U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Queen Avenue Property Absorbent Technology - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region X

Subject: **POLREP #5**
Queen Avenue Property Absorbent Technology
Albany, OR
Latitude: 44.6223700 Longitude: -123.1023000

To:
From: Daniel Heister, On-Scene Coordinator
Date: 4/18/2014
Reporting Period: February 25 to April 18, 2014

1. Introduction

1.1 Background

Site Number:		**Contract Number:**	
D.O. Number:		**Action Memo Date:**	
Response Authority:	CERCLA	**Response Type:**	Emergency
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	10/15/2013	**Start Date:**	10/15/2013
Demob Date:	3/30/2014	**Completion Date:**	1/10/2014
CERCLIS ID:		**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

CERCLA Incident Category: Inactive Production Facility

1.1.2 Site Description

Albany Fire Department became aware in early October 2013 of a potential public safety and health hazard involving Absorbent Technologies, Inc., at 140 Queen Avenue SW and 2830 Ferry Street SW. Absorbent Technologies had been in business on these leased properties since 2004, creating a soil additive and fertilizer that was used to improve crop irrigation efficiency. The company ceased all operations at 5:00 p.m. Friday, October 11, 2013.

The process for producing Absorbent's product involved the use of various hazardous materials that were abandoned at the site when the company closed its doors. Of primary concern is a tank at the Queen Avenue site containing acrylonitrile, a flammable and corrosive chemical with the potential to impact human health. When the plant was abandoned, Albany Fire Department immediately took steps to ensure the safety of the community by stabilizing the acrylonitrile tank, hiring security staff for the site, and working on a plan to appropriately deal with the other hazards that were left behind on both properties.

City staff contacted the EPA on Tuesday, October 15. EPA staff immediately mobilized to the site and as of Thursday, October 17, two federal on-scene coordinators were in Albany with a team of 12 contractors, chemists, engineers and other specialists. Tank removal of the product is planned for Monday, October 21, with decommissioning of the tank the following day.

EPA is working closely with Albany Fire Department, Public Works Environmental Services, the City Attorney's Office, and Linn County Public Health. Facility operators and both property owners are cooperating.

1.1.2.1 Location

The Queen Plant is located south of Queen Avenue SE between SW Ferry Street (to the west) and SE Lyon Street (to the east) in Albany, Oregon.

The City of Albany is located approximately 20 miles south of Salem, Oregon and approximately 70 miles south of Portland, Oregon, along the Interstate 5 corridor in the Willamette River Valley region.

The Queen Plant is located in a mixed use area with a 400-person industrial facility to the west, and residences to the east. Parking areas are located to the north, and an undeveloped lot is located to the south. Further, additional residential and light industrial populations are present.

An additional facility used for ATI's research and development is located nearby at 2830 SW Ferry Street, Albany, Oregon (Ferry R&D). Light commercial lots exist to the north, south, and west and residential area exist to the east.

1.1.2.2 Description of Threat

Hazardous Materials and wastes are located at the Queen Plant. The chemical of greatest concern is approximately 2,700 to 2,800 gallons of acrylonitrile (AN), present inside a 20,000 gallon STI Fireguard ®, UL 2085 (protected, insulated, and fire resistant) tank designated TK-0110. TK-0110 is located within secondary containment. TK-0110 is equipped with fire detectors, fire alarm, foam fire suppression system, and acrylonitrile vapor detectors, but testing and calibration of these systems has expired. TK-0110 is also equipped with a nitrogen “blanket” system designed to prevent AN from contacting oxygen in ambient air. AN is considered highly hazardous due to flammability and toxicity characteristics and can degrade into cyanide gas in a fire situation above 800 degrees F.

Also of concern is the fact that a "stabilizing agent" added to the AN to inhibit both its corrosive effects and to prevent polymerization (which could lead to ignition) is only effective for six months. The AN in this tank has been there over eighteen months. Neither the chemical expert for the manufacturer, nor the chemist who managed the facility could assure responders that any stabilizer remained in the AN. Both experts agreed that adding more stabilizer to the tank would be futile because it needed to be blended and the tank had no agitator.

