components are in excellent condition. There is a fine mesh screen on the vent that is in good condition with no visible air gaps or tears, see DP# 16&17. The vent cap to roof distance was 10-inches.

Ladders and Railings

The tank is not equipped with a shell ladder. A lift was used for access.

Shell

The exterior surface has almost no surface cracks or spalling, see DP# 4&5. Light mildew staining was found on the roof edges, see DP# 3.

Foundation

The tank foundation is not visible above grade and not inspected.

Recommendations

Read Schoolhouse Tank

There are no recommendations for repair or upgrades at this time.

Based on the sediment accumulation found during the inspection and the rate of deposition the tank should not require cleaning before the next inspection cycle.

The tank should be inspected again in 2017 according to AWWA recommendations.

NACE Certified Coating Inspector #00050

Scott Paul, P.E.

GLOSSARY OF TERMS FOR CONCRETE TANKS

ADHESION: State in which two surfaces are held together by interfacial forces which may consist off valence forces or interlocking action or both

AGGREGATE: Granular material, such as sand, gravel, crushed stone, crushed hydraulic-cement concrete, or iron blast-furnace slag used with a hydraulic cementing medium to produce either concrete or mortar.

BUGHOLES: Small regular or irregular cavities, usually not exceeding 15 mm in diameter, resulting from entrapment of air bubbles in the surface of formed concrete during placement and compaction.

CHEMICAL ATTACK: Decomposition of a coating or concrete due to the action of a chemical.

CONTRACTION JOINT: Formed, sawed, or tooled groove in a concrete structure to create a weakened plane and regulate the location of cracking resulting from the dimensional change of different parts of the structure.

DISBONDMENT: The loss of adhesion between a coating and the substrate.

EFFLORESENCE: A white crystalline or powdery deposit on the surface of concrete. Efflorescence results from leaching of lime or calcium hydroxide out of a permeable concrete mass over time by water, followed by reaction with carbon dioxide and acidic pollutants.

FINISH: The texture of a concrete surface after compaction and finishing operations have been performed.

GROUT, GROUTING: A plastic mixture of cementitious materials and water used as a filler for cracks, or other void spaces, in concrete surfaces to be coated.

HONEYCOMB: Voids left in concrete due to failure of the mortar to effectively fill the spaces among coarse aggregate particles.

HYDRAULIC, HYDROSTATIC PRESSURE: A force exerted on the concrete/coating interface due to the level of the ground water.

ISOLATION JOINT: A separation between adjoining parts of a concrete structure.

LAITANCE: A thin, weak brittle layer of cement and aggregate fines on a concrete surface. The amount of laitance is influenced by the degree of working or the amount of water in the concrete.

OSMOTIC PRESSURE: A force exerted on the concrete /coating interface through the capillaries in the concrete due to a moisture differential across the coating.

PINHOLES: Film defect characterized by small pore-like flaws in a coating which extend entirely through the applied film and have the general appearance of pin pricks, fine holes, or voids when viewed by reflected light.

PLASTIC CRACKING, PLASTIC SHRINKAGE CRACKING: Cracking that occurs in the surface of fresh concrete soon after it is placed and while it is still plastic,

POROSITY, SURFACE POROSITY: The ratio usually expressed as a percentage, of the volume of voids in a material to the total volume of the material, including the voids.

PROFILE, SURFACE PROFILE: Surface contour as viewed from the edge.

REFLECTIVE CRACKING: Cracking that develops in a coating directly over a dynamic crack in concrete.

SEALANT, JOINT SEALANT: Compressible material used to exclude water and solid foreign materials from joints.

STATIC CRACKS: A crack in the concrete surface whose width does not change.

VAPOR BARRIER: Waterproof membrane placed under concrete floor slabs that are placed on grade.

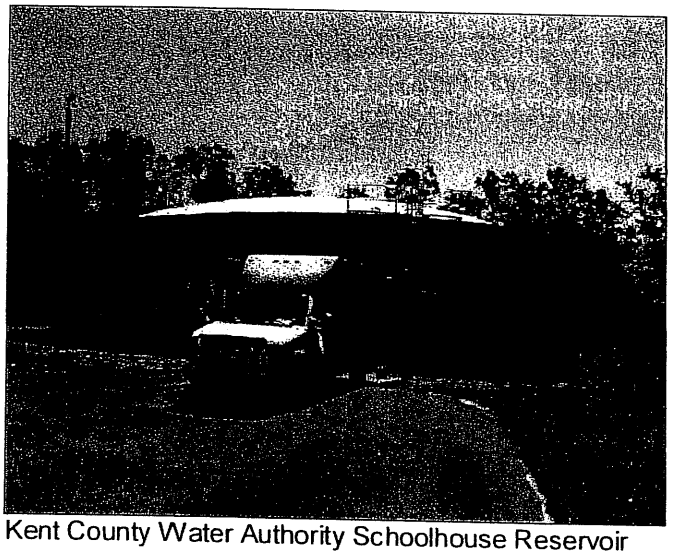
APPENDIX A

Digital Pictures
and
Underwater
Video Snaps

ACUREN

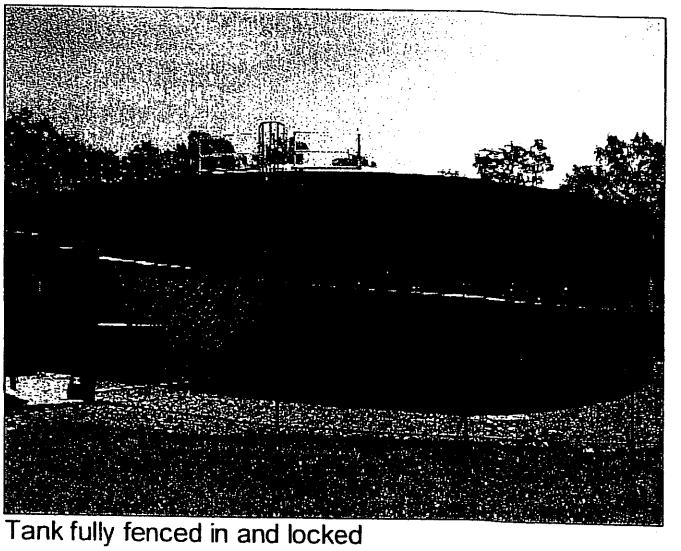
1.5MG Read Schoolhouse Reservoir

DP#1



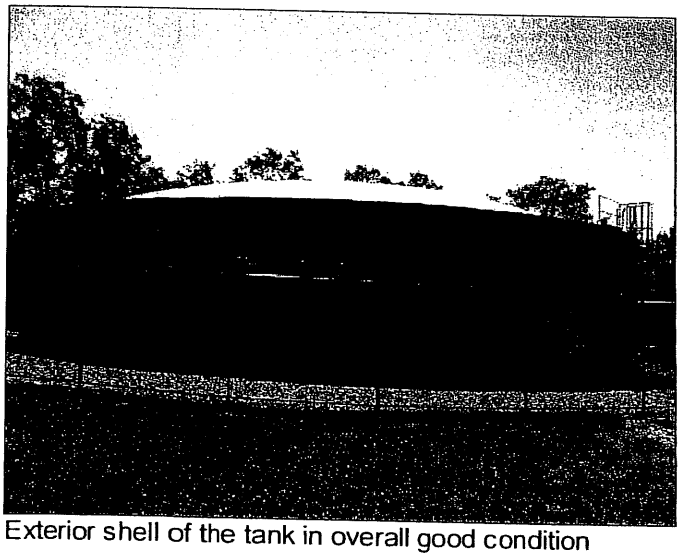
Kent County Water Authority Schoolhouse Reservoir

DP#2



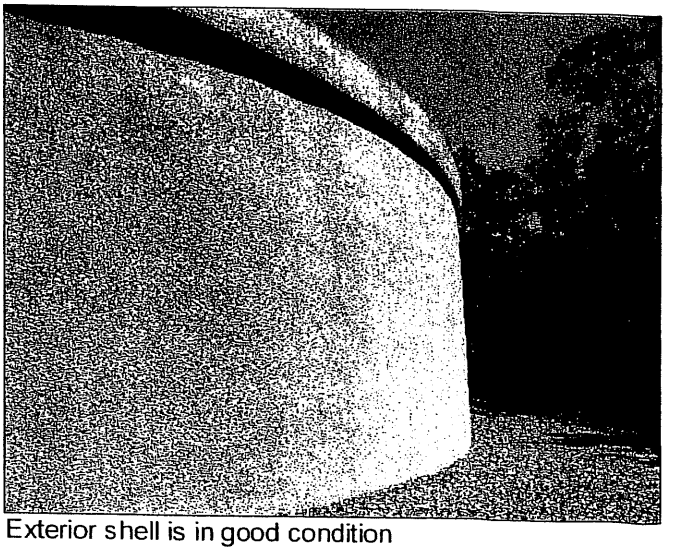
Tank fully fenced in and locked

DP#3



Exterior shell of the tank in overall good condition

DP#4

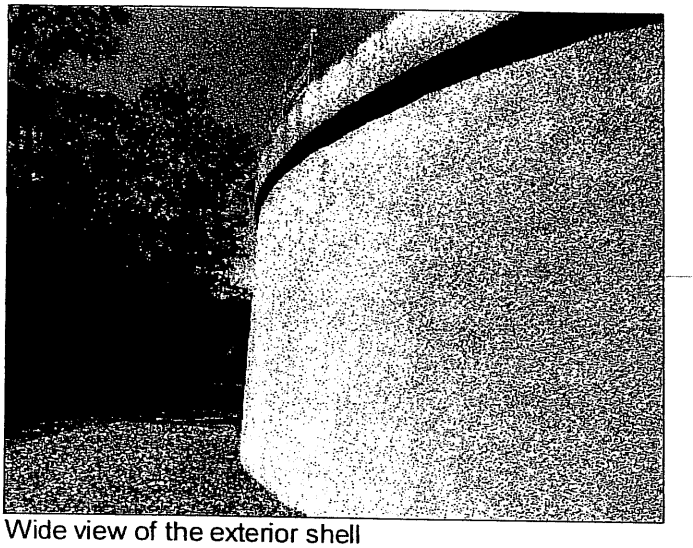


Exterior shell is in good condition

ACUREN

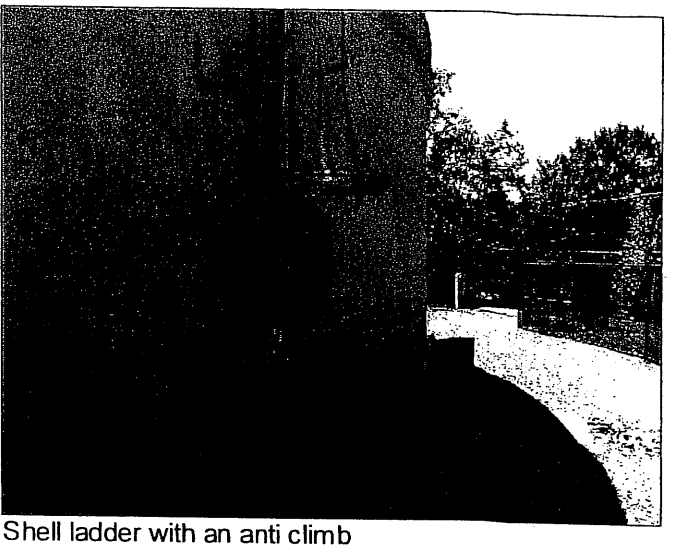
1.5MG Read Schoolhouse Reservo ir

DP#5



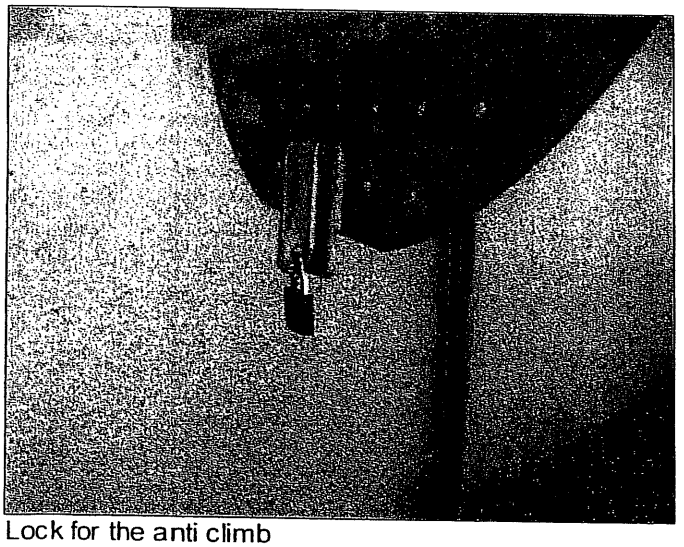
Wide view of the exterior shell

DP#6



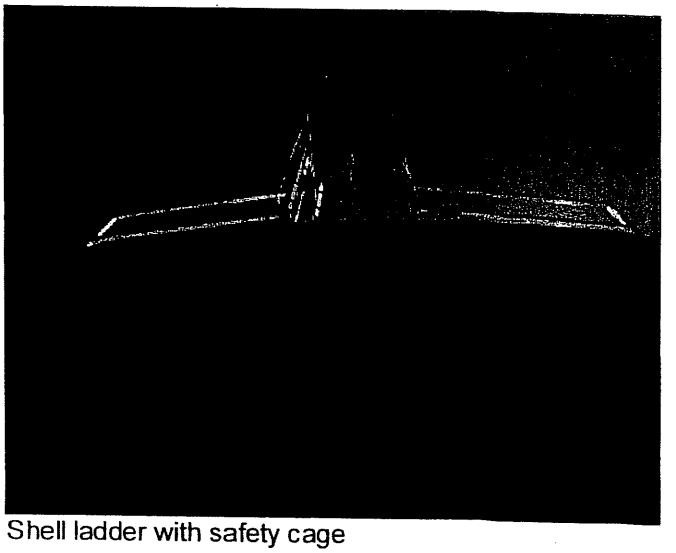
Shell ladder with an anti climb

DP#7



Lock for the anti climb

DP#8



Shell ladder with safety cage

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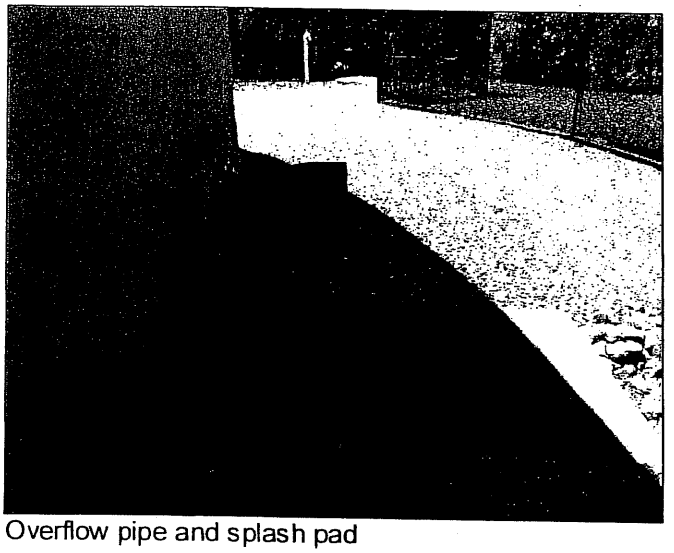
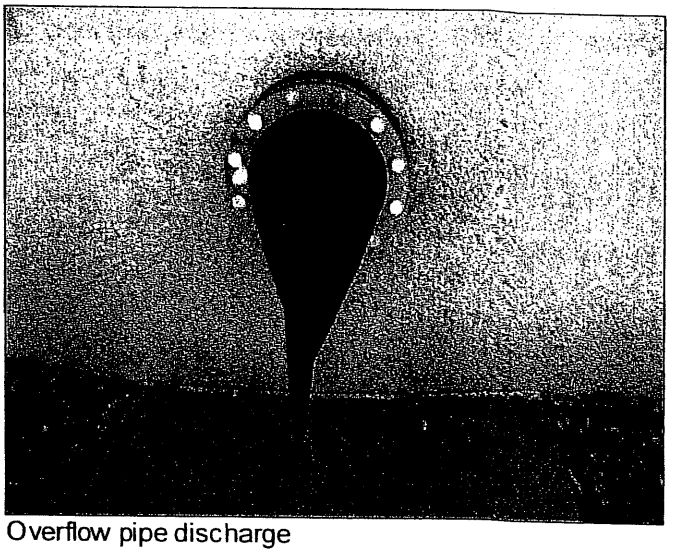
1.5MG Read Schoolhouse Reservo ir

