United States Environmental Protection Agency
Region VI
POLLUTION REPORT

Date: Wednesday, May 20, 2009
From: Gary Moore

Subject: Norphlet Chemical Inc.
600 MacMillian Road, Norphlet, AR
Latitude: 33.3093000
Longitude: -92.6560000

POLREP No.:	8	**Site #:**	A6N8
Reporting Period:	4/16/2009 to 5/20/2009	**D.O. #:**	
Start Date:	4/16/2009	**Response Authority:**	CERCLA
Mob Date:	4/16/2009	**Response Type:**	Emergency
Demob Date:		**NPL Status:**	Non NPL
Completion Date:		**Incident Category:**	
CERCLIS ID #:		**Contract #**	
RCRIS ID #:			

Site Description

Norphlet Chemical Inc (NCI) is located in Norphlet, AR which is just outside El Dorado, AR at the location of the former Macmillan Oil Refinery (a previous Superfund Removal Site). NCI was a chemical manufacturing facility in business to produce the refrigerant (HFC 134a) used in automobiles. The primary raw materials used for producing this product are Anhydrous Hydrogen Fluoride, Trichloroethylene, and a catalyst. The company attempted to produce the intended product but was unable to do so. In September 2008, the company laid off all of its employees.

EPA became aware of this facility in March 2009 while in the process of setting up a Risk Management Plan (RMP) inspection. The EPA immediately informed the ADEQ. EPA offered its assistance if deemed necessary by the ADEQ.

On March 11, 2009, ADEQ conducted a site inspection at Norphlet Chemical. The ADEQ inspection noted corrosion on the relief valves for the hydrofluoric acid tanks. ADEQ also noted activity at the site including employees of Jones-Hamilton actively assisting with the removal of chemical product from the site. During the site inspection, ADEQ spoke to a member of the Norphlet Chemical Board of Directors as well as the former plant manager who described the facility processes.

On April 15, 2009, DHS conducted an Infrastructure Protection Inspection of the facility and was alarmed with its condition and the fact that it was abandoned by NCI. DHS contacted EPA about their concerns with the site. The major concern was that the abandoned site had containers of Anhydrous Hydrogen Fluoride (AHF) and mixtures of AHF, TCE, and intermediate refrigerants in tanks deemed to be in poor condition by DHS. The EPA notified ADEQ about the DHS interest in the site.

On April 16, EPA participated in a conference call with DHS and Federal, State, Local, and other representatives concerning the site. Following this call, EPA received a request from ADEQ to address the situation at the site. EPA dispatched it START Contractors to begin air monitoring. EPA OSC Jones arrived on-site on Friday, April 17, 2009 and met with Federal, State, County, and City officials and evaluated the site. OSC Jones determined that an Imminent and Substantial Endangerment existed as a result of the abandonment of the facility, the conditions of the tankage, and the close proximity of the school and surrounding residents to the facility. On April 16, 2009, Union County Judge Bobby Edmonds declared an emergency. Because of the emergency order and the close proximity of the site to the school, the school elected to close on Friday, April 17.

There are 5 tanks of immediate concern that will be addressed by the EPA. These tanks are as follows:

o Tank TT10 (13,800 gallon capacity) - 13,400 gallons of a liquid mixture; 75% AHF and 25% TCE and intermediate refrigerants;
o Tank TT11 (13,800 gallon capacity) - 10,849 gallons of a liquid mixture; 4% AHF and 96% TCE and intermediate refrigerants;

o Tank TT13 (11,550 gallon capacity) - OF (4500 pounds) and 2,000 gallons of a AHF;
o Tank TT02 (18,213 gallon capacity): Approximately 2000 gallons of TCE;
o Tank TT01 (42,000 gallon capacity): 7,800 gallon of 98% AHF

The site has other areas of concern where chemicals are present, including an onsite laboratory, warehouse, plant area, and piping.

