Tennessee Valley Authority
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Soddy Daisy, Tennessee 37384-2000

Timothy P. Cleary
Site Vice President
Sequoyah Nuclear Plant

July 24, 2009

Randy Slater
State of Tennessee
Department of Environment & Conservation
Division of Underground Storage Tanks
Chattanooga Environmental Field Office
540 McCallie Avenue, Suite 550
Chattanooga, Tennessee 37402

Dear Mr. Slater:

SEQUOYAH NUCLEAR PLANT (SQN) FACILITY NO. 0-330628 - REPORT REQUEST FOR SUMMARY OF FAILURE OF PRESSURE TEST FOR PIPING ASSOCIATED WITH UNDERGROUND STORAGE TANKS (USTs)

Enclosed for your review is a summary of the incident and investigation to date involving the failure of a pressure test for piping associated with SQN's USTs, per your request to Stephanie Howard on July 10, 2009.

If you have any questions or need additional information, please contact Stephanie Howard at (423) 843-6700 or Ann Hurt at (423) 843-6714 of Sequoyah's Environmental staff.

Sincerely,

Timothy P. Cleary

Timothy P. Cleary

Enclosure
cc (Enclosure):
U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

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NRR

ENCLOSURE

SEQUOYAH NUCLEAR PLANT
REPORT REQUEST FOR SUMMARY OF FAILURE OF PRESSURE TEST FOR PIPING ASSOCIATED WITH UNDERGROUND STORAGE TANKS (USTs)

Incident Description

On Friday June 26, 2009 at approximately 1430, a section of piping that supplies no. 2 diesel fuel from SQN's Fuel Oil Storage Tanks (FOSTs) to underground storage tanks ("7 day tanks") failed a pressure test. The test was confirmed later that day and on June 27th. The section of piping is four inches in diameter and 180 feet long. These USTs are deferred per Tennessee Department of Environment and Conservation (TDEC) Rule 1200-1-15-.01(b)3. Because of the deferral, TDEC Rule 1200-1-15-.06 Petroleum Release Response, Remediation and Risk Management applies. Initial response actions per 1200-1-15-.06(3) were completed including notification to TDEC Chattanooga Environmental Field Office Division of Underground Storage Tanks and the Nuclear Regulatory Commission on Monday morning June 29, 2009. It should be noted that no drinking water supplies are within one-tenth mile of the petroleum site. Furthermore, visual inspections of surrounding soils and water revealed no diesel fuel contamination, including free product and vapor hazards, from the suspected piping breach. The UST system was taken out of service when the confirmatory pressure test was completed on Saturday June 27. The last successful pressure test on this section of piping was in April of 2008. Thirteen diesel fuel transfers have occurred since the last successful pressure test. Sequoyah Environmental staff has maintained verbal and email communication with TDEC Chattanooga Environmental Field Office Division of Underground Storage Tanks.

Investigation

Note: Oxygen levels and Lower Explosive Limit (LEL) for gases have been in acceptable ranges during all confined space monitoring conducted in excavation locations.

1. On Tuesday, June 30, two areas (Sites 1 and 3) were excavated in preparation for ultrasonic testing of the piping. The coating and the piping were in excellent condition at these excavation sites. There were no indications of vapor, free product, or other diesel fuel contamination.

2. On Wednesday July 1, Structural Integrity (SI) began ultrasonic pipe testing using Guided Wave technology. The first location was inside the diesel generator building (Site 6). The second area was a midpoint along the sidewalk outside the building (Site 3). The third location was near the FOSTs (Site 1). The data collected did not give SI a full scan of the pipe. Two additional areas were then excavated (Sites 2 & 4). Site 4, had an obvious odor of diesel when the backfill around the piping was exposed. Further testing at these additional sites resulted in inconclusive results. SI then conducted a rudimentary "over the line survey" and although not conclusive showed a possible indication of a piping breach. (see Attachment 1)

3. On Thursday July 2, excavation continued at an additional area Site 5. Near the pipe, the backfill once again had an odor of diesel. A 45 deg piping bend also explained the difficulties in performing the ultrasonic test in this section of piping. Based on engineering assessment after excavating several locations, this appeared to be the area of concern.