DP#9



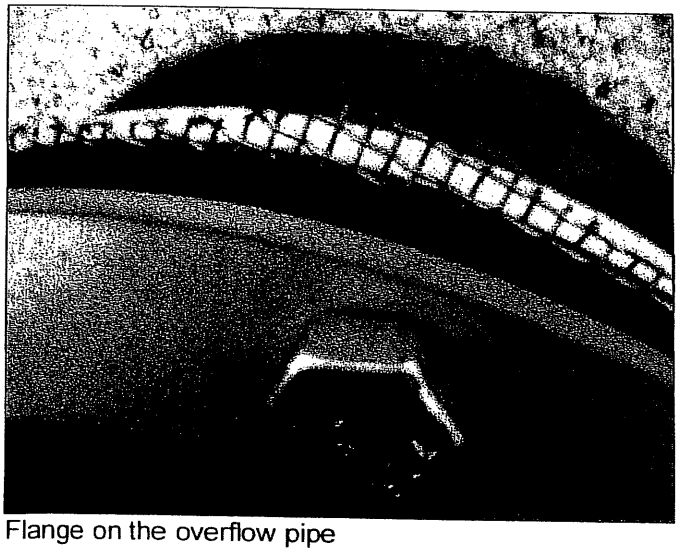
Overflow pipe and splash pad

DP#10



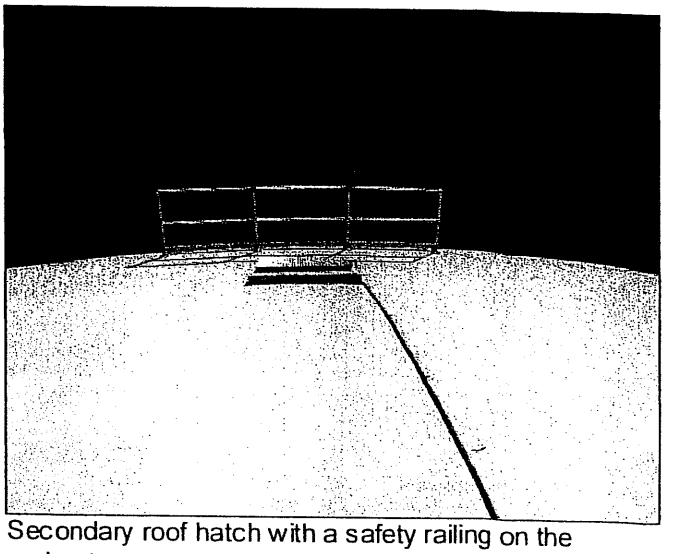
Overflow pipe discharge

DP#11



Flange on the overflow pipe

DP#12



Secondary roof hatch with a safety railing on the perimeter

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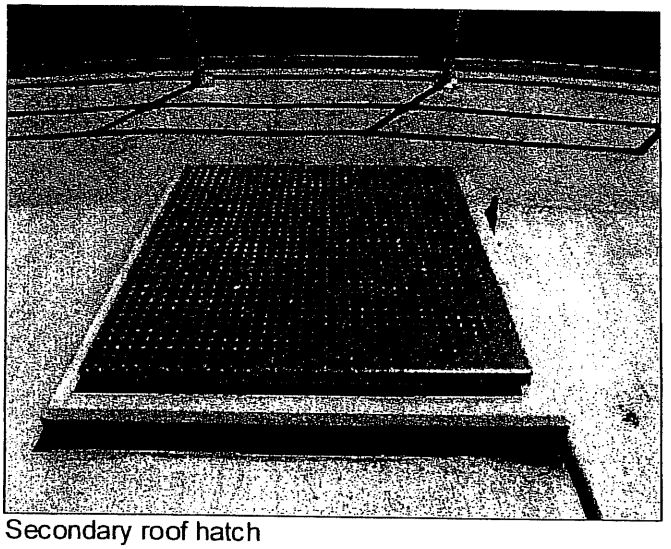
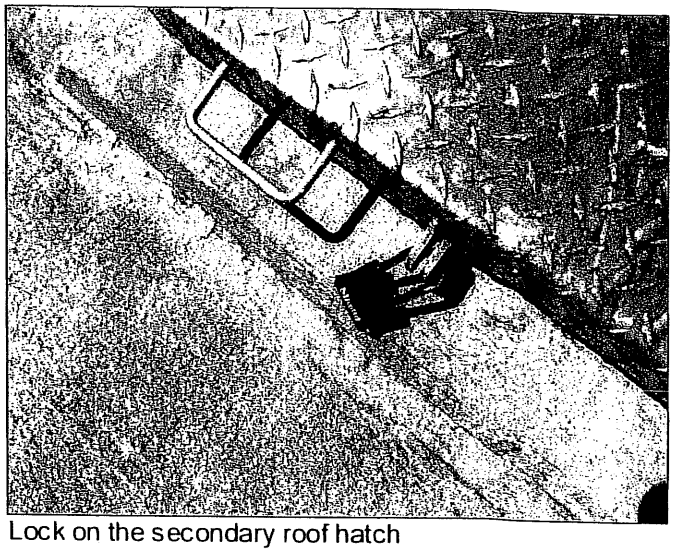
1.5MG Read Schoolhouse Reservoir

DP#13



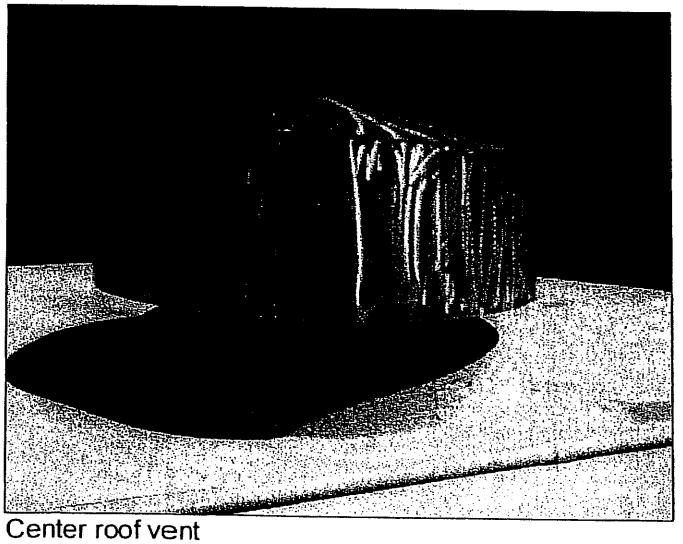
Secondary roof hatch

DP#14



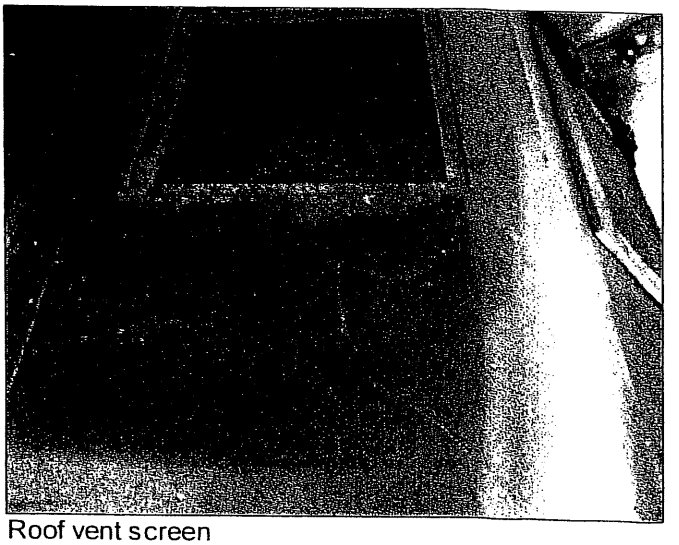
Lock on the secondary roof hatch

DP#15



Center roof vent

DP#16

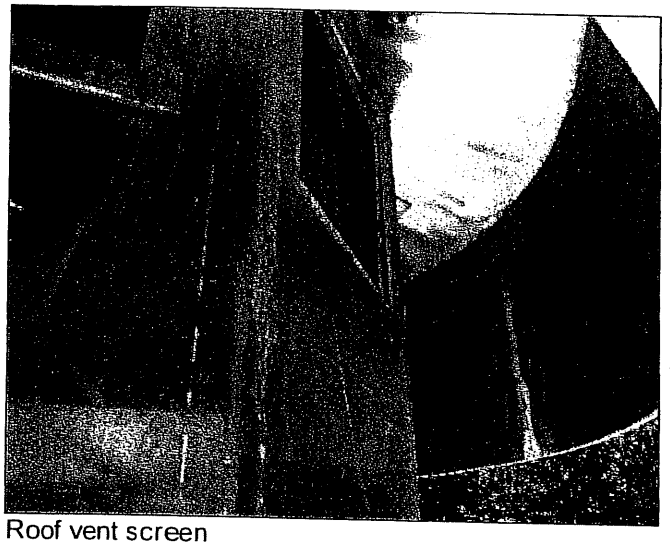


Roof vent screen

ACUREN

1.5MG Read Schoolhouse Reservoir

DP#17

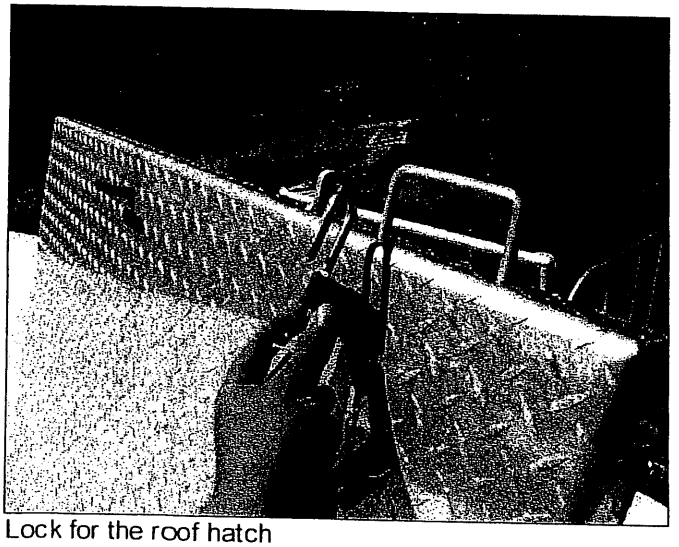


Roof vent screen

DP#18

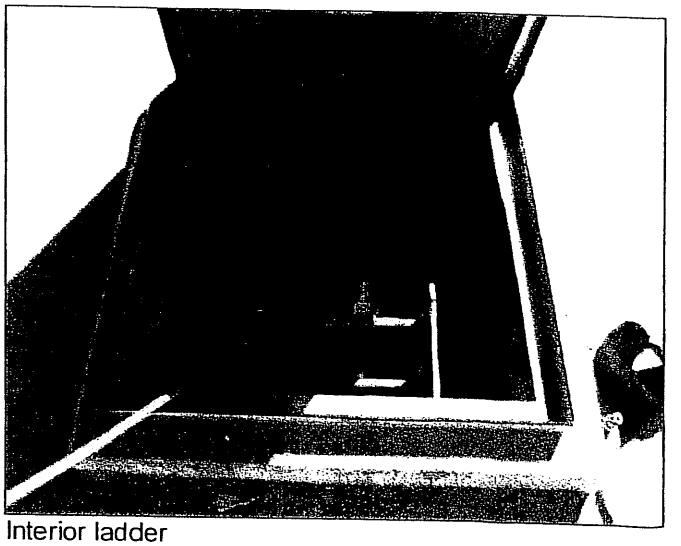
Perimeter roof hatch

DP#19



Lock for the roof hatch

DP#20



Interior ladder

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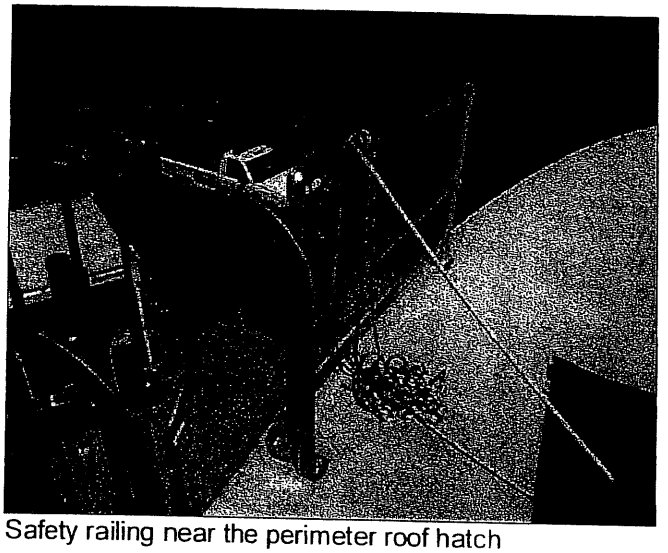
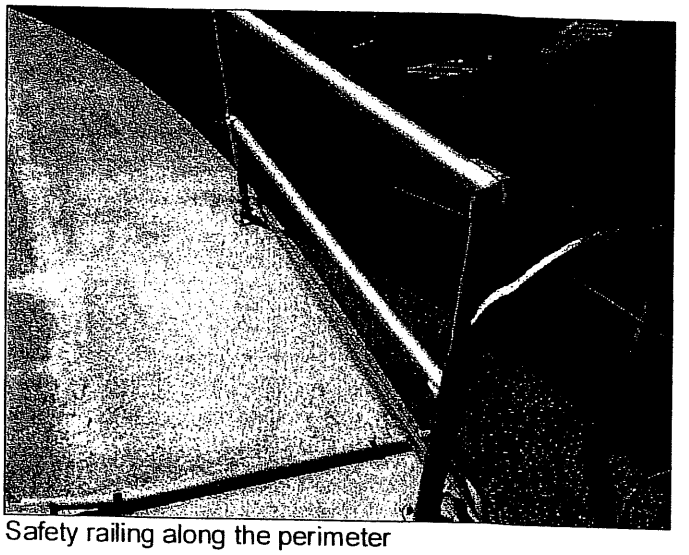
1.5MG Read Schoolhouse Reservoir

DP#21



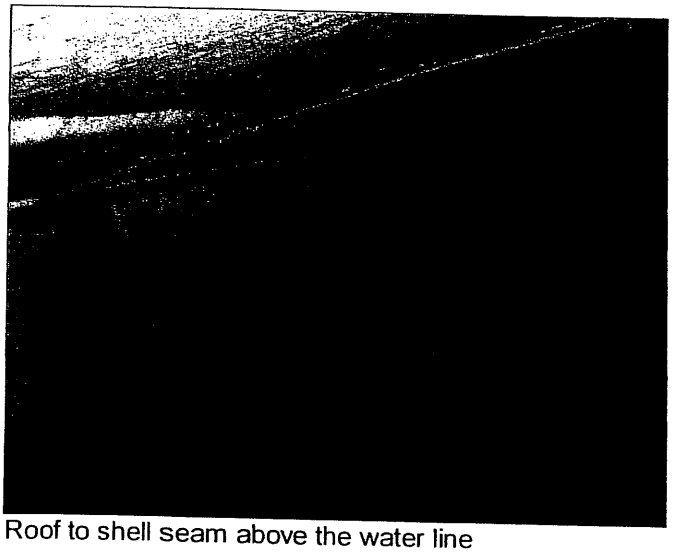
Safety railing near the perimeter roof hatch