Current Activities

On April 19, 2009, EPA attempted to transfer material from TT11 into a tanker truck. In order to accomplish this, piping was removed from the tanks to allow the connection of a pump and hoses. The transfer operation failed due to pump failure as a result of vapor expansion which damaged the teflon diaphragm allowing pass through of material to the dry side. The system was isolated and shut down immediately. There were no injuries or significant releases of material. Additionally, the SRV's on the trucks were set to low for the pressures that existed on the tanks. The trucks were released.

The EPA and its contractors searched and contacted numerous companies about containers and tankers that would hold this material with SRVs set in the 100 to 150 psig range. Most companies did not want to carry this material as they were concerned about potential moisture issues associated with the materials and damage to their containers.

The issue with the pressures is associated with the refrigerant intermediates within the waste stream. The EPA has located companies willing and capable in assisting us in transporting and storing this material. EPA requested and obtained a DOT exemption for use of a specialty tanker used to carry dinitrogen tetroxide and hydrazine for NASA and DOD. It is listed as a MC338 but does not exactly meet those specifications.

On April 24, 2009, ultrasound tests were conducted on the tanks containing the AHF and AHF mixtures. The tests indicated a critical area on tank TT-13 and an area of concern on tank TT-10.

On April 25, 2009, EPA completed constructing a dry lime scrubber with carbon filter out of a frac tank and two totes. The frac tank contains approximately 10 feet of dry lime to scrub the AHF and carbon to scrub the organics.

On April 26 2009, EPA completed cleaning out the original tanker truck used for the first transfer attempt. The material in the truck was neutralized with a lime slurry. This truck will be released on April 27, 2009.

On April 26, 2009, TT13 was scrubbed through the scrubber to reduce the pressure on the tank. The pressure was reduced to 20 psig. It is now ready for transfer.

On April 28, 2009, the Solvay railcar was delivered for transfer of the pure AHF from TT01.

On April 30, 2009, EPA transferred the contents of TT13 into a tanker with no incident.

On May 2, 2009, EPA completed a vapor/vent system for Tank TT11. The Vapor/vent system will be processed through the site scrubber system. The valve connections were completed on the railcar to facilitate transfer of AHF from Tank TT01 into railcar.

On May 3, 2009, EPA completed the transfer of approximately 8,073 gallons of AHF material from Tank TT01 into the Solvay railcar.

On May 4, 2009, EPA transferred approximately 18,000 pounds (2,230 gallons) of material from Tank TT10 into one JB Kelly Tanker. EPA continued to vent Tank TT11 and process vapor through the scrubber system.

On May 5, 2009 EPA transferred approximately 54,100 pounds (6,700 gallons) of material from Tank TT10 into a total of three (3) JB Kelly Tankers. EPA continued to vent Tank TT11 and process vapor through the scrubber system.

On May 6, 2009, EPA completed the removal and transfer of liquid material in Tank TT10. Approximately 11,300 pounds (1,400 gallons) of material was transferred from Tank TT10 into one JB Kelly Tanker. 4,000 gallons of Trichloroethylene was transferred from Tank TT44 and transported off site to Blentech Corporation in Houston, Texas.

On May 7, 2009, EPA completed transfer of 7,200 lbs of material from tank TT11 into the same JB Kelly tanker which emptied TT10. This brought the tanker truck load to (18,400 lbs). Another JB Kelly tanker was also filled with (18,000 lbs) bringing the total of JB Kelly tankers filled to (6). EPA will release the remaining (2) JB Kelly tankers and utilize (2) Dana PIH tankers for the remaining transfers at a significant cost savings. Tank TT11 continues to vent through the scrubber system.

On May 8,2009, EPA completed installing fittings on tank TT01 in order to purge the tank with nitrogen. EPA began the nitrogen purge of tank TT10. EPA continued to vent Tank TT11 and process vapor through the scrubber system.

On May 9,2009, EPA completed the installation of fittings on the rail yard line piping from the facility in preparation for purging the line with nitrogen. EPA completed the nitrogen purge of TT10. Tank TT11 continues to vent through the scrubber system.

On May 10, 2009 EPA continued to vent Tank TT11 through Tank TT 13 into the temporary scrubber system. Fittings were set for purging the rail yard line. The empty tankers K809 and K806 were removed from site.