Other identified chemicals of concern at the Queen Plant are potassium hydroxide, sodium hydroxide, cerium ammonium nitrate, sulfuric acid, phosphoric acid and smaller quantities of various lab and industrial chemicals and compressed gases.

Undetermined liquid wastes in plastic totes are also present at the Queen Plant.

There is no evidence that any of the chemicals or wastes at the Queen Plant have discharged into the environment at this time. Most of these chemicals are within warehouses at both sites and are properly contained.

Seventeen liquid waste totes (approximately 275 gallons each), 2 methanol tanks, and various lab chemicals are located at the Ferry R&D facility.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

TK-0110 has been examined by EPA, START, ERRS, and by the City of Albany Fire Marshal.
ERRS created a plan for the removal of AN from TK-0110 to a cleaned chemical tanker trailer for transport to a TSDF facility in Aragonite, Utah. EPA and the Fire Marshal approved the ERRS transfer plan on 10/20/2013, and the transfer was completed on 10/21/2013. The tanker truck left the site on 10/22/2013 and the material was bound for destruction in Texas rather than Utah.

A plan submitted by ATI’s former process chemist to neutralize the AN by processing it into unfinished inert product was not adopted by EPA due to the relatively long processing time (several weeks) and uncertain conclusion.

The waste totes are currently under evaluation. Preliminary field tests on a subset of the totes were performed and definitive samples were collected and were submitted to a commercial contract lab for expedited definitive analysis.

Other chemicals of concern will not be removed by EPA at this time. The estimated risk and consequence of release from these chemicals is low enough that EPA has agreed to allow the property owners to hire their own contractors to responsibly remove these chemicals with EPA oversight. EPA met with the Queen St. property owner on Tuesday 10/22/2013 to discuss a draft plan. The property owners will submit their final plan to EPA for approval on or about 10/25/2013.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

2.1.1.1 Current Situation as of 27-January-2014:
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2.1.2 Response Actions to Date

a. The Sites (Queen Plant and Ferry R&D) were abandoned by the operator due to bankruptcy.

ATI Queen Avenue Facility

- The remaining Acrylonitrile in above-ground bulk storage tank was removed on 21-October-2013 and transported to a hazardous waste incineration facility, largely abating the main hazard associated with the site.
- Per an agreement between EPA and the property owner of the facility, and with the approval of the bankruptcy court, the owner contracted with River City Environmental, Inc. (River City) and developed a plan to remove the remaining dangerous chemicals from the facility.
- EPA reviewed a draft work plan developed by River City's subcontractor, NRC. EPA provided comments and approved a final work plan. River City also subcontracted Wastexpress, Inc. to sample, profile, and dispose of chemical and hazardous wastes generated from the facility. On 2-December-2013 EPA met with representatives from River City and NRC to discuss the logistics of the chemical removal plan.
- NRC began removing and containerizing chemicals (acids, hydroxides, and other industrial

chemicals) from tanks, and rinsing cleaning tanks, vessels and piping systems at the Queen Avenue facility.

- On 3-December-2013 Wastexpress measured pH and collected a sample from each of twenty liquid waste tote containers located at the facility.
- On 4-December-2013 START collected samples from three of the twenty liquid waste tote containers at the Queen Avenue facility. The samples were transferred to EPA custody for analyses.
- Containerized chemical and waste materials were profiled and transported from the Queen Avenue facility by Wastexpress for recycling or disposal.
- EPA evaluated the waste/chemical removal work at the ATI Queen Avenue location and determined that the contractor had not followed their work plan, and did not adequately remove the contents and rinse portions for the chemical piping system. EPA required that the contractor perform additional work at the site. NRC performed the additional cleaning work, which included opening acrylonitrile lines and flushing the lines, between 26-December-2013 and 3-January-2014.