4. On Friday July 3, additional backfill and clay were removed to expose five welds: four welds on the 45 and 90 that lead into the building (Site 5) and one weld on the straight run of pipe (Site 4). The coal tar tape around the four welds had deteriorated over time. A pressure test was run once again and all five welds were tested using Snoop. Bubbles were formed and gas could be heard escaping from one of the locations. (see Attachments 2, 3, and 4)

5. On Monday July 6, the coating was removed from the affected area. The coal tar was brittle and cracking. The leak location was found at the 12 o'clock position on the weld at the connection of the 90 to the straight run that enters the building (Site 5). The remaining weld along the circumference of the pipe appeared to be in good condition. Three other welds that were uncovered in Site 5 looked good as well. An area in the base material in the general area of the weld failure had some shallow pitting on the surface, but did not look substantial.

6. On Tuesday July 7, ultrasonic testing (UT) was performed on accessible areas of the pipe that have been exposed. Nominal thickness for four inch Schedule 40 pipe is 0.237 inch. The lowest area found with UT was 0.225 inch, basically nominal wall thickness after 30 years of service. The depth of the largest outer diameter (OD) pit was only 0.0625 inch, a minimum wall thickness of 0.1745 inch at that location. Based on a minimum wall criteria of 0.3Tnom, base metal thickness of the pipe was acceptable.

7. On Saturday July 11, the weld was repaired. Prior to repair, 100 gallons of diesel fuel were removed from the piping. The capacity of the piping is approximately 117 gallons (15.7 cubic feet). A pressure test was then conducted on the pipe. Although the weld repair passed, the pressure test failed, indicating a second leak in the piping.

8. On Wednesday July 15, a pressure test was conducted at the location of the repaired weld to determine if the second leak was between the USTs and the repaired weld. The pressure test confirmed the location of the second leak between the repaired weld and the USTs.

9. On Thursday July 16, a pressure test was conducted at the location of the repaired weld to confirm the integrity of the pipe between the repaired weld and the FOSTs. The pressure test passed, confirming no leaks between the repaired weld and the FOSTs. Walk downs were also conducted to determine the tentative location of upstream and downstream gradient sampling locations. The engineering reviews of these locations are still in process.

10. On Friday July 17, the section of piping determined to have the second leak was exposed. Another through-wall OD originating pit was found, with two other significant pits close by. All of these were found in the base metal. Maintenance is in the process of clamping this hole and performing a pressure test to insure this is the last leak location. (see Attachment 5)

11. On Saturday July 18, repair at second leak location was completed. Pressure test was performed and found acceptable.

12. On Monday July 20, second pressure test on line was performed and found acceptable. Soil that contains diesel fuel continues to be removed.

13. On Tuesday July 21, question asked about whether or not coal tar wrap contains asbestos. Work stopped and samples taken. Coal tar is currently contained in a 55-gallon drum, in diesel contaminated soil pile, and at excavation sites.