DP#22



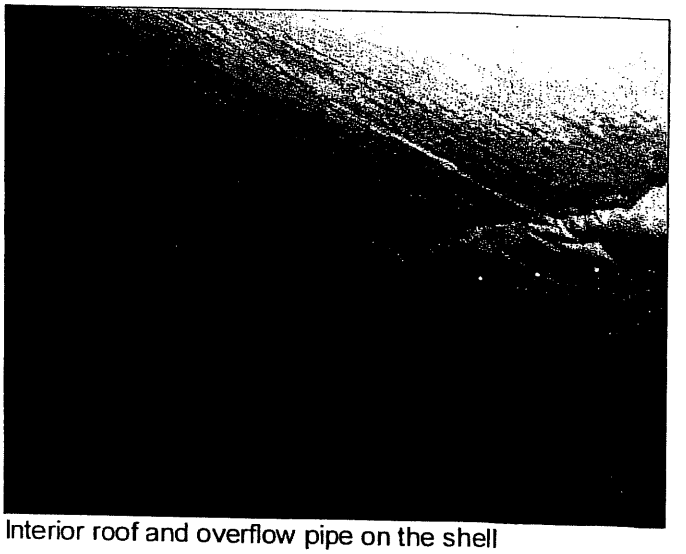
Safety railing along the perimeter

DP#23



Roof to shell seam above the water line

DP#24

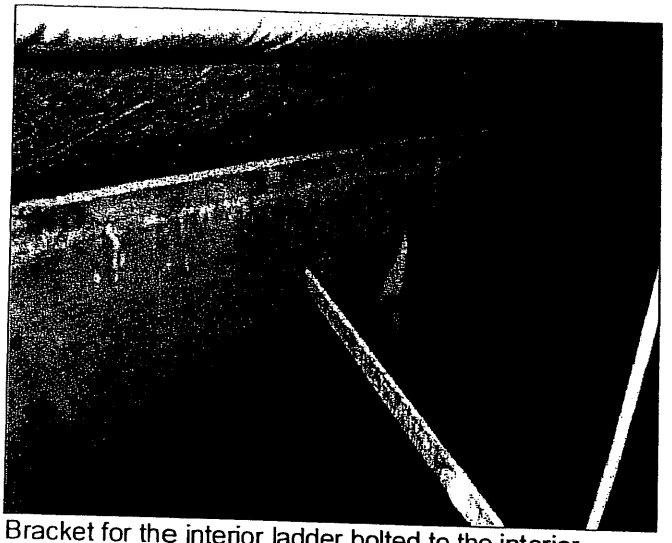


Interior roof and overflow pipe on the shell

ACUREN

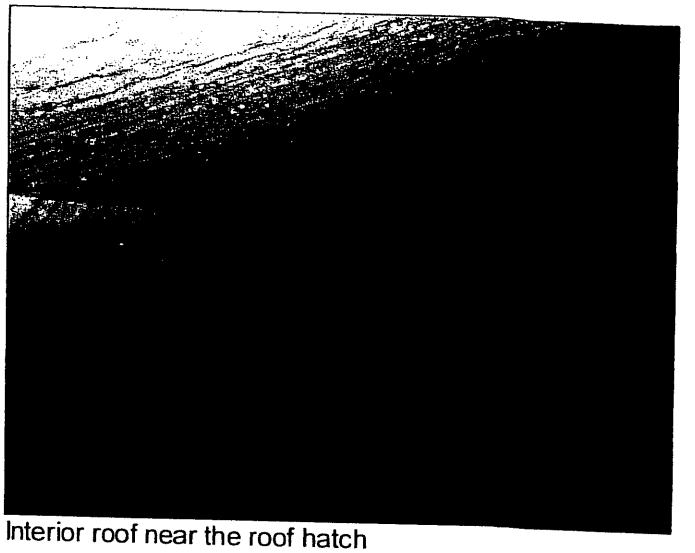
1.5MG Read Schoolhouse Reservo ir

DP#25



Bracket for the interior ladder bolted to the interior shell

DP#26



Interior roof near the roof hatch

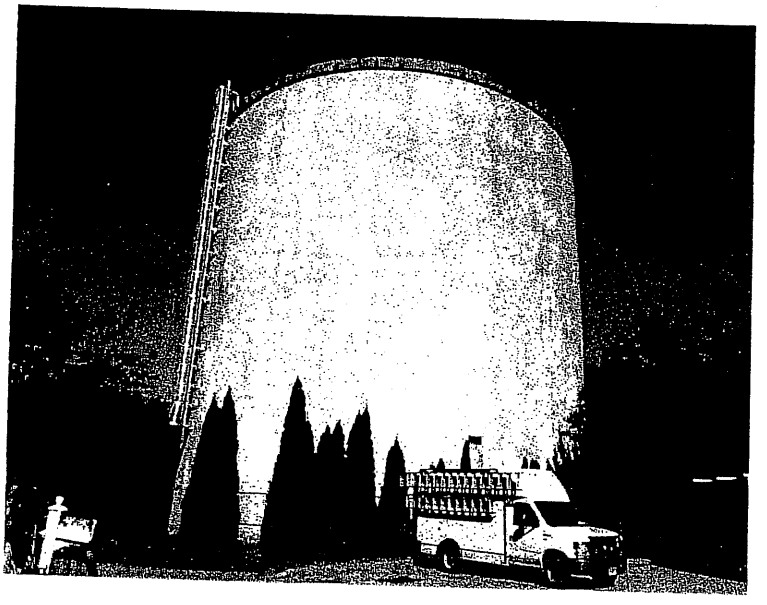
E

Water Tank Inspection Report

For

Kent County Water Authority

Of the



2.0MG Wakefield Standpipe
West Warwick, RI

August 29, 2012

ACUREN

455 Main Street Bldg 1 Suite A-B
Deep River, CT 06417
Tel: (860) 526-2610 Fax:(860) 526-5018)
www.extechllc.com

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Kent County Water Authority

Wakefield, RI

INTRODUCTION

On August 29, 2012 Acuren representatives, Bill Iaquessa and Matt Weaver performed a condition assessment of the exterior and interior of a pre-stressed concrete ground storage water tank for the KCWA. The inspection was conducted to establish the current condition of the tank's coating, concrete substrate, safety and sanitary equipment.

2.0 MG Wakefield Concrete Standpipe

The tank was inspected in accordance with the latest version of AWWA D101, AWWA D110-04 standard for Pre-Stressed Wire Wound Concrete Water Tank inspections as well as the AWWA M42 Tank Manual.

The tank interior was inspected while full and in operation with the TankRover remotely operated vehicle (ROV). The TankRover is the only piece of equipment like it in the United States and was developed by Acuren. By using the TankRover the tank was inspected with no special preparation, no additional disinfection, no confined space entry and no downtime.

The TankRover was prepared for the inspection by disinfecting in accordance with AWWA C652, by spray application of a 200 ppm chlorine solution prior to insertion to the tank.

The exterior portions of the tank were inspected by walking the roof, shell portions and shell portions that could be inspected from the tank's base.
The objectives of the assessment were to:

1. Perform field inspections and tests to assess the structural and coating integrity of the tank
2. Review the safety compliance of tank ladders and access.
3. Determine if sanitary screens on vents and pipes are intact.
4. Formulate a report to document the assessment findings.
5. Provide recommendations for rehabilitation.

EXECUTIVE SUMMARY

The condition and recommendations for the tank is briefly summarized in this section. For detailed information regarding detailed tank conditions and the specific recommendations please refer to the designated section for the tank.

The tank is in good condition with typical map cracking on the exterior surfaces. No active cracks or spalls were visible on the exterior roof and shell. No active leaks were found during the inspection.

The interior concrete and seams remain in good condition with no significant deterioration. The interior concrete coating has localized delamination on the upper shell and several areas below the water line. The coating is still nearly 95 percent intact.

The tank floor sediment was removed as part of the inspection. Based on the sediment accumulation rate the tank should not require cleaning for 3-5 years.

The tank should be inspected again in 2017 according to AWWA recommendations.

OBSERVATIONS

Interior and exterior photographs provided in the report were developed from a digital camera and were captured in digital format from the interior videotape. The interior images are as clear as our printing technology will allow. The interior videosnaps in the report provide a reference for our comments. Keep in mind that the videotape provides the greatest detail and should be viewed as part of the report. Each videosnap (VS) is marked with the time stamp from the videotape. This allows the reader to easily view the original footage for each feature.

Narration on the videotape is done in the field and some of the comments may be different than the written report. The written report is the official document and contains the formal opinion of Acuren.

Wakefield 2.0 M Gallon Concrete Tank

The standpipe is a 2.0 MG pre-stressed concrete structure that is listed to be 70 feet in diameter and 70 feet high. The tank was constructed in 1989 by Natgun. The tank uses typical construction with a corrugated steel diaphragm and gunite coating.

INTERIOR

The interior of the tank was accessed through the 36-inch x 30-inch roof hatch, see DP# 20 & 21. The roof hatch was equipped with an 8-inch sanitary lip and a 3-inch hatch lip as called for by AWWA. The water level was indicated to be 68.1-feet during the inspection.

Roof (ceiling)

No visible spalling or cracking was found throughout the roof surface or rust staining that would indicate exposed and rusting reinforcement, see VS# 2&3. The roof to shell seam was in good condition with no evidence of separations, see DP# 24. The roof seams had typical efflorescence buildup, see DP# 28. The roof appears to have no coating material however the roof concrete is in good condition.

Ladders

There is one carbon steel interior ladder that extends from the roof hatch to the tank floor. The ladder is in good condition and well anchored into the overflow casing, see DP# 23. The ladder rails and rungs have light corrosion build up probably due to the galvanic action between the carbon steel ladder and the stainless steel cable climb, see VS# 4. There is another short section of ladder below the shell manway hatch which extends to the floor.

Shell

The tank walls are pre-formed concrete panels, jointed together and then tensioned with reinforcement wire. The concrete panels have no major spalls or cracks see VS# 9&11. Light iron staining was found below the water line but no major sediment accumulation has formed on the walls.

Some concrete coating delamination was found in the atmospheric zone and several areas below the water line, see VS# 8 & DP# 25. No problems were found in the concrete in the exposed areas. Overall the coating remained nearly 95 percent intact.

Floor

The floor of the tank had minimal sediment accumulation with only a 1/4-inch of light brown material, see VS# 15. Coating flakes have collected around the perimeter floor that had fallen from the upper shell, see VS# 14. No visible concrete deterioration was found on the floor.

Inlet/ Outlet

The tank has a combined inlet/outlet pipe that enters through the floor into a shallow sump. The pipe has a 12-inch sediment ring, see VS# 16. The pipe has small corrosion cells on the top edge of the sediment ring.

Overflow

The tank is equipped with an internal overflow pipe that discharges through the lower part of the shell. The pipe is 12-inches in diameter and discharges into an adjacent pond. The outlet is equipped with a coarse screen that is intact, see DP# 29.

EXTERIOR

Roof

The tank roof has a few radial hairline cracks but no spalling or corrosion stains, see DP# 13-16. Almost no deterioration was found on the exterior roof concrete. Light discoloration and mildew staining were found on the roof edges, see DP# 19.

Vent

The tank is equipped with one center vent that measures 24-inches on the vent collar and the concrete bolting flange measuring 32-inches on the outside diameter, see DP# 17. There is a fine mesh screen on the vent with no visible air gaps or tears, see DP# 18. The vent cap to roof distance measured 10-inches.

Ladders and Railings

The tank has an exterior shell ladder that terminates 20-ft above grade with a safety cage and anti climb that was locked upon arrival to the site, see DP# 7. The ladder and cage was in good condition. The ladder measures 18 inches in width, has an 11-inch toe kick clearance and a 12-inch rung to rung spacing.

Shell

The exterior surface has typical widespread spider cracking in the surface applied shotcrete. The formation of spider cracks in these tanks is normal. Atmospheric moisture enters in through the concrete and a combination of drying and freeze/thaw actions produce the cracking, see DP# 4. No active cracks or leakage was found on the shell.

Foundation

The tank foundation is not visible above grade and not inspected.

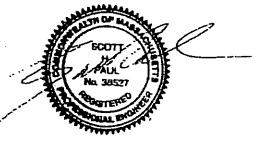
Recommendations

2.0M Gallon Wakefield Concrete Tank

There are no recommendations at this time.

The tank should be inspected again in 2017 according to AWWA recommendations.

NACE Certified Coating Inspector #00050



Scott Paul, P.E.

GLOSSARY OF TERMS FOR CONCRETE TANKS

ADHESION: State in which two surfaces are held together by interfacial forces which may consist off valence forces or interlocking action or both

AGGREGATE: Granular material, such as sand, gravel, crushed stone, crushed hydraulic-cement concrete, or iron blast-furnace slag used with a hydraulic cementing medium to produce either concrete or mortar.

BUGHOLES: Small regular or irregular cavities, usually not exceeding 15 mm in diameter, resulting from entrapment of air bubbles in the surface of formed concrete during placement and compaction.

CHEMICAL ATTACK: Decomposition of a coating or concrete due to the action of a chemical.

CONTRACTION JOINT: Formed, sawed, or tooled groove in a concrete structure to create a weakened plane and regulate the location of cracking resulting from the dimensional change of different parts of the structure.

DISBONDMENT: The loss of adhesion between a coating and the substrate.

EFFLORESENCE: A white crystalline or powdery deposit on the surface of concrete. Efflorescence results from leaching of lime or calcium hydroxide out of a permeable concrete mass over time by water, followed by reaction with carbon dioxide and acidic pollutants.

FINISH: The texture of a concrete surface after compaction and finishing operations have been performed.

GROUT, GROUTING: A plastic mixture of cementitious materials and water used as a filler for cracks, or other void spaces, in concrete surfaces to be coated.

HONEYCOMB: Voids left in concrete due to failure of the mortar to effectively fill the spaces among coarse aggregate particles.

HYDRAULIC, HYDROSTATIC PRESSURE: A force exerted on the concrete/coating interface due to the level of the ground water.

ISOLATION JOINT: A separation between adjoining parts of a concrete structure.

LAITANCE: A thin, weak brittle layer of cement and aggregate fines on a concrete surface. The amount of laitance is influenced by the degree of working or the amount of water in the concrete.

OSMOTIC PRESSURE: A force exerted on the concrete /coating interface through the capillaries in the concrete due to a moisture differential across the coating.

PINHOLES: Film defect characterized by small pore-like flaws in a coating which extend entirely through the applied film and have the general appearance of pin pricks, fine holes, or voids when viewed by reflected light.

PLASTIC CRACKING, PLASTIC SHRINKAGE CRACKING: Cracking that occurs in the surface of fresh concrete soon after it is placed and while it is still plastic,

POROSITY, SURFACE POROSITY: The ratio usually expressed as a percentage, of the volume of voids in a material to the total volume of the material, including the voids.

PROFILE, SURFACE PROFILE: Surface contour as viewed from the edge.

REFLECTIVE CRACKING: Cracking that develops in a coating directly over a dynamic crack in concrete.

SEALANT, JOINT SEALANT: Compressible material used to exclude water and solid foreign materials from joints.

STATIC CRACKS: A crack in the concrete surface whose width does not change.

VAPOR BARRIER: Waterproof membrane placed under concrete floor slabs that are placed on grade.