- Feb. 12 Jonathan Sheckard of River City Environmental contacted Dan Heister by telephone. Sheckard reported that River City had been working at the Queen Avenue site removing miscellaneous materials from the building on behalf of the owners (Dave Ellis and Faruk Alhadid). Sheckard said that on the previous day, February 11, 2014, he witnessed a valve that was opened by pipe and equipment dismantlers (Cascade Metal Recyclers, subcontractor to Metro Metals, contractor to Ellis and Alhadid). The piping had been voided of contents and cleaned, but when the valve was opened on the potassium hydroxide line a greenish/brown liquid flowed out onto the snow covered ground (approximately five gallons). Sheckard informed Heister that Cascade employees did not have hazardous materials training.

- Sheckard said he called property owner Dave Ellis to report the situation, and recommended to Ellis that hazardous material contractor NRC be mobilized to the site to be on standby during the continued demolition/dismantling operation to deal with remaining hazardous liquid in pipes and equipment. Sheckard said Mr. Ellis stated strongly that he did not want to pay for NRC to be on site, at which point Mr. Sheckard contacted EPA OSC Dan Heister. Dan Heister who was en route Eugene, Oregon stopped by the site with START contractor Ryan Whitchurch. Heister and Whitchurch observed the area of release near the valve but did not observe any of the discharge because snow melt and rain had washed it away. Heister endorsed the plan to have NRC Haz Mat trained personnel on site in event that more residual material was encountered during the scrapping operation.
- On February 20, 2014 EPA OSC Heister and START Jim Petersen arrived at the Queen Avenue ATI site. EPA learned from Cascade Metals Recycling workers on site that one Cascade employee had received a chemical burn on his scalp, and another Cascade employee had experienced nausea while dismantling acrylonitrile piping, a symptom consistent with acrylonitrile poisoning. Two NRC employees were on site. NRC showed EPA a covered container that had approximately 15 gallons of liquid that had been collected from the process piping during demolition activities. EPA and START placed custody seals on the container and posted a notice not to tamper with or open the container. Heister reported the situation to Oregon OSHA and directed the foreman of the Cascade Metals crew to take the employee who had sustained the burn to the hospital to be examined.
- Heister stopped work at the site due to safety concerns and contacted EPA R10 Office of Regional Counsel (ORC) to discuss the situation at the site. It was decided that work would stop at the site while ORC prepared a Unilateral Administrative Order directing the property owner to develop a workplan to be approved by EPA that would require all piping and equipment to be emptied of their contents and cleaned properly under EPA over site. The owner's environmental consultant (NRC) and the OSC are in the process of developing this plan.February 21, 2014 START, in Level B protective equipment, opened the container of liquid drained from the pipes. START used a pH strip to check the liquid; the pH strip indicated approximately pH 13. START collected a sample of the liquid from the container. The sample was delivered the same day to an analytical laboratory for analysis of Volatile Organic Compounds, pH, and Total Metals.
- EPA and START identified an open-topped container with approximately 15 gallons of milky liquid, and used a pH strip to measure a pH of approximately 3. EPA learned that on February 18 an NRC worker had opened a valve on a 5,000-gallon spill containment tank located east of the wastewater treatment building, releasing the tanks contents to a raceway that lead to the City of Albany storm water system, and eventually to the Willamette River.February 24, 2014 START collected a sample of the acidic liquid in the open topped container for laboratory analysis. START also collected a sample from the 5,000-gallon spill containment tank located east of the wastewater treatment building. Both samples were delivered to an analytical laboratory under chain-of-custody documentation for Volatile Organic Compounds, pH, and Total Metals analyses

- February 25, 2014 EPA and START met with two representatives from the City of Albany Public Works Pretreatment Program to discuss the release of the contents of the 5000 gallon containment tank to the City's storm water system. At the conclusion of the meeting the City representatives told Heister they would be reporting the incident to ODEQ as a possible NPDES violation.