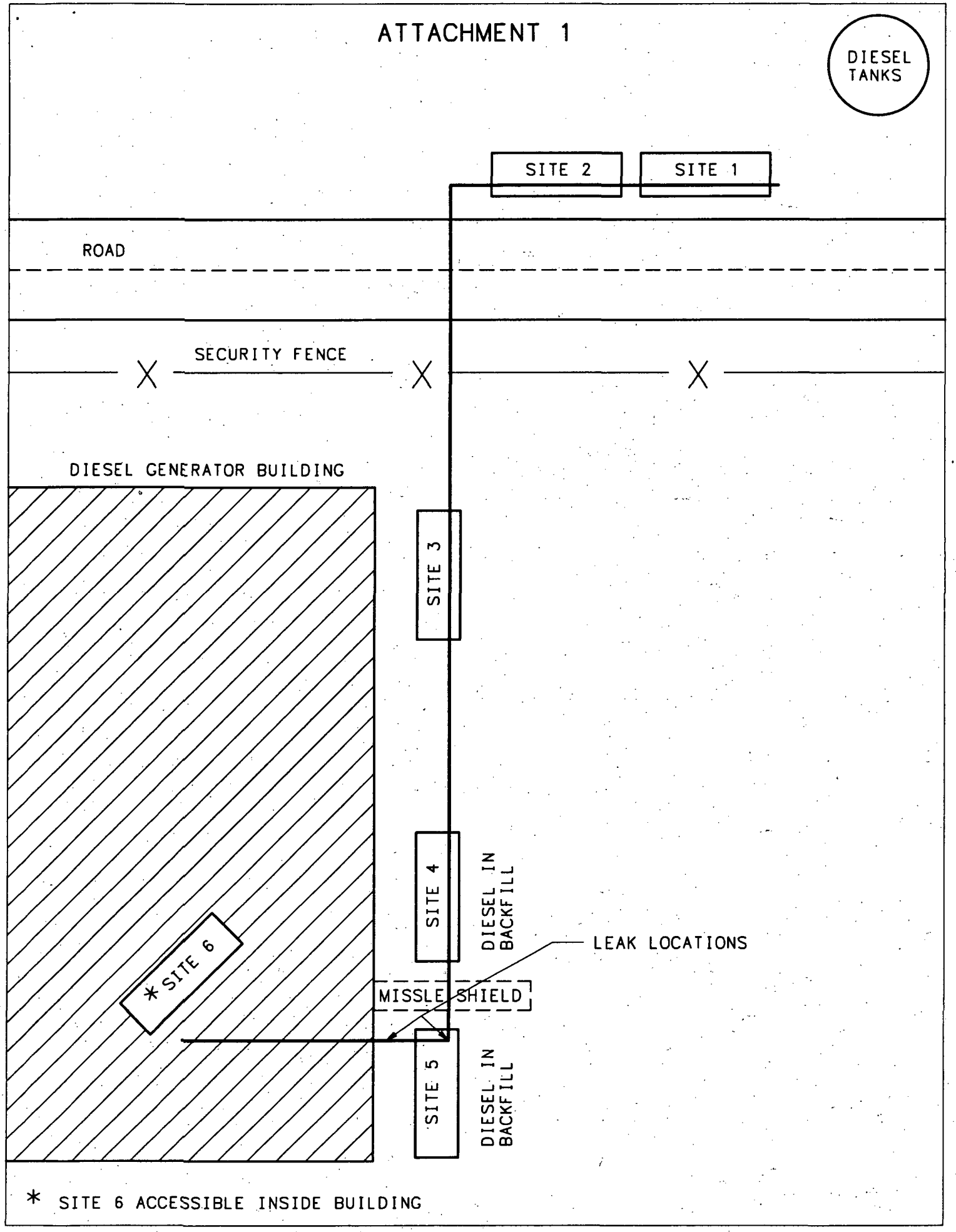
14. On Wednesday July 22, samples confirm that coal tar wrap contains greater than one percent chrysotile asbestos. From July 1 to 15, approximately 10 linear feet had been removed. Less than 1 pound released to the environmental, majority is non-friable, class III.

15. On Thursday July 23, Chattanooga Hamilton County Air Pollution Control Bureau was notified per SQN annual asbestos permit A-123008 of unexpected asbestos containing material that was found.