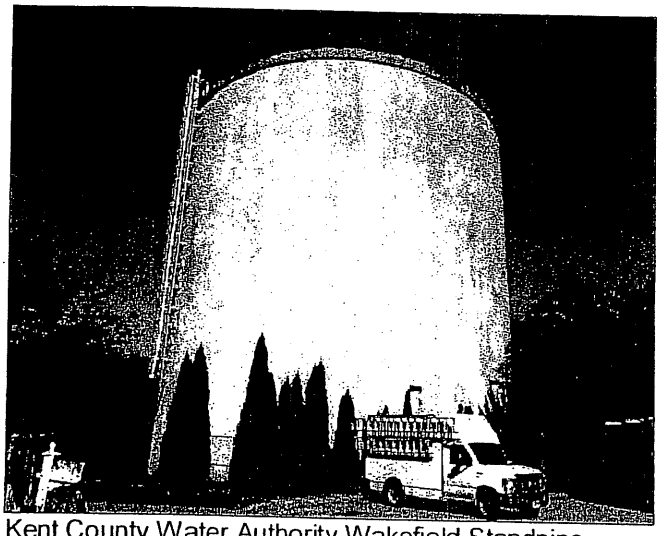
APPENDIX A

Digital Pictures and Underwater Video Snaps

ACUREN

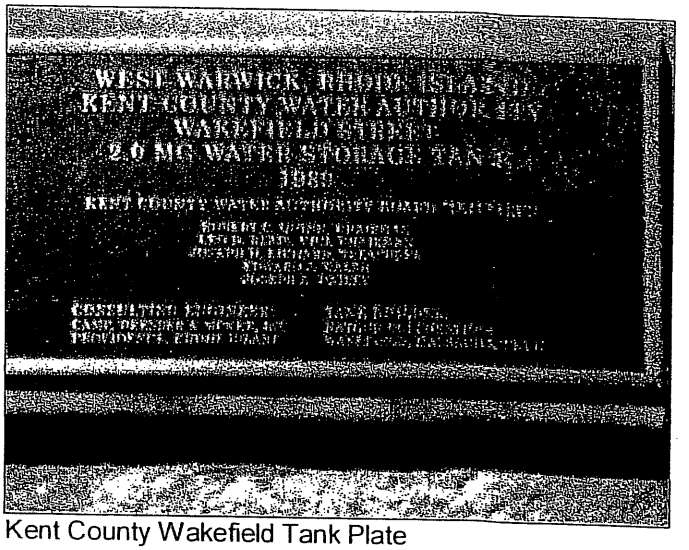
2.0MG Wakefield Standpipe

DP#1



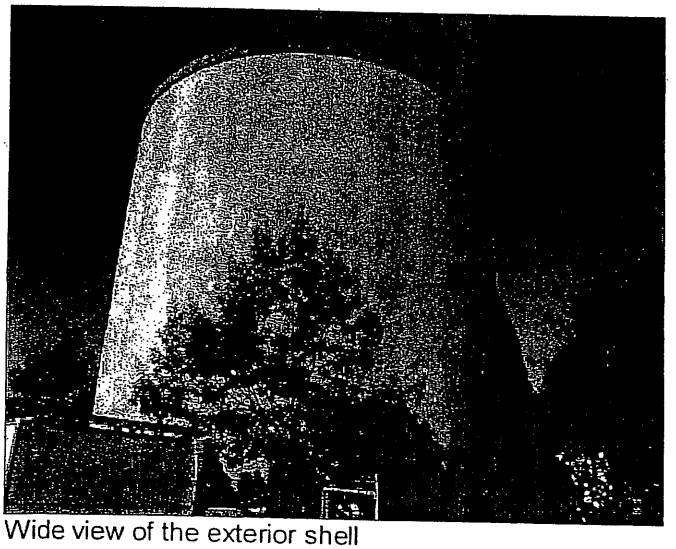
Kent County Water Authority Wakefield Standpipe

DP#2



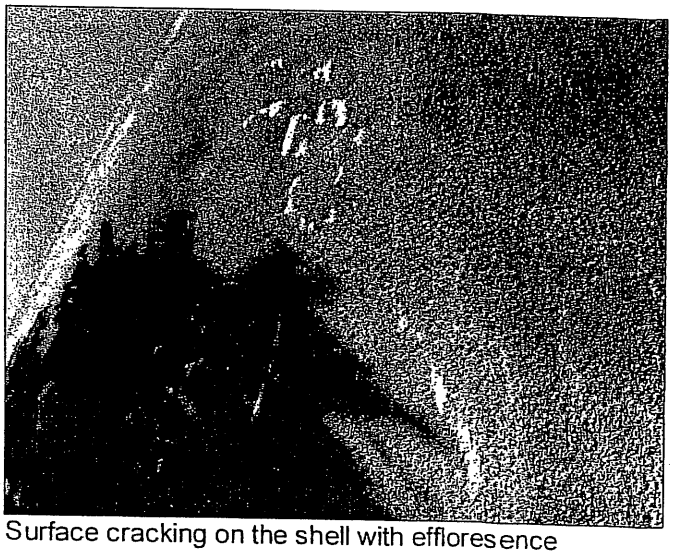
Kent County Wakefield Tank Plate

DP#3



Wide view of the exterior shell

DP#4

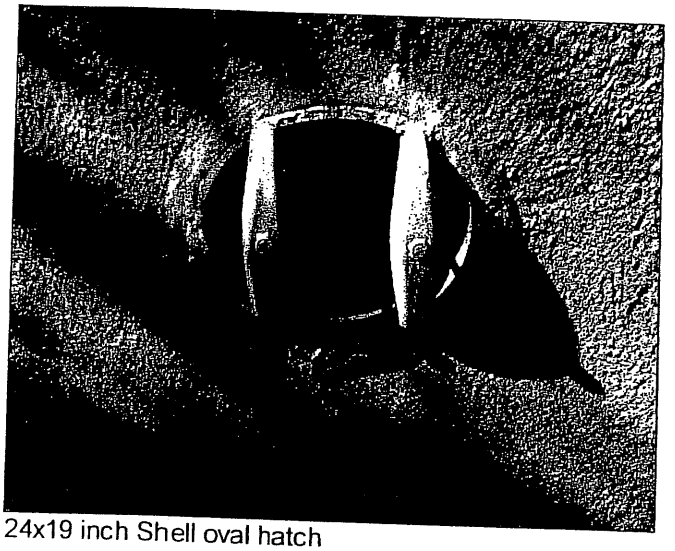


Surface cracking on the shell with efflorescence

ACUREN

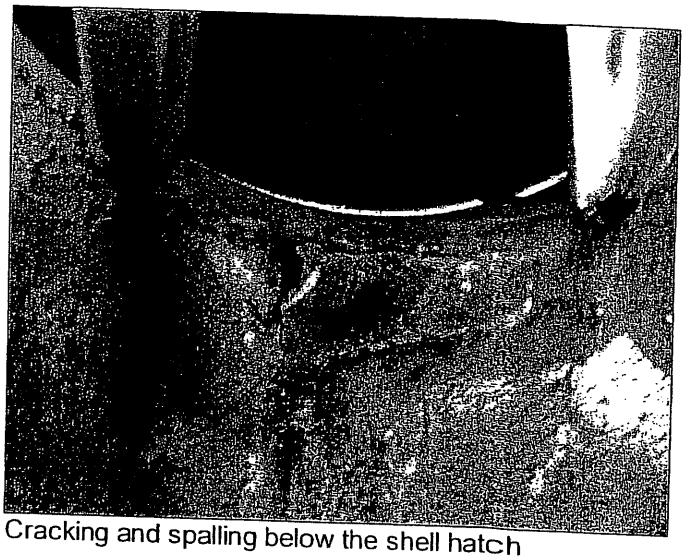
2.0MG Wakefield Standpipe

DP#5



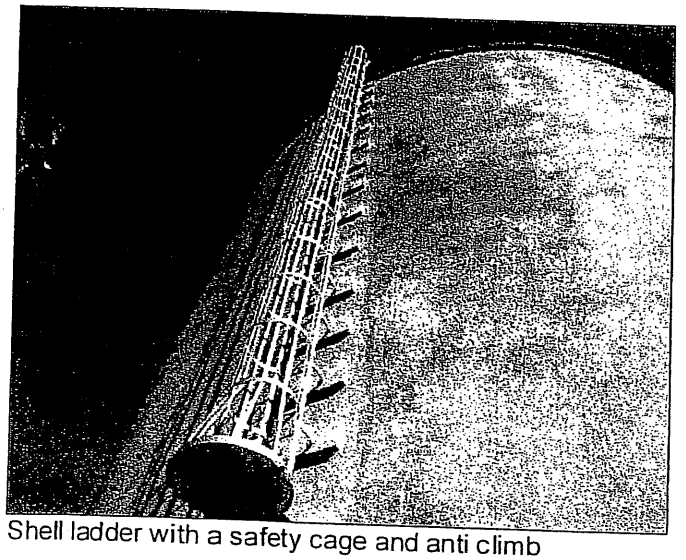
24x19 inch Shell oval hatch

DP#6



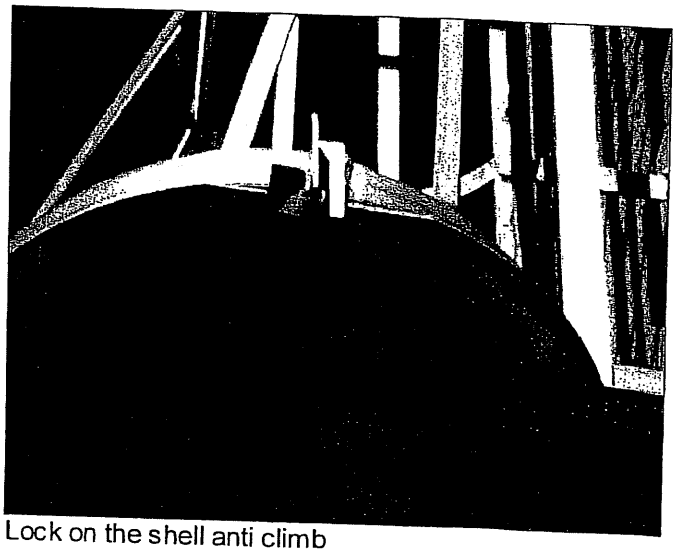
Cracking and spalling below the shell hatch

DP#7



Shell ladder with a safety cage and anti climb

DP#8

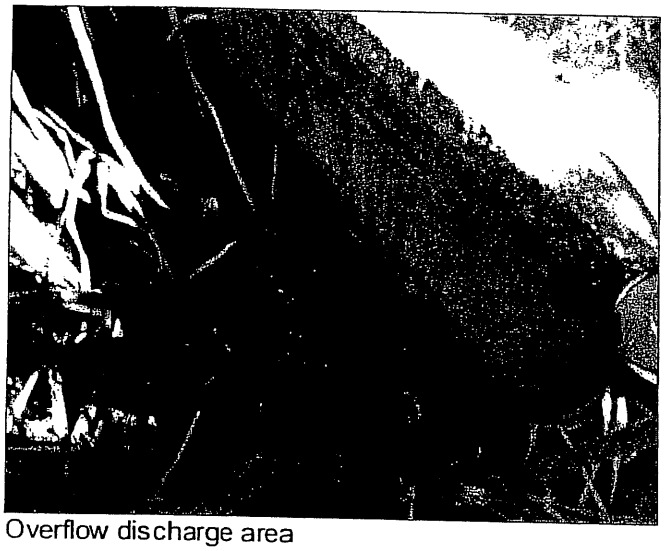


Lock on the shell anti climb

ACUREN

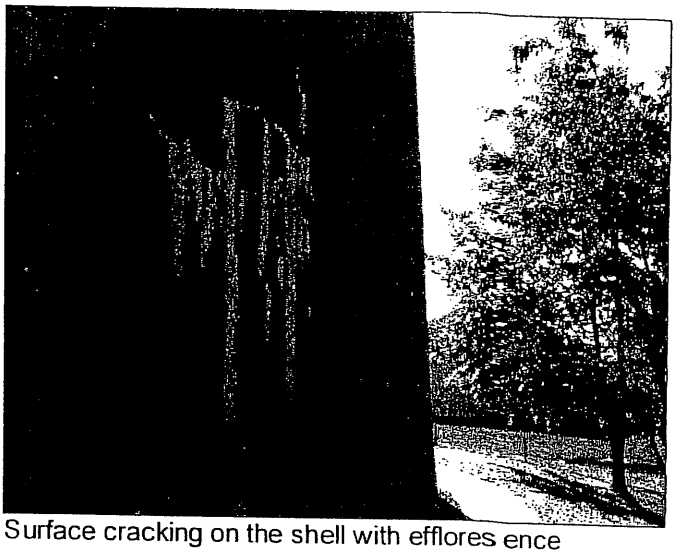
2.0MG Wakefield Standpipe

DP#9



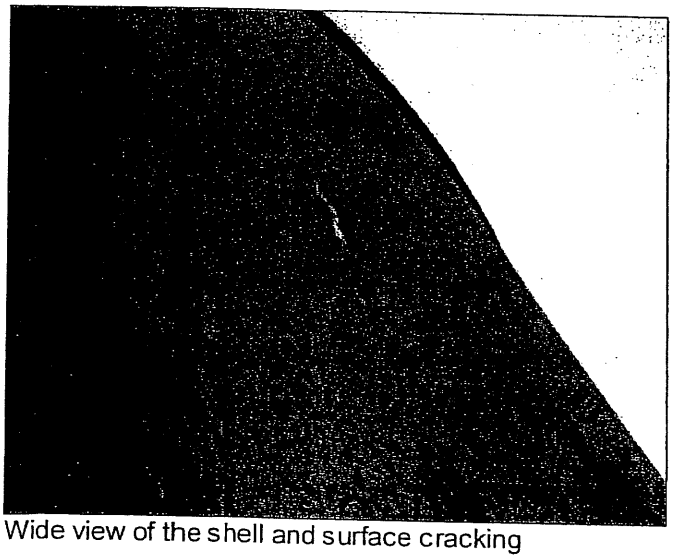
Overflow discharge area

DP#10



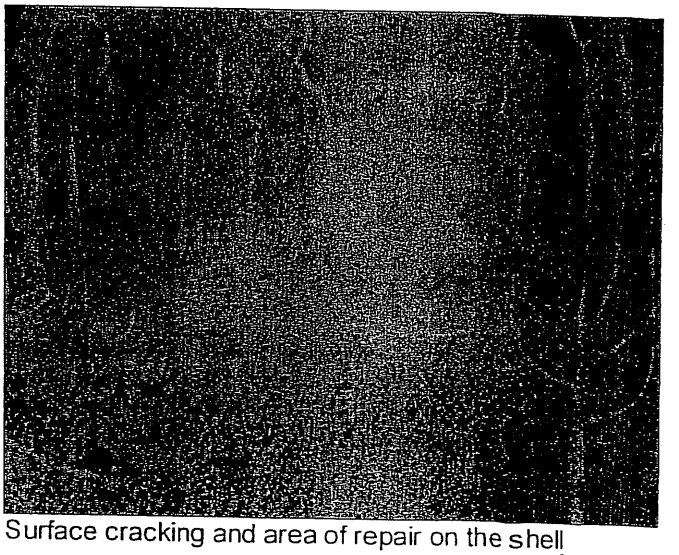
Surface cracking on the shell with efflores ence