- February 26-28, 2014. EPA and START used Flame Ionizing Detector and pH test strips to evaluate residual concentration of hazardous materials in piping, including acrylonitrile, potassium hydroxide, and phosphoric acid. EPA and START conducted a sampling event at the ATI Queen Avenue facility to evaluate acrylonitrile levels in the (1) granular activated carbon (GAC) vessels (the charcoal vapor filters used to scrub acrylonitrile vapor emissions during the facility operation), (2) the graft reactor and (3) the activated starch reactor in the farm area, (4) the hydrated starch tank in the southeast corner of Building #1. Subsequent laboratory results indicated elevated levels of acrylonitrile in the

residual graft reactor dough, and in the GAC vessel carbon media. Under the direction of EPA direction and START oversight, the facility owner's environmental contractor tested representative segments of potassium hydroxide and phosphoric acid piping that had been previously removed in order to evaluate residual hazardous chemicals. Using the methodology, proposed by EPA and agreed upon by the contractor, clean water was placed in capped segments of pipe. After a minimum of 20 minutes, the water in each pipe segment was tested to evaluate acidic or caustic pH levels. The potassium hydroxide pipes had elevated pH levels. Based on these results, and on the residual chemical materials found in piping during scrapping activities, EPA determined that additional assessment and cleaning of the piping and vessels was necessary.

- March 1, 2014. EPA and START conducted a sampling event at the ATI Queen Avenue facility to evaluate acrylonitrile levels in the (1) granular activated carbon (GAC) vessels (the charcoal vapor filters used to scrub acrylonitrile vapor emissions during the facility operation), (2) the graft reactor and (3) the activated starch reactor in the tank farm area, (4) the hydrated starch tank in the southeast corner of Building #1. Subsequent laboratory results indicated elevated levels of acrylonitrile in the residual graft reactor dough, and in the GAC vessel carbon media.
- March 4-7, 2014. EPA and START evaluated additional piping for acrylonitrile using an FID and colorimetric sample tubes. The facility owner's environmental contractor was on site cleaning the pipe segments of contaminant residue. Oregon OSHA representatives were on site, and interviewed the metal scrapping contractor personnel regarding reports of exposure to hazardous chemicals and subsequent injury.
- March 10-14, 2014. EPA and START oversaw the owner's environmental contractor removing process chemical piping inside of Building #1 and on the tank farm pipe bridge. START conducted air monitoring, and evaluated piping after cleaning operations.
- March 17-21, 2014. The owner's environmental contractor, under EPA and START oversight, removed process chemical piping and pumps in the tank farm, removed water and piping from the oxidizer cabinet, cleaned the graft reactor, and re-rinsed the 20,000-gallon acrylonitrile storage tank. The graft reactor cleaning was accomplished by a crew equipped with Level B personal protective equipment, using pressurized water and air to wash residual acrylonitrile-containing starch dough into drums. START used an FID and colorimetric sample tubes to evaluate ambient acrylonitrile concentrations in the air. Elevated acrylonitrile levels were observed in the exclusion zone, but dissipated to background level immediately outside of the exclusion zone.
- March 29-30, 2014. EPA, with support for EPA's ERRS and START contractors, removed the carbon media from four granular activated carbon (GAC) vessels on the site containing elevated levels of acrylonitrile. EPA took several measures to minimize the risk of accidental exposure to people outside of the work zone. The removal work was conducted over a weekend when other workers would not be present on the site. The GAC vessels were moved to the south side of Building #2, the location furthest from potential off-site receptors. EPA arranged for the neighboring Precision Cast facility to close off their southern parking area to keep their workers away from the work zone. START provided constant air monitoring for acrylonitrile and other potential airborne contaminants outside of the exclusion zone. An ERRS crew in level B PPE used a drum vacuum equipped with a filter to remove the carbon from the vessels. A plastic sheeting enclosure was erected around the two most highly contaminated GAC vessels to help ensure that elevated levels of airborne contaminants did not leave the exclusion zone. A total of 47 drums of contaminated carbon media were generated. The drums have been staged on site pending disposal at a licensed facility. The 47 drums of carbon waste were shipped off site on 2-April-2014.

