

**United States Environmental Protection Agency
Region V
POLLUTION REPORT**

Date: Monday, June 8, 2009

From: Brian Kelly

Subject: Continue PRP Removal
Southern Illinois Railcar
7570 Ottawa Road, Cairo, OH
Latitude: 40.8470000
Longitude: -84.0830000

POLREP No.:	8	Site #:	B5QP
Reporting Period:	5/26/09 to 6/18/09	D.O. #:	
Start Date:	12/2/2008	Response Authority:	CERCLA
Mob Date:	12/2/2008	Response Type:	Emergency
Demob Date:		NPL Status:	Non NPL
Completion Date:		Incident Category:	Removal Action
CERCLIS ID #:		Contract #	
RCRIS ID #:			

Site Description

The Southern Illinois Railcar (SIR) Site is located at 7570 Ottawa Road, Cairo, Allen County, Ohio 45807. The facility is a former fertilizer plant adjacent to the Warrington Ditch a tributary of Rattlesnake Creek and Little Auglaize River. The Site is currently owned and operated by Southern Illinois Railcar as a railcar repair facility.

Current Activities

See POLREP #1 for initial response.

On Tuesday May 26, 2009 AES excavated stone debris from the driveway area from the northeast corner of the North Warehouse. This material was placed in roll-off boxes for later disposal at a landfill facility. AES excavated soil at approximately 1' to 1.5' cut in this area. No odor or staining was observed after post excavation. AES excavated ammonia impacted soil along the west edge of the North Warehouse. Due to severely impacted soil in this area, AES excavated to approximately 4'-5' below ground surface along the building foundation and approximately 1' below ground surface to the west of the building. Due to dark brown ammonia water seeping from the foundation on the northwest corner of the building, AES cut a concrete square into the floor and dug a collection sump to approximately 8' below ground surface on the inside of building in this area. Soil was excavated approximately 3' below the building footer to collect ammonia water in the sump. Soil excavated from the sumps and around the North Warehouse was placed on the soil stockpile for future landfarming activities.

No ammonia water or impacted soil was transported offsite on this date.

On Wednesday May 27, 2009 AES continued excavation activities on the west side of the North Warehouse removing the top 1' of granular fertilizer and stone debris. This material was placed in a roll-off box for disposal at a landfill facility. AES continued to excavate ammonia impacted soil from the North Ditch. Due to impacted soil present in the upper 1 foot of soil in the North Ditch (west side of the North Warehouse) AES excavated soil using a 2 foot cut in this area. Soil did not have staining or odor at the two foot depth in the North Ditch. One 3" diameter clay tile pipe was encountered in the North Ditch. The clay pipe was filled with soil and only very slight drainage was observed from the pipe. AES placed concrete in pipe to stop any further drainage. A 9' deep sump was excavated just north of the outfall pipe in the North Ditch to collect ammonia water.

AES installed two additional ammonia water collection sumps inside the North Warehouse along the north wall near the middle of the building and in the northeast corner. These sumps were excavated to approximately 7' to 8' below ground surface and were dug approximately 3' below the building footer. Excavated soil from the sumps were placed on the soil stockpile at the site for future landfarming purposes.

No ammonia water or impacted soil was transported offsite on this date.

On Thursday May 28, 2009 AES continued excavation activities on the west side of the North Warehouse and excavated along the sewer pipe on the southwest side of the building. Ammonia impacted soil and stone debris along with staining was observed along the sewer pipe run. The soil material and stone debris was placed in a roll-off box for disposal at a landfill facility.

AES removed loose transite and debris from the Continuous Ammoniazation Building. All surfaces were continually wetted and Level C PPE was worn during transite removal activities.

No impacted soil or ammonia water was transported offsite on this date.

On Friday May 29, 2009 AES continued removing residual transite and debris from the Continuous Ammoniazation Building. Level C PPE was worn during transite removal activities. Transite and debris was placed in a lined roll-off box for disposal at a landfill facility. Also, AES repaired silt fence around the site.

AES collected surface water samples from Warrington Ditch to monitor water quality for pH, temperature, and ammonia concentration upstream and downstream of the site. A water sample was collected at Hook-Waltz Road (upstream) on the north side of the road next to the outfall pipe. The following readings were recorded: pH 7.84, temperature 26.5 degrees Celsius, and 0.0 ppm ammonia concentration. Additionally, a downstream water sample was collected from north of the railroad spur. The following readings were recorded: pH 7.97, temperature 16.3 degrees Celsius, and 0.0 ppm ammonia concentration, respectively. A Hach Ammonia Field Kit was used to collect ammonia readings and an Oakton pH meter was used to collect pH data. All instrumentation was calibrated before sampling.