On May 11, 2009 EPA continued to vent Tank TT11 through Tank TT 13 into the temporary scrubber system. Finished setting the fittings for purge of rail yard line. Overnight two lightning strikes occurred at the site, one of the lighting strikes disabled the camera for the rail yard and the other struck the tower.

On May 12, 2009 EPA continued to vent Tank TT11 through Tank TT 13 into the temporary scrubber system. EPA began and completed the nitrogen purge of rail yard line. Flushed the rail yard supply line from facility with water in preparation for caustic solution (approximately 500 gallons). Prepared the caustic solution which will circulate through the vapor and liquid lines leading from the facility to the rail line into a 1000 gallon poly tank. Completed circulating caustic solution through the lines to remove any residual HF and discharged 1000 gallons from the poly tank into the waste water pond. The pH reading on the solution from the poly tank was between 7.5 -8.0. The MEXCHEM HF training railcar was removed from the site via rail by Union Pacific.

On May 13,2009 EPA continued to vent Tank TT11 through Tank TT 13 into the temporary scrubber system. Prepared TT01 for caustic solution by adding water to until ½ full. Allowed the tank to sit two hours before adding 2000 gallons of caustic solution which brought the solution pH to 14. After adding additional water to fill the tank, the solution was allowed to set overnight.

On May 14, 2009 EPA continued to vent Tank TT11 through Tank TT13 into the temporary scrubber system. TT01 had a pH reading of 14 in the AM. ERRS collects pH readings from TT01 periodically allowing the solution to stabilize. ERRS prepared TT10 for caustic solution by adding water to ½ full. ERRS allows the tank to sit two hours before adding 2000 gallons of caustic solution. After adding additional water to fill the tank, the solution will sit overnight. ERRS will check the pH of TT10 in the morning.

On May 15, 2009 EPA re-plumbed TT13 to allow for nitrogen purging. Decontamination of TT01 and TT10 was completed. EPA will allow water to remain in tanks until they are ready to neutralize and discharge into the wastewater treatment pond or removed off site for disposal.

May 16, 2009 EPA continued to vent TT11 into the scrubber. EPA detected a slow leak, using an RKI air monitor, at the gauged manhole hatch of Kelly tanker K803. EPA washed and cleaned the gaged manhole area with caustic solution.

May 17, 2009 EPA continued to vent TT11 into the temporary scrubber system. EPA swept TT13 with nitrogen and prepared TT13 for caustic solution by adding water to ½ full. EPA monitored the pressure gages of the Kelly Tanks and confirmed that K803 is leaking slowly at the man way cover at the bolt on the passenger side at the 3 o'clock position. The leak was detected with an RKI air monitor and nothing visible was noted. EPA cleaned K803 at the manhole hatch and torqued the manhole cover bolts to 275 pounds to slow the leak. EPA contacted the vendor of the Kelly tanks and quarantined the area around K803. K803 contents will be transferred to another empty Kelly tank.

On May 18, 2009 EPA continued to vent TT11 into the scrubbers, and filled TT13 with caustic solution. The caustic solution in TT13 was brought up to a pH of 14. EPA prepared for the T11 and K803 transfers scheduled to occur tomorrow. After today TT01, TT10, and TT13 now have caustic solution setting in them waiting for treatment and disposal in the settling pond or disposal off site.

On May 19, 2009 EPA transferred the contents of JB Kelly tanker #803 to the replacement tanker #809 (17,000 lbs) and the remaining contents of TT11 to Dana Tanker #1190 (19,680 lbs). EPA monitored the transfer with AREA RAE monitors and SKC sampling pumps at five (5) locations around the transfer area. The transfer was safely and successfully accomplished.

Planned Removal Actions

Continue to flush piping and arrange for the neutralization of the caustic solutions in TT01, TT10, TT11, and TT13 for either disposal off site or into the settling pond south of the facility.

Begin flushing and decontaminating piping in the plant which may have contained AHF.

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