16. On Friday July 24, abatement and cleanup of asbestos begins.

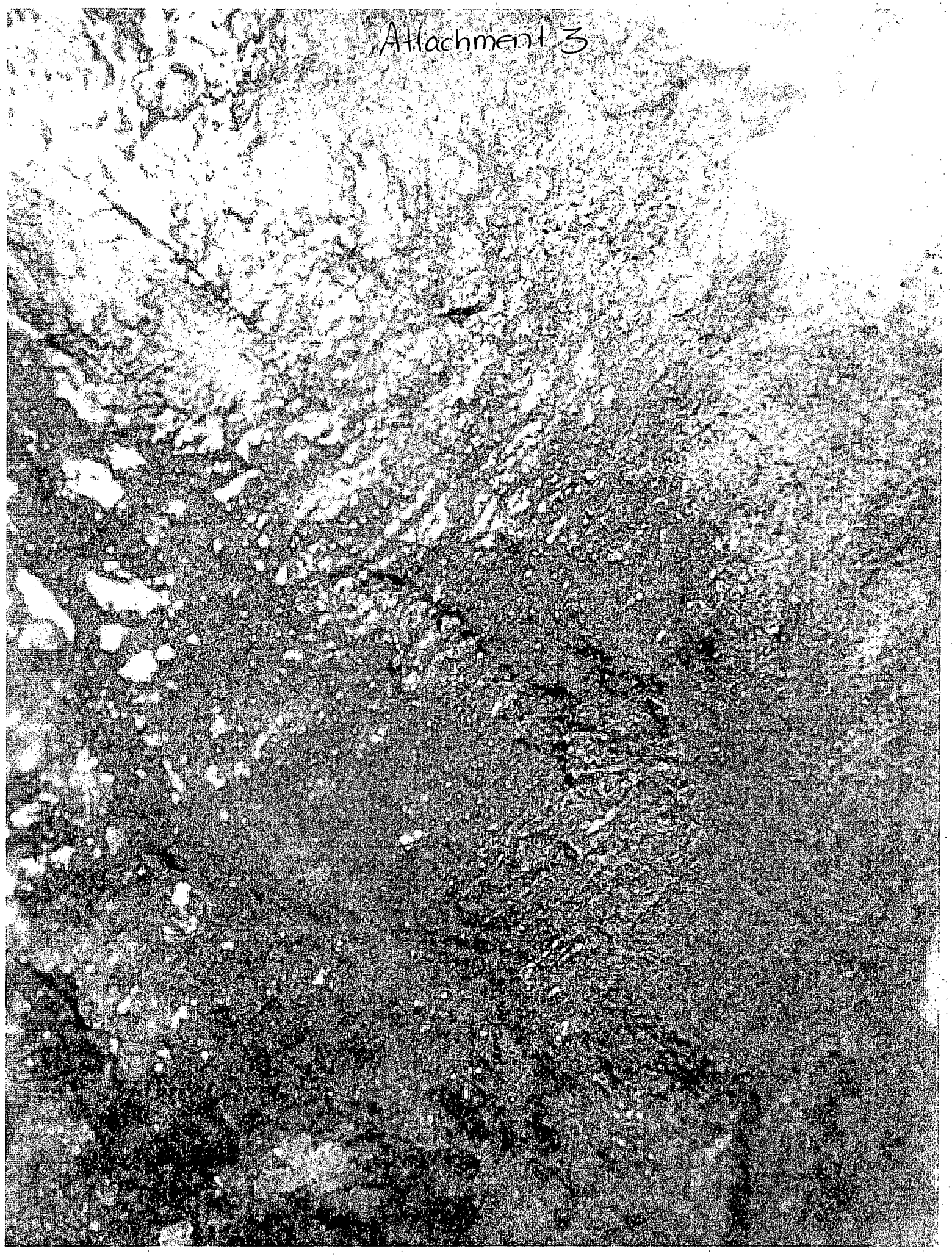
17. Upcoming Events include:
    - Complete asbestos abatement
    - Excavate additional welds in piping to visually inspect for corrosion
    - Finalize schedule for field activities

ATTACHMENT 1



Attachment 2

Attachment 3



Attachment 4

Attachment 5.