One 20 cubic yard roll-off box containing soil and transite debris was transported offsite to County Environmental Landfill of Wyandot, located in Carey, OH.

No work activities were conducted over the weekend (5/30/09 and 5/31/09).

On Monday June 1, 2009 AES continued removing residual transite and debris from the Continuous Ammoniazation Building. Level C PPE was worn during transite removal activities. AES also constructed a small earthen dam in the North Ditch on the north side of the sump in the ditch to contain all ammonia water collected within the sump and to eliminate migration out into the North Ditch. AES cleaned a frac tank and performed air monitoring activities prior to entering the tank for cleaning.

AES conducted two shallow test trenches (1' deep by 2' wide) on the north side of the Ag Lime Storage Bin to investigate the extent of granular fertilizer present in this area. Based on test trench activities AES will remove the top 6" of soil material from this area. All soil excavated from the test trenches was placed in a roll-off box for disposal at a landfill facility.

No impacted soil or ammonia water was transported offsite on this date.

On Tuesday June 2, 2009 AES conducted 11 Geoprobe soil borings at the former South Warehouse and 2 soil borings along the roadway on the east side of the former metal scrap pile location north of the South Ditch. Borings were advanced to 4' below ground surface. All soil borings were logged for soil classification, sampled for ammonia chemical analysis, and screened for ammonia headspace readings using a MultiRae PID unit. Elevated PID readings were observed in several of the headspace soil samples.

AES started on the removal of the top 1 foot of soil and transite on the north side of the Continuous Ammoniazation Building. This material was placed in a lined roll-off box for disposal at a landfill facility.

AES moved a railcar that was turned on its side and is in preparation for scrap from the area west of the North Warehouse to the area along the roadway north of the South Ditch. Additional impacted soil is present where the railcar was located thus, was moved to accommodate further soil excavation on the west side of the North Warehouse.

AES performed water management tasks at the site by dewatering ditches and sumps using a vac. truck and transferring the water to onsite frac tanks.

Ammonia water was transported offsite for disposal to Lima Wastewater and United Wastewater, respectively. No impacted soil was transported offsite on this date.

On Wednesday June 3, 2009 AES collected preliminary Hach Ammonia Field Test Kit samples from South Ditch, North Ditch, puddle on the west side of the North Warehouse, and a puddle on the northeast corner of the North Warehouse. All field test strip samples were above 6 ppm (limit of the test strip is 6 ppm).

AES started power washing the inside of the Ag Lime Storage Bin. All water was containerized and placed in onsite frac tanks. AES also put up a new layer of poly plastic on the west side of the Continuous Ammoniazation Building to keep rain off the wood lathes that are filled with granular fertilizer on the side of the building.

AES continued excavation activities along the sewer pipe on the southwest corner of the North Warehouse. The pipe was exposed and partially removed during the excavation activities. The pipe was perforated and had a very strong ammonia odor and contained a green ammonia liquid. The soil material from this excavation was placed in a roll-off box for disposal at a landfill facility.

AES performed water management tasks at the site by dewatering ditches and sumps using a vac. truck and transferring the water to onsite frac tanks.

AES conducted test trenches along the rail road tracks between the North Warehouse and the former South Warehouse area. A total of 5 test trenches were dug. Test trenches were approximately 3.5' deep and 1.5' wide and 4' in length. The test trench located near the tower in the North Warehouse and the railroad tracks had a slight ammonia odor and brown ammonia water was observed.

AES collected surface water samples from Warrington Ditch to monitor water quality for pH, temperature, and ammonia concentration upstream and downstream of the site. A water sample was collected at Hook-Waltz Road (upstream) on the north side of the road next to the outfall pipe. The following readings were recorded: pH 8.01, temperature 16.3 degrees Celsius, and 0.0 ppm ammonia concentration. Additionally, a downstream water sample was collected from north of the railroad spur. The following readings were recorded: pH 7.68, temperature 15.5 degrees Celsius, and 0.0 ppm ammonia concentration, respectively. A Hach Ammonia Field Kit was used to collect ammonia readings and an Oakton pH meter was used to collect pH data. All instrumentation was calibrated before sampling.