DP#11



Wide view of the shell and surface cracking

DP#12

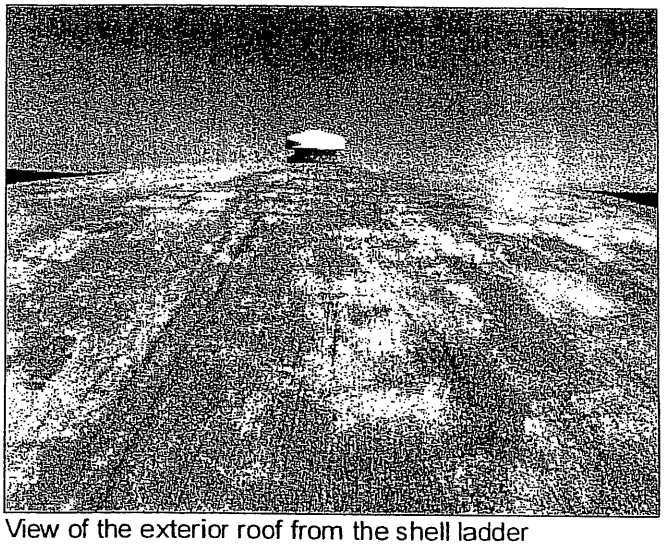


Surface cracking and area of repair on the shell

ACUREN

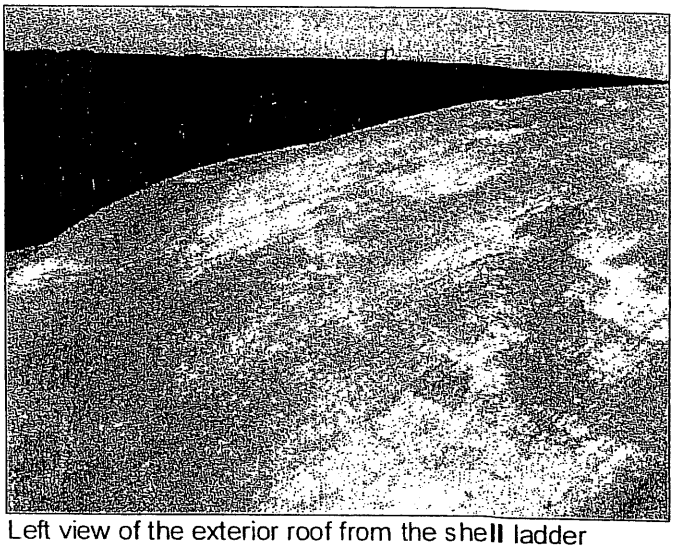
2.0MG Wakefield Standpipe

DP#13



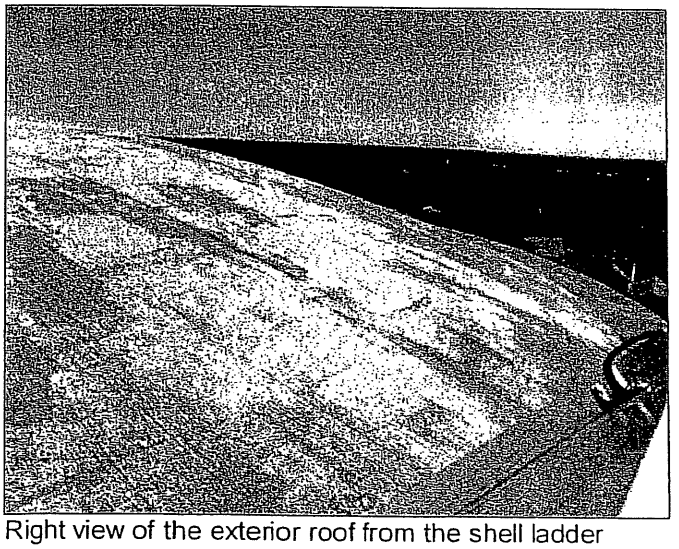
View of the exterior roof from the shell ladder

DP#14



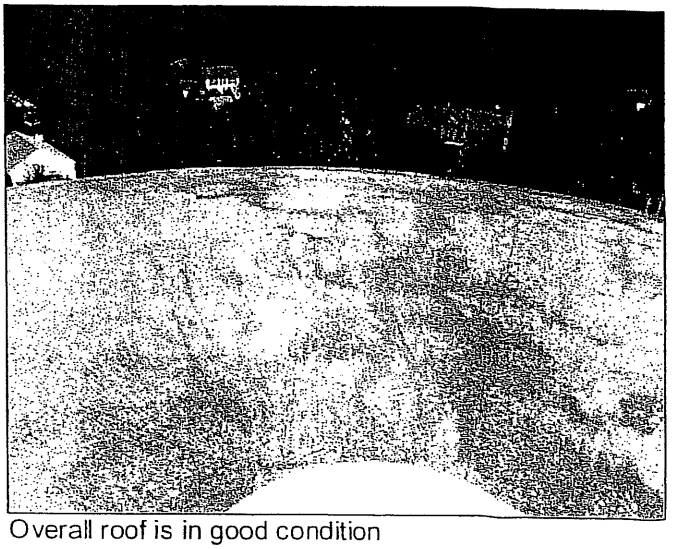
Left view of the exterior roof from the shell ladder

DP#15



Right view of the exterior roof from the shell ladder

DP#16

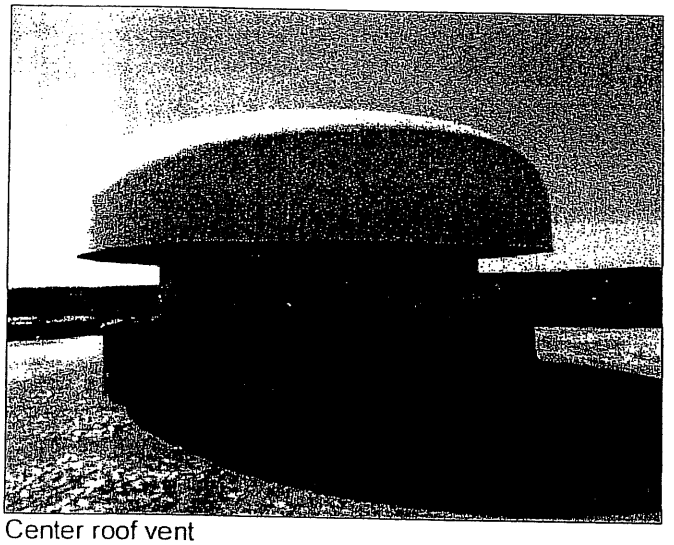


Overall roof is in good condition

ACUREN

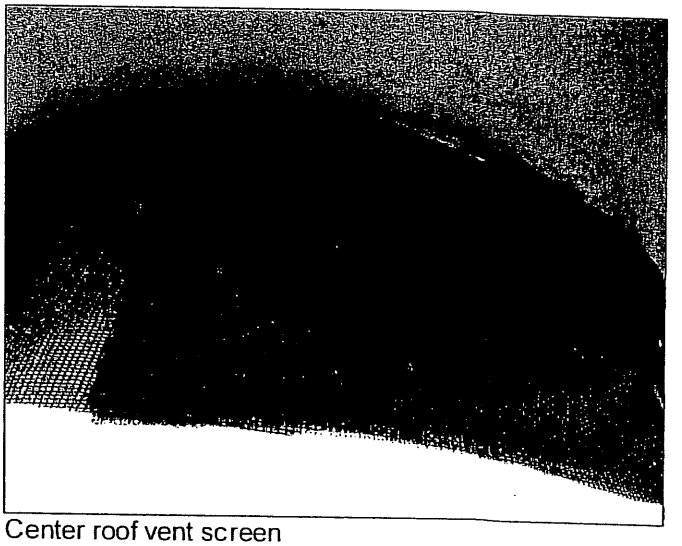
2.0MG Wakefield Standpipe

DP#17



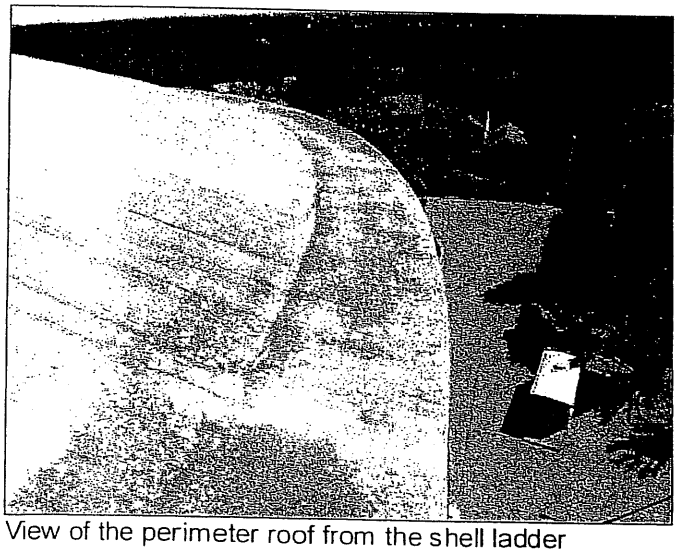
Center roof vent

DP#18



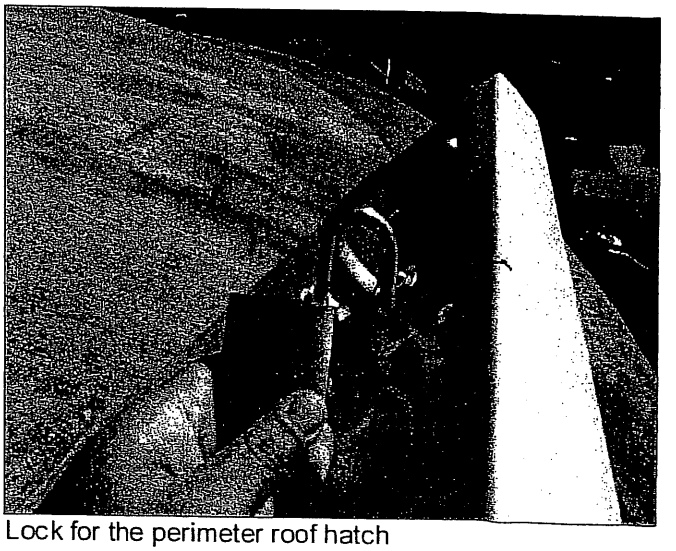
Center roof vent screen

DP#19



View of the perimeter roof from the shell ladder

DP#20

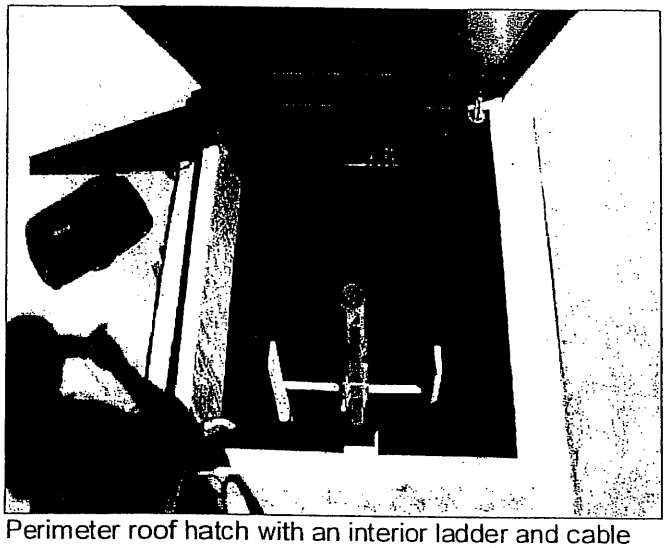


Lock for the perimeter roof hatch

ACUREN

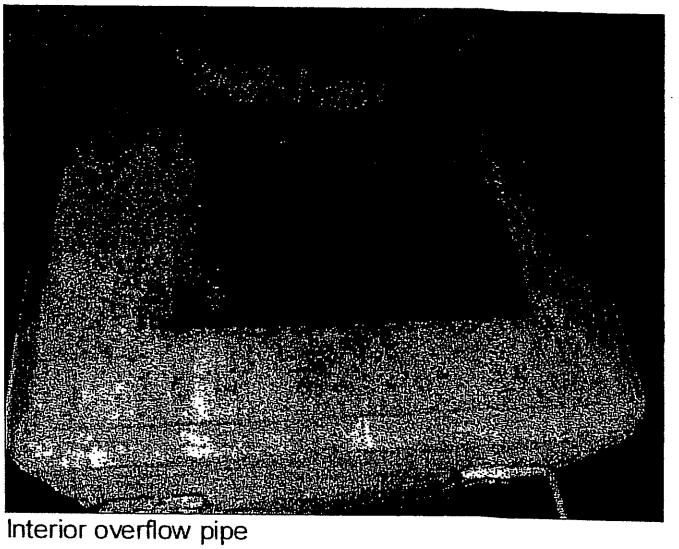
2.0MG Wakefield Standpipe

DP#21



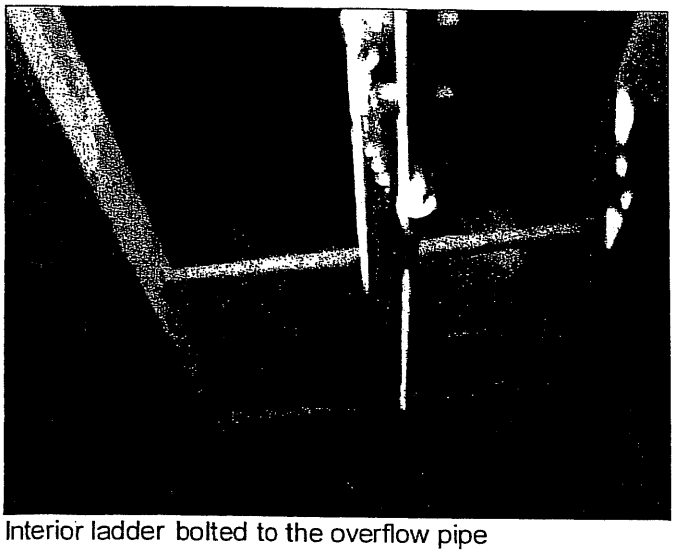
Perimeter roof hatch with an interior ladder and cable climb

