Based on the amount of oil collected from the cooler and from absorbents placed in the circulating water system it was estimated that approximately 780 gallons of oil were released to Lake Michigan. The tube leaks were caused by corrosion and were repaired. A lube oil cooler inspection program has been established utilizing fiber optics and eddy current testing to monitor future corrosion and take actions to prevent tube failures.

June 23 and 26, 1998 – Spills occurred from a temporary ice-making system discharge line. The ice making system contained a weak sodium tetraborate solution that was being used to replenish the borated ice in the plant's ice condensers. The ice making system was mounted on a skid and had a spill containment system.

On 6/23 at 1900 hours, the discharge line developed a leak and oversprayed the containment, spilling approximately 50 gallons to the ground. It was calculated that approximately 0.7 pounds of boron and 0.8 pounds of sodium were discharged to the ground. When the leak was discovered, the system was shutdown and the leak was stopped. The leak was repaired prior to starting the system. Excessive vibration and wear against the discharge line caused the leak. The discharge line supports were redesigned to prevent further excessive wear on the line.

On 6/26 at 1410 hours, the discharge line was accidentally cut during the improvement work on the supports. Approximately 30 gallons of the weak sodium tetraborate solution leaked to the ground before the line was isolated. It was calculated that approximately 0.5 pounds of boron and 0.5 pounds of sodium were discharged to the ground. The line was replaced and the system was properly aligned to prevent further failures. The ground where the spills had occurred was excavated and properly disposed of.

August 1, 1998 - On August 1, 1998, plant personnel were preparing the alternate heating boiler for maintenance. At 1350, a small leak in the blowdown drain line was noted during the drain. The boiler water from this leaked to an isolated catch basin used for chemical unloading. This allowed approximately 100 gallons of heating boiler water to drain into the chemical unloading area catch basin. The boiler water contained approximately 5.2 ppb hydrazine and 9.9 ppm ethanolamine. Environmental technicians, unaware of the spill, drained the catch basin twice during the week of August 3-7 after heavy rainfalls to the storm drain system. Changes to the draining procedure now require input from the Environmental Section prior to draining the boiler's contents. This incident was noted during a review of logbooks on 8/16/98.

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