AES transported 4-20 cubic yard roll-off boxes containing ammonia impacted soil and transite to County Environmental Landfill of Wyandot, located in Carey, OH. Ammonia water was transported offsite for disposal at United Wastewater.

On Thursday June 4, 2009 AES loaded out 19 dump trucks with ammonia impacted soil and stone debris from the area west of the North Warehouse and the Ag Lime Storage Bin. Soil and debris was transported to County Environmental Landfill of Wyandot.

AES removed the top 6" to 1' of soil from the area north of the Ag Lime Storage Bin and placed the soil and granular fertilizer in roll-off boxes for disposal at a landfill facility.

AES power washed the inside of the Ag Lime Storage Bin including the rafters to continue to remove urea fertilizer from the structure. All water was containerized and placed in onsite frac tanks.

AES transported 4 roll-off boxes containing ammonia impacted soil and stone debris to County Environmental Landfill of Wyandot. Ammonia water was transported offsite for disposal at United Wastewater.

On Friday June 5, 2009 AES loaded out six roll-off boxes containing ammonia impacted soil and debris to County Environmental Landfill of Wyandot. AES moved all equipment out of the Ag Lime Storage Bin as cleaning has been completed inside the structure.

No site activities were performed on June 6 or June 7, 2009.

On Monday June 8, 2009 AES continued ammonia impacted soil removal along the sewer pipe on the southwest corner of the North Warehouse. The extent of impacted soil was still not defined as AES continued digging soil to the south (towards the railroad tracks) that had very strong ammonia odor and a green color.

AES completed the removal of transite debris from the soil ramp area on the north side of the Continuous Ammoniazation Building. Transite was placed in lined roll-off boxes for disposal at a landfill facility.

AES cleaned out a frac tank. AES performed air monitoring during the tank cleaning and wore Tyvek and rubber boots.

AES transported 4 roll-off boxes containing transite and ammonia impacted soil to County Environmental Landfill of Wyandot, located in Carey, OH. AES loaded out ammonia water and transported offsite to United Wastewater, located in Sharonville, OH.

On Tuesday June 9, 2009 AES completed the removal of the sewer pipe along the southwest corner of the North Warehouse and excavated ammonia impacted soil surrounding the pipe. AES utilized a 2.5 to 3 foot soil cut in swale. Strong ammonia odors were still present on the clay bottom of the swale after excavation.

Additionally, AES pumped out all ammonia water from the collection sumps in the North Warehouse using a vac truck and transferred the water to an onsite frac tank.

AES started excavation activities along the plastic perforated sewer pipe that drains the weigh scales and discharges to the South Ditch. This sewer pipe will be removed.

AES transported 4 roll-off boxes containing transite and soil from the north side of the Continuous Ammoniazation Building to County Environmental Landfill of Wyandot, located in Carey, OH. AES transported ammonia water/mud to United Wastewater, located in Sharonville, OH.

On Wednesday June 10, 2009 AES removed additional soil along the building foundation in the northeast corner of the North Warehouse. A soil cut of approximately 2.5 to 3 feet was utilized. Soil in this area had a very strong ammonia odor and some staining was observed. A crack in the building foundation was also observed and was slowly leaking brown to green ammonia water out onto the soil along the edge of the building. AES will continue to monitor this area and excavate additional soil as needed. Soil excavated from this area was placed on the soil stockpile for future landfarming activities.

AES conducted 3 test trenches along the catch basins and sewer piping runs located between the North Warehouse scale area and the railroad tracks. No staining or odor was present in any of the test trenches. Test trenches were excavated to approximately 3.5' below ground surface. AES vacuumed out the sump that is located next to the scales at the North Warehouse and very strong green ammonia water continuously flowed into the sump from a pipe located at the bottom of the sump. Buried concrete walls were encountered when AES attempted to dig around the sump to determine where the pipe originates.

AES cleaned out a frac tank and transported offsite. Air monitoring was performed prior to and during the frac tank cleaning activities and personnel wore Tyvek suits, rubber boots, and respirators.

AES collected a preliminary ammonia water sample using a Hach Ammonia Field Test Kit from standing water in the sewer pipe excavation going from the weigh scales to the South Ditch. The result of the water sample was above 6 ppm (6 ppm is the limit of the test strip). Additionally, AES removed a 4" diameter iron sewer pipe that was tied into the sump along the gravel roadway between the railroad tracks and the North Warehouse. The pipe ran in the south to north direction and discharged into the North Ditch. There was a very strong ammonia odor and liquid present in the large diameter stone underneath the pipe. The large diameter stone and ammonia impacted soil was removed and placed on the soil stockpile for future landfarming activities. AES excavated to a depth of approximately 3' below ground surface along the pipe run.