DP#22



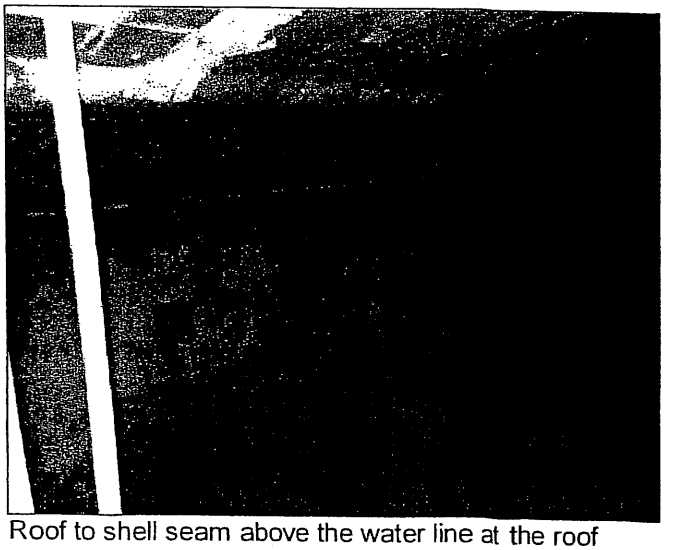
Interior overflow pipe

DP#23



Interior ladder bolted to the overflow pipe

DP#24

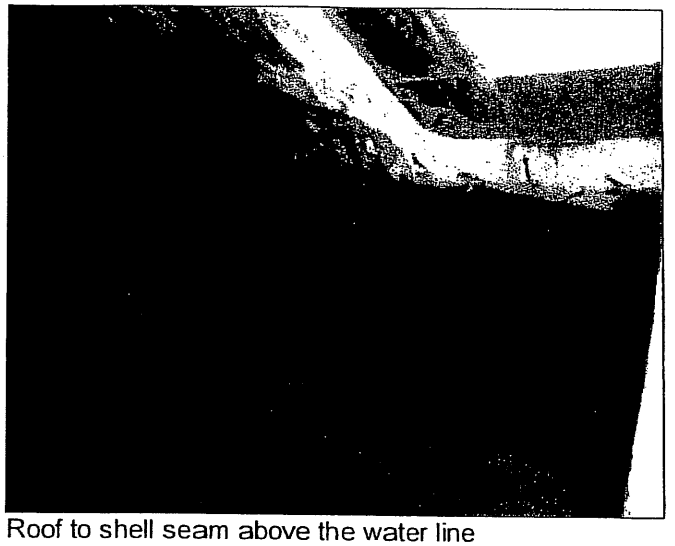


Roof to shell seam above the water line at the roof hatch

ACUREN

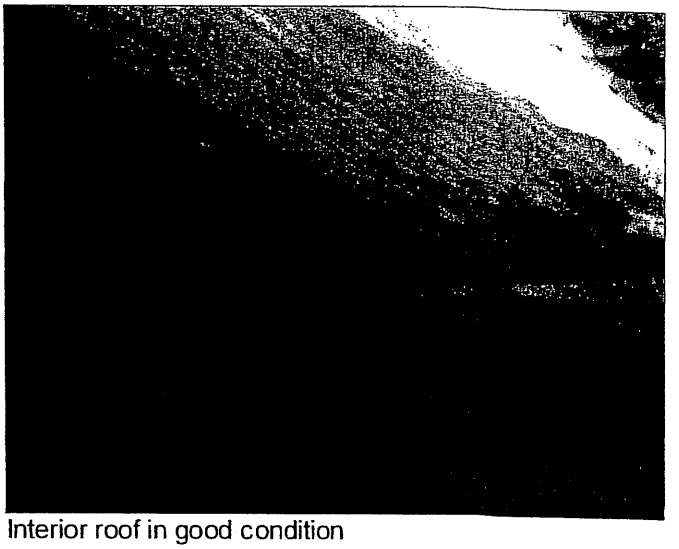
2.0MG Wakefield Standpipe

DP#25



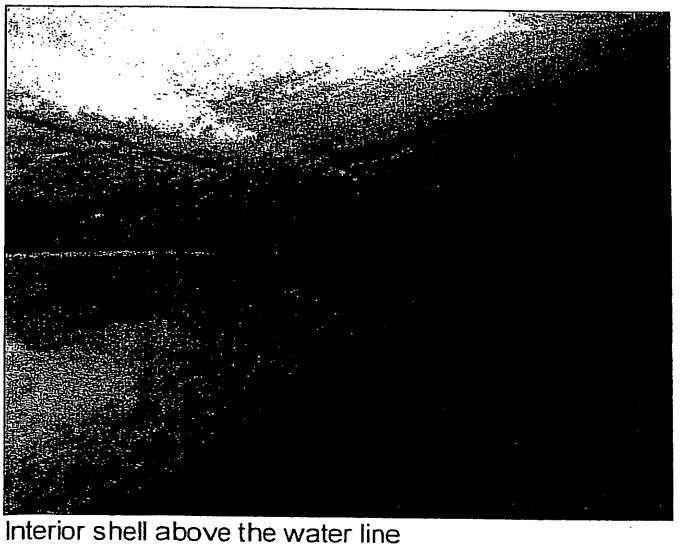
Roof to shell seam above the water line

DP#26



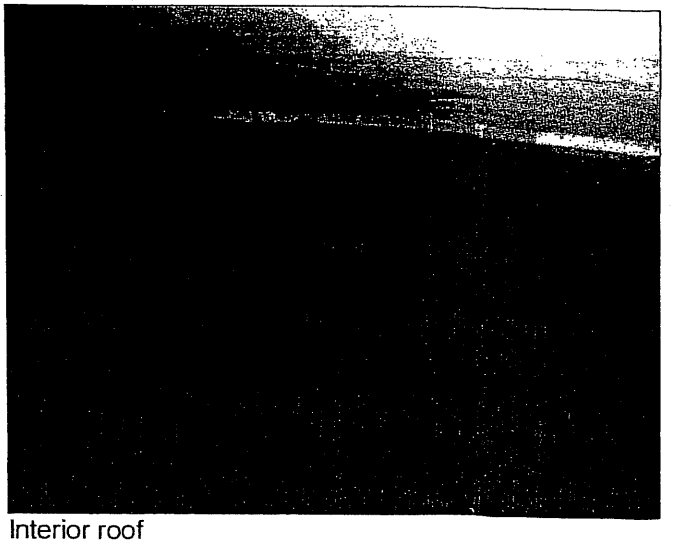
Interior roof in good condition

DP#27



Interior shell above the water line

DP#28

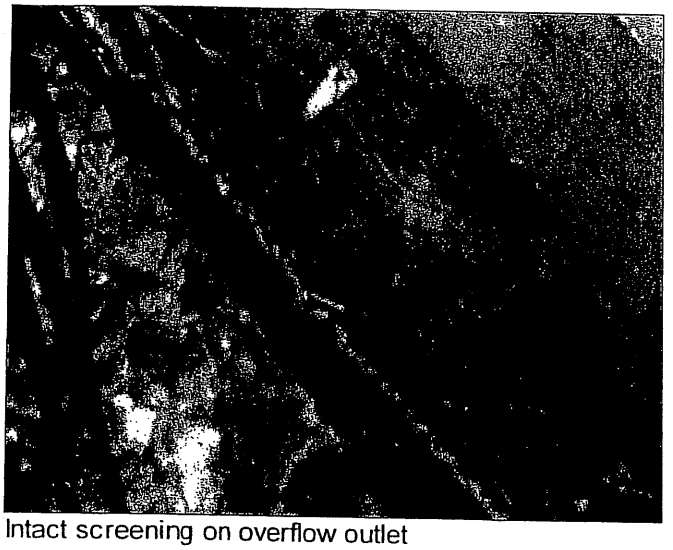


Interior roof

ACUREN

2.0MG Wakefield Standpipe

DP# 29

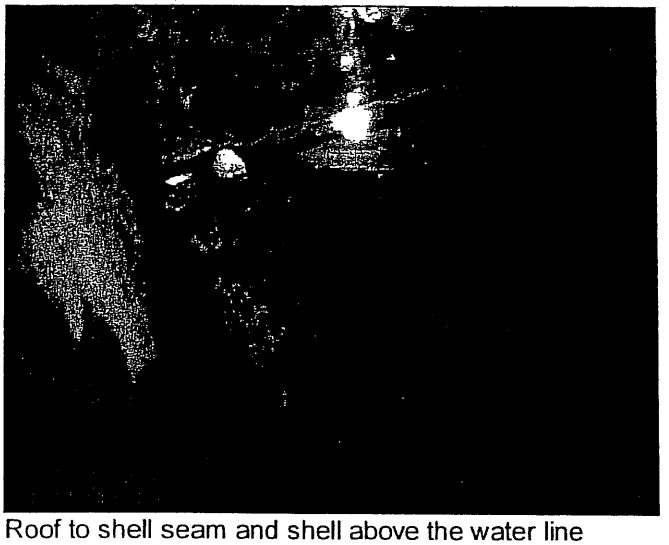


Intact screening on overflow outlet

ACUREN

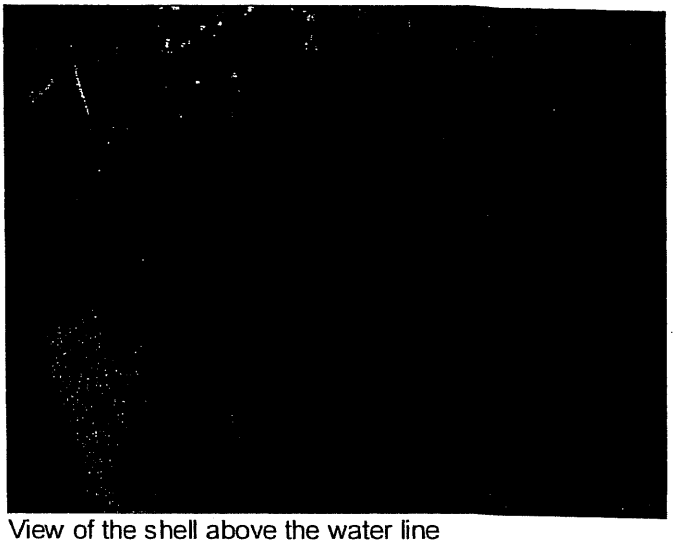
KCWA Wakefield Reservoir Video Snaps

VS#1



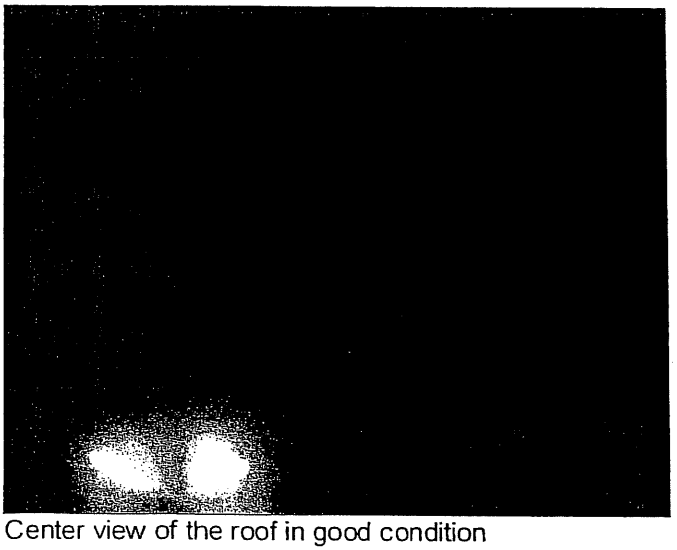
Roof to shell seam and shell above the water line
(Time 1:09)

VS#2



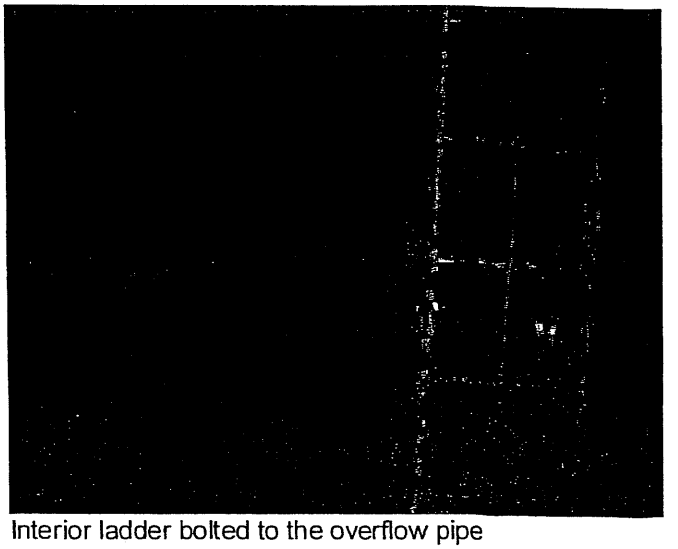
View of the shell above the water line
(Time 3:10)

VS#3



Center view of the roof in good condition
(Time 5 :58)

VS#4

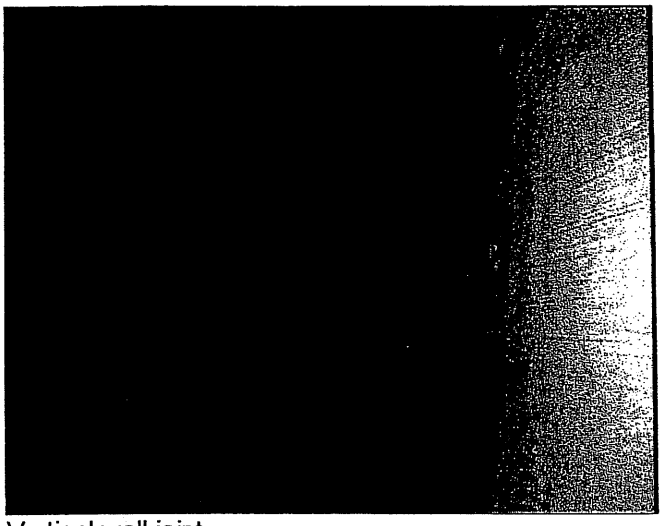


Interior ladder bolted to the overflow pipe
(Time 6:35)

ACUREN

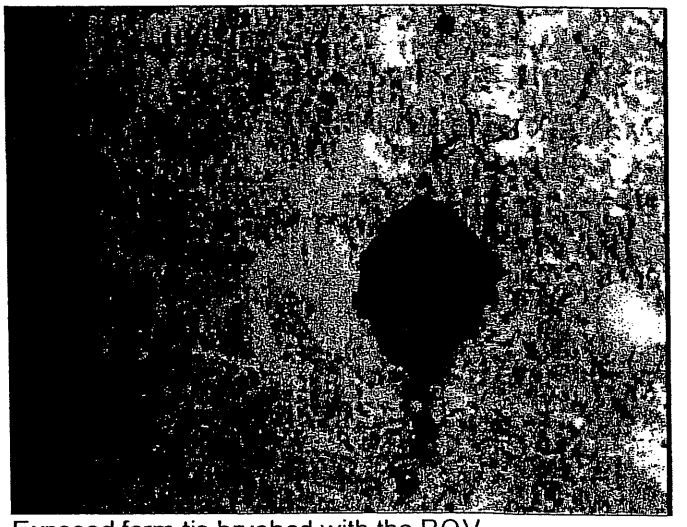
KCWA Wakefield Reservoir Video Snaps

VS#5



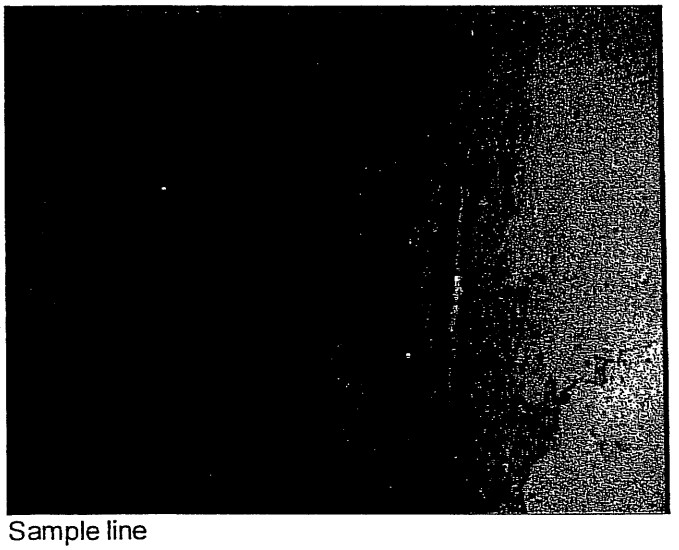
Vertical wall joint
(Time 7:17)

VS#6



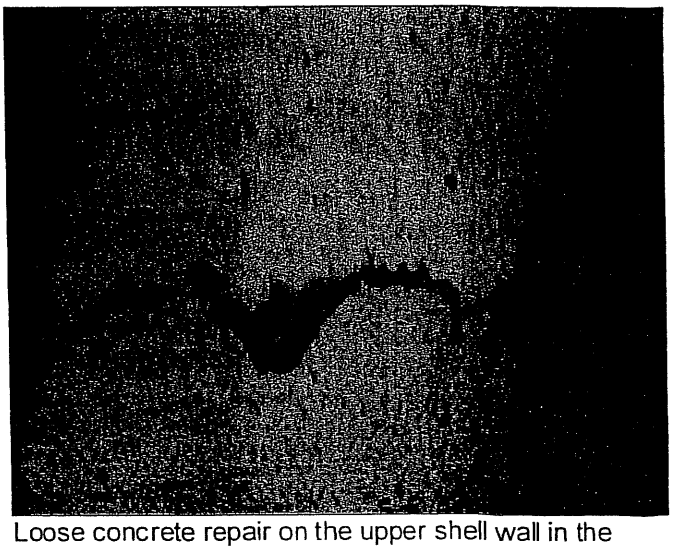
Exposed form tie brushed with the ROV
(Time 9:43)