AES did not transport any soil or ammonia water offsite on this date.

On Thursday June 11, 2009 AES excavated ammonia impacted soil and stone debris and removed a 4" diameter iron sewer pipe and a 4" diameter perforated plastic pipe on the south side of the catch basin in the southwest side of the gravel driveway near the North Ditch. Soil was excavated to approximately 3' below ground surface in this area. Soil was placed on the soil stockpile for future landfarming activities. AES completed excavation activities on the south side of the catch basin and backfilled with clean fill and small stone. The excavated ammonia impacted soil was placed on the soil stockpile for future landfarming activities.

AES used a vac truck to vacuum out all ditches and ammonia water collection sumps across the site. Water was containerized in onsite frac tanks for later offsite disposal.

AES started excavating ammonia contaminated soil around the two storage bins on the southeast side of the North Warehouse. A strong ammonia odor and staining was observed in this area. Also, a significant amount of granular fertilizer was present. This material was placed in a roll-off box for disposal at a landfill facility.

AES transported 4 roll-off boxes to County Environmental Landfill of Wyandot, located in Carey, OH. Two boxes contained transite debris and ammonia impacted soil and two boxes contained ammonia impacted soil only.

No ammonia water was transported offsite on this date.

On Friday June 12, 2009 AES used a vac truck and power washer to remove granular fertilizer from around two storage bins on the southeast side of the North Warehouse.

AES removed a section of yellow perforated plastic pipe that runs from the former South Warehouse under the railroad tracks and discharges to the North Ditch. Additional yellow perforated pipe exists along the railroad tracks and will be removed in the coming days.

AES used a sewer camera to inspect the condition of the sewer pipe that runs from the catch basin located in the gravel drive just east of the scale area at the North Warehouse and runs to the west to another catch basin in the gravel drive before discharging to the North Ditch. The pipe was in good condition and showed no signs of leaks, cracks, or disconnections.

AES collected surface water samples from Warrington Ditch to monitor water quality for pH, temperature, and ammonia concentration upstream and downstream of the site. A water sample was collected at Hook-Waltz Road (upstream) on the north side of the road next to the outfall pipe. The following readings were recorded: pH 8.01, temperature 33.0 degrees Celsius, and 1.0 ppm ammonia concentration. Additionally, a downstream water sample was collected from north of the railroad spur. The following readings were recorded: pH 8.41, temperature 22.2 degrees Celsius, and 0.0 ppm ammonia concentration, respectively. A Hach Ammonia Field Kit was used to collect ammonia readings and an Oakton pH meter was used to collect pH data. All instrumentation was calibrated before sampling.

AES transported one 20 cubic yard roll-off containing ammonia impacted soil to County Environmental Landfill of Wyandot, located in Carey, OH.

No ammonia water was transported offsite on this date.

No site work activities were performed over the weekend (6/13/09-6/14/09), respectively.

On Monday June 15, 2009 AES removed additional ammonia impacted soil from the north side of the Continuous Ammonization Building. AES removed approximately 3 to 3.5 feet of soil in this area. Soil was transported to the soil stockpile for future landfarming purposes. Ammonia water continued to leach through the course stone of the railway bed into the excavation area at the Continuous Ammonization Building.

AES personnel removed hardened granular urea from the entry way of the Ag Lime Storage Bin. This material was wedged between cement blocks and plywood walls in the entry way to the bin. AES knocked out the plywood walls and used a mini-excavator to remove the hardened granular material. All urea fertilizer material was placed in a roll-off box for disposal at a landfill facility.

AES backfilled the former sewer pipe excavation area to the far west in the gravel drive between the North Warehouse and the railroad tracks with clean clay and silt.

No impacted soil or ammonia was transported offsite for disposal on this date.

On Tuesday June 16, 2009 AES completed the ammonia impacted soil excavation of the North Ditch (the portion of the North Ditch that is on the west side of the gravel access drive to Chem Trade). AES used a 3' soil cut in this portion of the North Ditch. A sand seam approximately 2 feet thick was encountered on the east side wall of the ditch along the access roadway to Chem Trade. The North Ditch has a north to south orientation in this area. The sand seam was visibly impacted with staining and a very strong ammonia odor was present. The seam is located approximately 3 feet below grade. It appears that the sand seam is approximately 7 feet wide on the east sidewall of the ditch and approximately 3 feet wide on the west sidewall of the ditch.