VS#7



Sample line
(Time 10:18)

VS#8

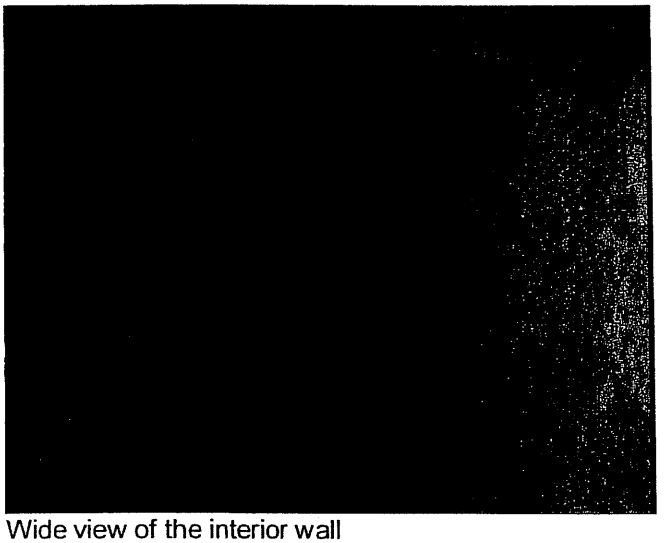


Loose concrete repair on the upper shell wall in the fluctuation zone
(Time 10:44)

ACUREN

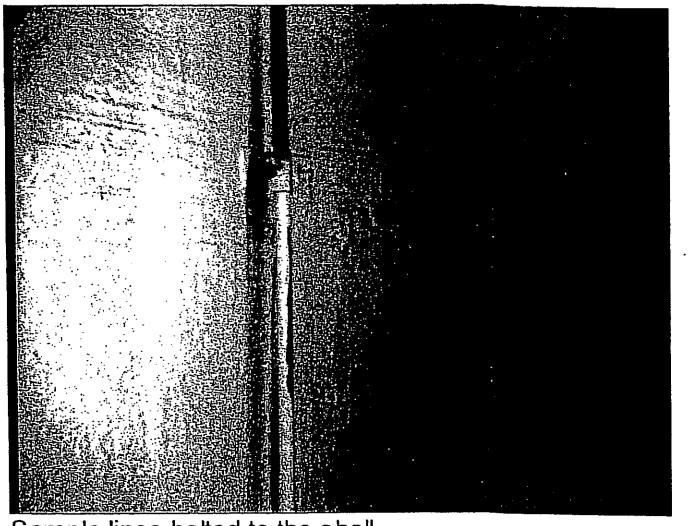
KCWA Wakefield Reservoir Video Snaps

VS#9



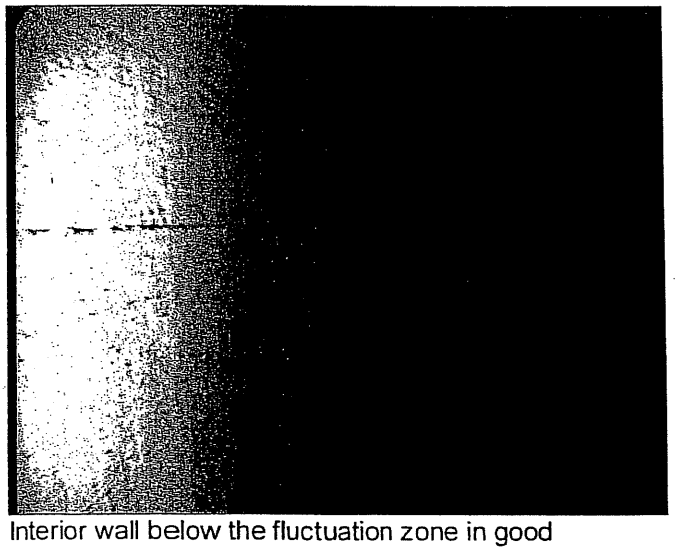
Wide view of the interior wall
(Time 12:08)

VS#10



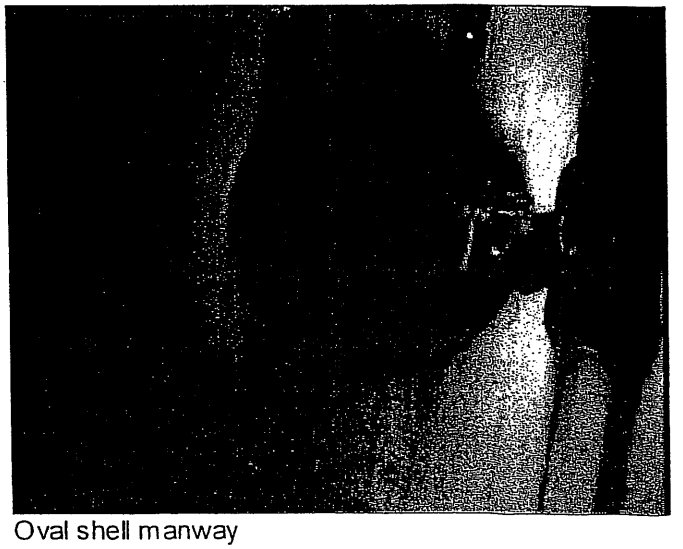
Sample lines bolted to the shell
(Time 15:59)

VS#11



Interior wall below the fluctuation zone in good condition
(Time 17:03)

VS#12

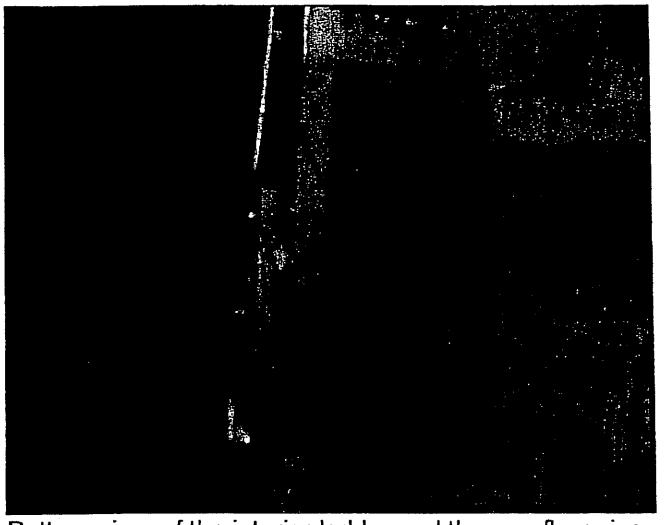


Oval shell manway
(Time 19:24)

ACUREN

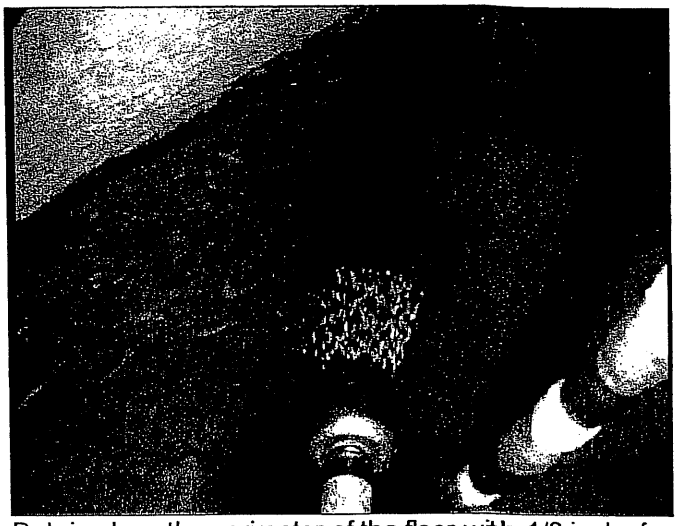
KCWA Wakefield Reservoir Video Snaps

VS#13



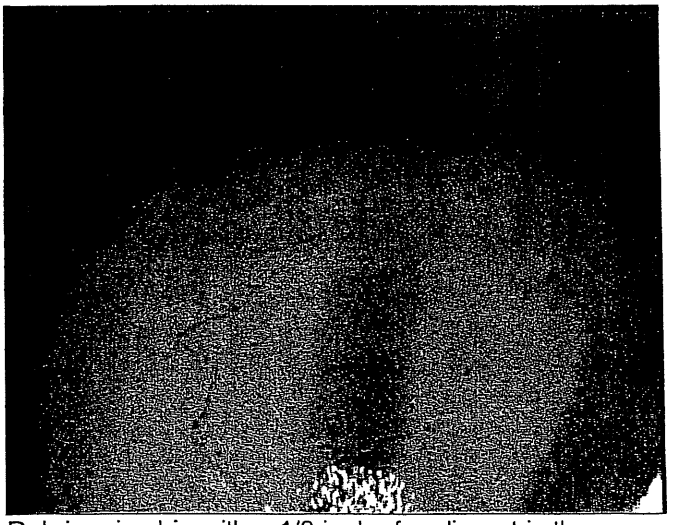
Bottom view of the interior ladder and the overflow pipe with a floor penetration
(Time 21:50)

VS#14



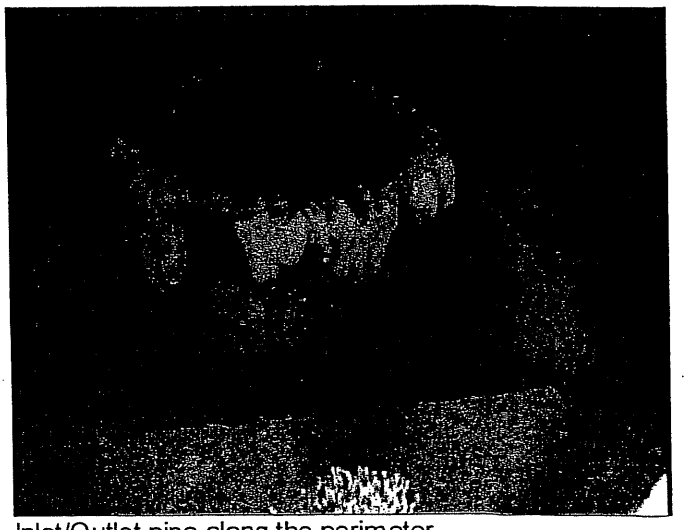
Debris along the perimeter of the floor with 1/8 inch of sediment
(Time 24:26)

VS#15



Debris mixed in with a 1/8 inch of sediment in the middle of the floor
(Time 27:13)

VS#16



Inlet/Outlet pipe along the perimeter
(Time 27:27)

RI-1040X-R Amended Rhode Island Resident Individual Income Tax Return 2011

(To be used by resident taxpayers only)

NAME AND ADDRESS	First name	Initial	Last name	Your social security number
	VIOLETTE	M	CHARPENTIER	037-28-9453
	Spouse's first name	Initial	Last name	Spouse's social security no.
Please print or type	Present home address (number and street, including apartment no. or rural route)			Daytime telephone number
	20 WOODLAND DR APT 334			
	City, town or post office	State	Zip code	City or town of legal residence
	COVENTRY	RI	02816-	

ADDITIONAL INFORMATION

A. Enter name and address used on original return (if same as above write "SAME")
→ SAME

B. Are you filing an amended federal income tax return? ..... [X] Yes

C. Have you been advised your federal return is under examination? ..... [ ] Yes

FILING STATUS

D. On original return [X] 1. Single [ ] 2. Married filing jointly [ ] 3. Married filing separately [ ] 4. Head of Household [ ] 5. Qualifying widow(er)

E. On this return [X] 1. Single [ ] 2. Married filing jointly [ ] 3. Married filing separately [ ] 4. Head of Household [ ] 5. Qualifying widow(er)

INCOME AND TAX

Single $7,500 | Married filing jointly or Qualifying widow(er) $15,000 | Married filing separately $7,500 | Head of household $11,250

		A. Originally reported	B. Net change	C. Correct amount
1.	Federal AGI (Adjusted Gross Income)	2,728.	9,844.	12,572.
2.	Modifications from RI-1040, Schedule M, Line 3			
3.	Modified Federal AGI - Combine lines 1 and 2	2,728.	9,844.	12,572.
4.	Deductions (see instructions)	7,500.		7,500.
5.	Subtract line 4 from line 3	(4,772.)	9,844.	5,072.
6.	Exemptions - Enter the number of federal exemptions claimed on this return in the box then multiply by → [1] $3,500 and enter the result on line 6, column C.	3,500.		3,500.
7.	RI Taxable Income - subtract line 6 from line 5		1,572.	1,572.
8.	RI income tax from RI Tax Table or Tax Computation Worksheet		59.	59.
9A.	RI percentage of allowable federal credit from RI-1040, page 2, line 22			
9B.	RI credit for income tax paid to other states from RI-1040, page 2, line 29			
9C.	Other RI credits from RI-1040, Schedule CR, line 4			
9D.	Total RI credits - add lines 9A, 9B and 9C			
10.	RI income tax after credits - subtract line 9D from line 8 (not less than 0)		59.	59.
11.	RI checkoff contributions from RI-1040, page 2, line 37			
12.	USE/SALES tax due from Consumer's Use Tax Worksheet, page 4, line 5			
13.	Total RI Tax and checkoff contributions		59.	59.

PAYMENTS

14. A.	RI 2011 income tax withheld from Schedule W, line 21	14A.		
B.	2011 estimated tax payments and 2010 carryforward	14B.		
C.	Property tax relief credit from Form RI-1040H	14C.		
D.	Residential lead abatement income tax credit from Form RI-6238	14D.		
E.	RI Earned Income Credit	14E.		
F.	Other Payments		14F.	
G.	Total - Add lines 14A, 14B, 14C, 14D, 14E and 14F		14G.	
H.	Overpayment allowed on original return		14H.	
I.	Total payments after overpayment - subtract line 14H from 14G		14I.	

AMOUNT DUE

15. A.	If line 13 is larger than 14I, subtract line 14I from 13. This is the amount you owe	15A.	59.
B.	Interest due on amount on line 15A	15B.	
C.	Total balance due - add lines 15A and 15B	15C.	59.

REFUND

16.	If line 14I is larger than line 13, subtract line 13 from 14I. This is the amount you overpaid	16.	
17.	Amount of overpayment to be refunded	17.	
18.	Amount of overpayment to be applied to 2012 estimated tax	18.	

RETURN MUST BE SIGNED - SIGNATURE LINE IS LOCATED ON PAGE 2

Mail returns to: Refunds: RI Division of Taxation - One Capitol Hill - Providence, RI 02908-5806

Payments: RI Division of Taxation - One Capital Hill - Providence, RI 02908-5807

RI-1040X-R

Amended Rhode Island Resident Individual Income Tax Return

(To be used by resident taxpayers only)

2011

Name(s) shown on Form RI-1040X-R
VIOLETTE M CHARPENTIER

Your social security number
037-28-9453

PART 2 EXPLANATION OF CHANGES TO INCOME, DEDUCTIONS AND CREDITS

Enter the line number from the form for each item you are changing and give the reason for each change. Attach only the supporting forms and schedules for the items changed. If you do not attach the required information, your Form RI-1040X-R may be returned.