AES removed a cement catch basin from the southwest corner of the North Warehouse and removed the catch basin located at the North Ditch west of the North Warehouse. Ammonia impacted soil was observed under and behind the cement catch basin removed from the North Ditch. A 12" cement pipe runs under the roadway where the cement catch basin was removed and ammonia impacted soil was

observed underneath the pipe. This pipe discharges to the North Ditch on the west side of the access roadway to Chem Trade. AES is planning on excavating the pipe and removing the impacted soil from this area in the coming days.

AES continued to remove fertilizer from the elevator drag line and steel boxes underneath the railroad tracks next to the two storage bins on the southeast side of the North Warehouse.

AES vacuumed out all ammonia water collection sumps in the North Warehouse.

AES transported 3-20 cubic yard roll-off boxes containing ammonia impacted soil and fertilizer to County Environmental Landfill of Wyandot, located in Carey, OH.

AES transported 3 tanker truck loads of ammonia water to United Wastewater, located in Sharonville, OH.

On Wednesday June 17, 2009 AES installed 3 new ammonia water collection sumps inside the North Warehouse. A new sump was installed in the northeast portion of the building next to the large door and the square brick tower structure. Another new sump was installed southwest of the two large storage bins on the south side of the building. A third sump was installed in the eastern most part of the building next to the production water well that is currently not in use. The sumps are approximately 7 feet deep.

AES started backfilling the North Ditch with clean fill taken from the purposed landfarm area. The fill material was mostly silt and clay and was compacted on 1 to 2 foot lifts using a soil compactor. Clay and silt backfill was compacted around the sand seam encountered yesterday in this area.

AES transported 2 roll-off boxes containing ammonia impacted soil, fertilizer, and transite debris to County Environmental Landfill of Wyandot, located in Carey, OH.

No ammonia water was transported offsite on this date.

On Thursday June 18, 2009 AES excavated the East Ditch using a 1 foot soil cut to remove ammonia impacted soil. The excavated soil from the East Ditch was placed on the soil stockpile for future landfarming purposes. AES plans to backfill the ditch with 6" to 1' of clean fill and grade in the coming days.

AES continued compacting fill in the North Ditch and working on the final grade in the west portion of the ditch.

AES vacuumed out all ammonia water collection sumps in the North Warehouse and in areas along the building foundation on the outside. All water collected was transferred to onsite frac tanks for later disposal offsite. Additionally, AES removed a cement catch basin located next to the weigh scales at the site.

AES started placing clean clay and silt fill around the west side of the foundation at the North Warehouse and used a compactor to compact the soil material.

No impacted soil or ammonia water was transported offsite on this date.

The storm water management task will continue during removal activities.

Planned Removal Actions

former South Warehouse soil removal from basement structure

Backfill the North Warehouse soil removal area with clean fill

Backfill the North Ditch with clean fill

Backfill the East Ditch with clean fill

Remove the top 6" to 1' of impacted soil using an excavator around the Ag Lime Storage Bin

Remove the remaining residual fertilizer present at the surface around the two storage bins on the southeast side of the North Warehouse.

Next Steps

Backfill the North Ditch, East Ditch, and areas around the North Warehouse. Remove impacted soil from around the Ag Lime Storage Bin. Collect surface water samples for pH and ammonia to confirm the effectiveness of the soil removal and discharge surface water if it meets the regulatory requirement of 13 mg/L, respectively.

Key Issues

Preliminary ammonia field test kit water samples indicate the presence of ammonia above 6 ppm at the South Ditch outfall pipe from the scale area, the North Ditch, puddles on the west side of the North Warehouse and on the northeast corner of the North Warehouse. It is likely that elevated ammonia concentrations (above the regulatory level of 13 ppm) still exist in these areas and may need to be addressed with further action.

Disposition of Wastes

Waste Stream	Quantity	Manifest #	Disposal Facility
Ammonia Water	216,000 gallons to date	various	Lima Wastewater Lima, OH
Ammonia Water	3,127,324 gallons to date	various	United Wastewater Cincinnati, OH
Ammonia impacted soil/stone debris and transite	3,090 tons	various	County Environmental Landfill of Wyandot Carey, OH
Ammonia Water	36,966 gallons	various	United Wastewater Sharonville, OH

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