LT CAPITAL GAINS NOT INCLUDED ON ORIGINAL FILED RETURN IN ERROR

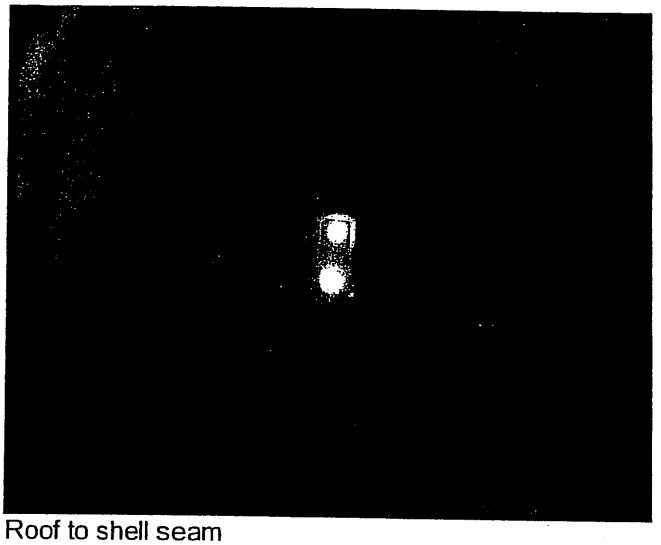
Under penalties of perjury, I declare that I have examined this return, and to the best of my knowledge and belief, it is true, correct and complete.

Your → Signature	Date	Spouse's → Signature	Date
		May the division contact your preparer about this return? Yes X	
Paid preparer's signature and address		SSN, PTIN or EIN P00607331	Date 05/22/2012
Paid preparer's address 1260 MAIN ST RTE 117		Paid preparer's telephone number 401-828-2155 COVENTRY RI 02816-	

ACUREN

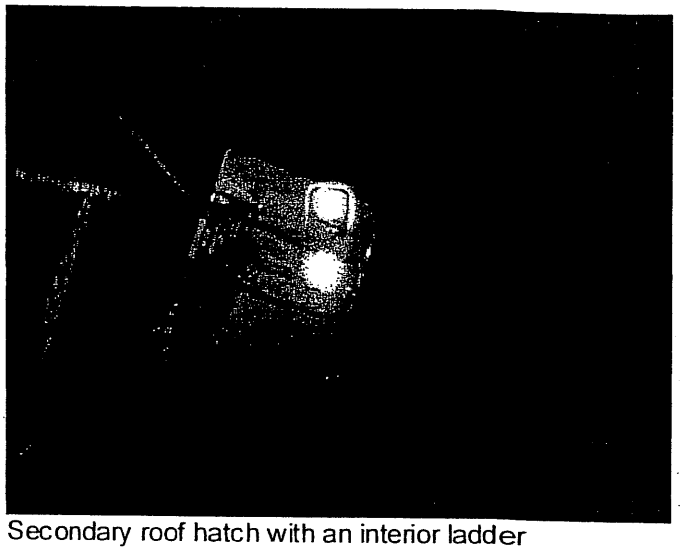
1.5MG Read Schoolhouse Reservoir

VS#1



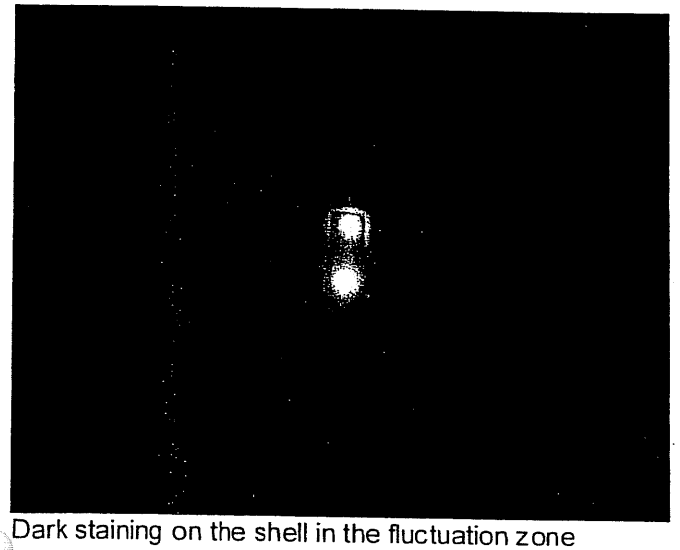
Roof to shell seam
(Time 1:28)

VS#2



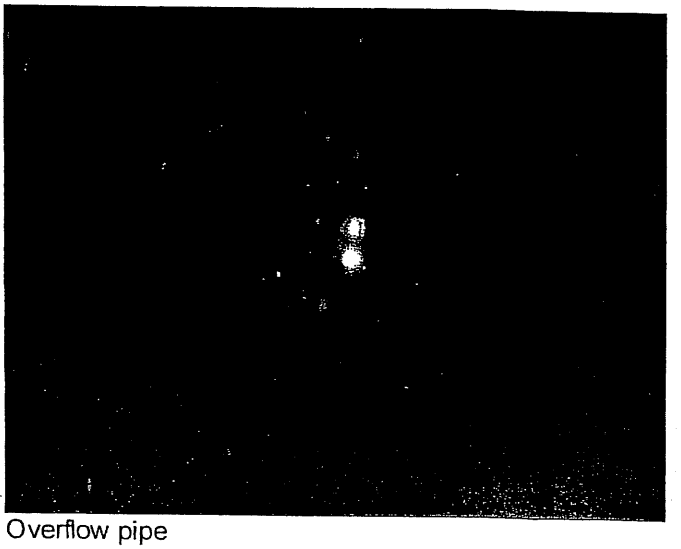
Secondary roof hatch with an interior ladder
(Time 3:08)

VS#3



Dark staining on the shell in the fluctuation zone
(Time 3:26)

VS#4

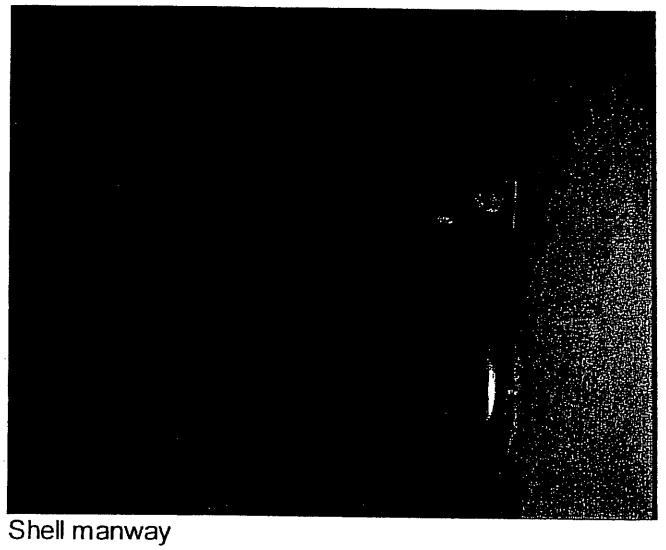


Overflow pipe
(Time 5:13)

ACUREN

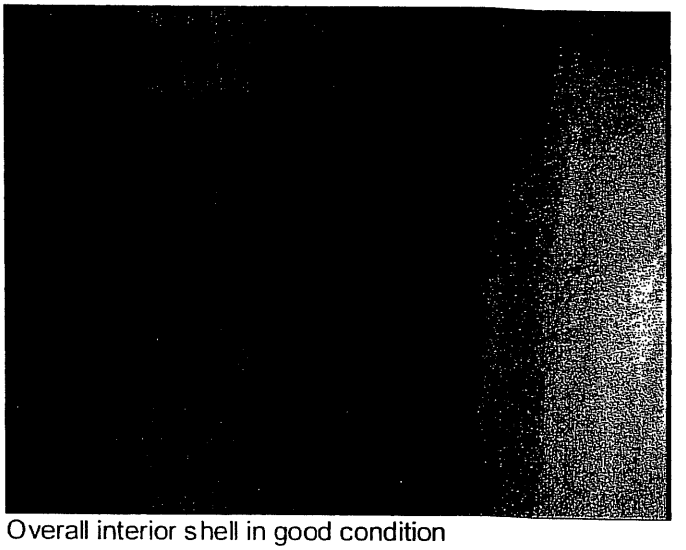
1.5MG Read Schoolhouse Reservoir

VS#5



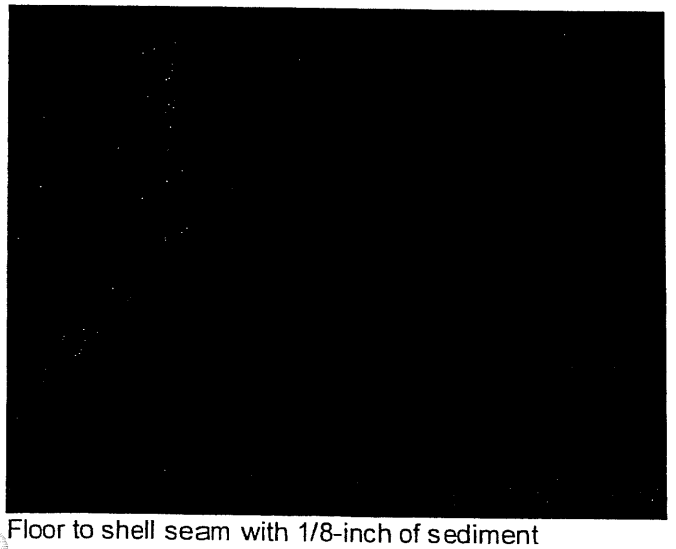
Shell manway
(Time 7:46)

VS#6



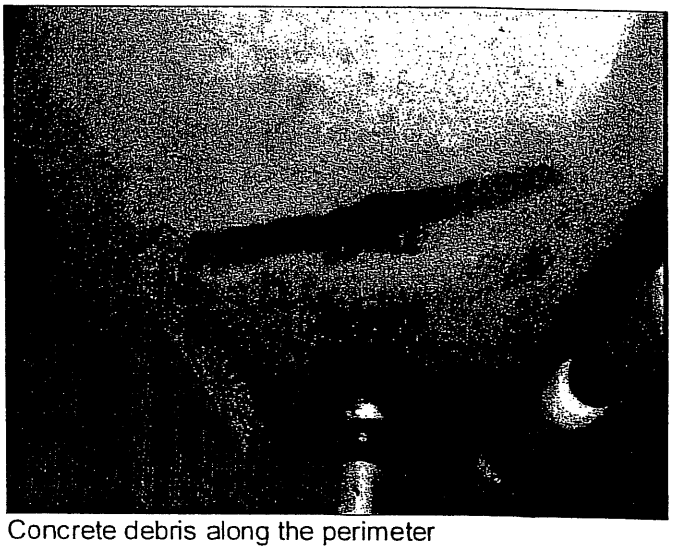
Overall interior shell in good condition
(Time 8:47)

VS#7



Floor to shell seam with 1/8-inch of sediment
(Time 12:22)

VS#8

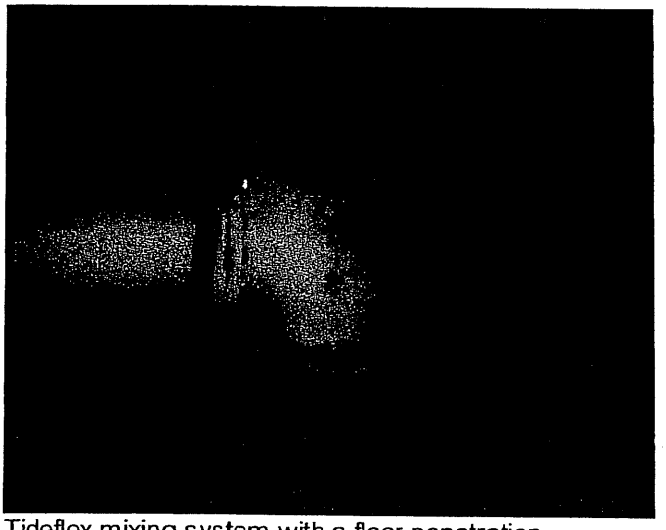


Concrete debris along the perimeter
(Time 15:32)

ACUREN

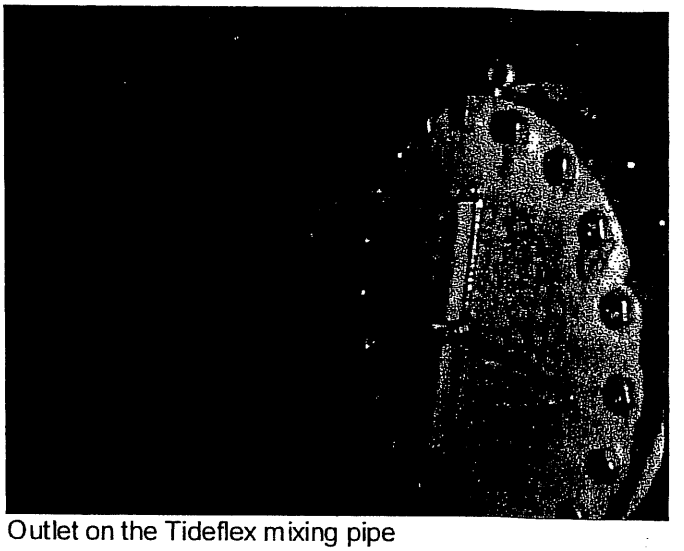
1.5MG Read Schoolhouse Reservoir

VS#9



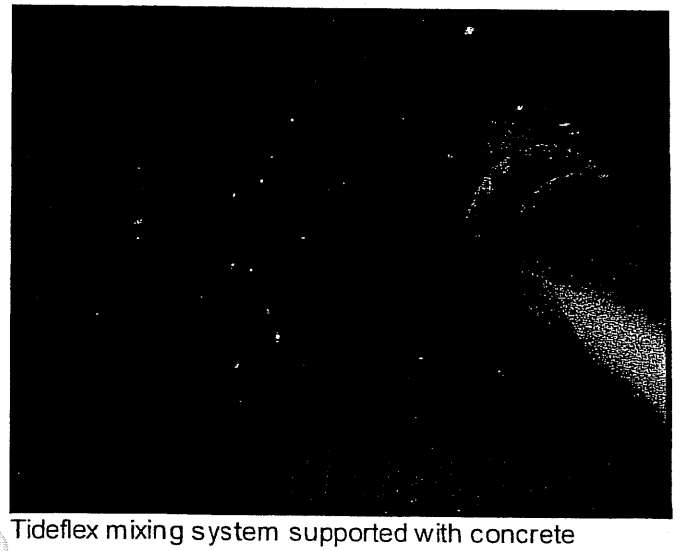
Tideflex mixing system with a floor penetration
(Time 17:28)

VS#10



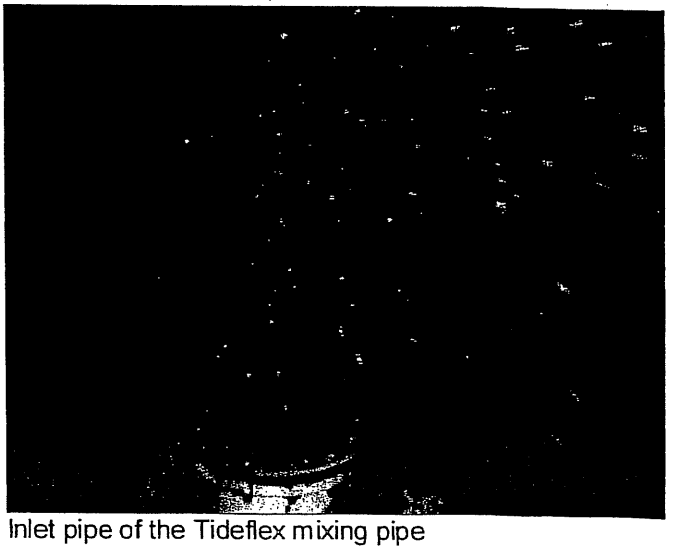
Outlet on the Tideflex mixing pipe
(Time 18:15)

VS#11



Tideflex mixing system supported with concrete saddles
(Time 18:34)

VS#12



Inlet pipe of the Tideflex mixing pipe
(Time 18:51)