ATI Ferry Street Facility

- On 12-December-2013 Wastexpress collected samples from each of the eighteen liquid waste totes staged at the ATI Ferry Street facility. The labels on the totes indicated the water in the totes originated from four sources: (still) bottoms water; boiler water; cooling tower water, and laboratory water. A sample from each tote was collected for Flashpoint analyses. Composite samples were collected for Volatile Organic Compounds and Total Metals, based on wastewater source and appearance.
- NRC began removing the contents of tanks, vessels, piping systems, and industrial equipment at the ATI Ferry Street facility.
- On 17-December-2013, START collected samples from three vessels associated with the methanol distillation process at the Ferry Street facility. START collected samples of the Methanol Supply Tank, the Methanol Still Feed Tanks, and the Still Bottoms Tank. Results indicated the material was flammable liquids in the tanks contained methanol and other volatile organic compounds. The laboratory did not detect elevated levels of metals or acrylonitrile.
- On 18-December-2013 NRC removed the contents of the Methanol Supply Tank, the Methanol Still Feed Tanks, and the Still Bottoms Tank.
- The contractors (River City and subcontractors NRC and Wastexpress) finished cleaning the pipes, vessels and equipment, and transporting chemicals and wastes offsite for disposal, in January-2014.
- March 12-14, 2014. EPA and START evaluated additional piping for acrylonitrile and methanol using an FID and colorimetric sample tubes, and used pH test strips to evaluate acidic and caustic residue. START collected samples from residual liquid at three locations in the methanol processing area, and collected a carbon media sample from each of the two granular activated carbon vessels. Subsequent laboratory results indicated elevated concentrations of acrylonitrile in the carbon media. The residual liquid in the methanol process area was confirmed to be liquid methanol.
- April 8-11, 2014. EPA, with the support of EPA's ERRS and START contractor personnel, completed an EPA-lead removal effort to address the remaining acrylonitrile, methanol, and other hazardous materials from the ATI Ferry Street facility. ERRS removed piping that EPA and START had previously identified with acrylonitrile vapors, acidic or caustic pH levels, and methanol. ERRS also removed the carbon media from the two granular activated carbon (GAC) vessels which contained elevated levels of acrylonitrile. A plastic sheeting tent was placed over GAC vessels to contain airborne acrylonitrile within the exclusion zone. Continuous air monitoring for acrylonitrile and other potential airborne contaminants was conducted during the removal. No elevated acrylonitrile levels

were measured outside of the exclusion zone. The drums of carbon media removed from the vessels were staged at the facility until offsite disposal at a licensed facility is arranged. The 36 drums of the carbon media were sent for disposal on 16-April-2014.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

- The former operator is a PRP, but is under bankruptcy.
- The creditors (current property owners) are PRPs.
- No other PRPs have been identified at this time.

2.1.4 Progress Metrics

Waste Stream	***Medium***	***Quantity***	***Manifest #***	***Treatment***	***Disposal***
Acrylonitrile w/ MEHQ and H2O	Off-Spec Product	apx 3000 gallons			
Liquid Wastes	Aqueous	apx 10,000 gal.			
Other COPCs	Liquid and Solid	TBD			

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities
Removal of COPCs has been completed.

2.2.1.2 Next Steps
Disposal of COPCs has been completed. No additional site work is antipipated.

2.2.2 Issues

2.3 Logistics Section

START is demobilized.

2.4 Finance Section

2.4.1 Narrative
EPA contractors are managing finances separately and tracking costs between the two sites and reporting to EPA.

2.5 Other Command Staff

2.5.1 Safety Officer

START – Jim Petersen

EQM – Pat Heyneman (H2O)

EPA – Dan Heister

2.5.2 Liaison Officer
OSC (IC) Daniel Heister

2.5.3 Information Officer
Hanaday Kader

3. Participating Entities

3.1 Unified Command
The incident commander (IC) is OSC Daniel Heister and Ryan Bond Oregon Haz Mat Team 5.

3.2 Cooperating Agencies
City of Albany Fire Marshal and Fire Department, HazMat Team 5, and Oregon State Office of the Fire Marshal are cooperating with EPA**.**

4. Personnel On Site

EPA
Daniel Heister (OSC, UC)
Mike Sibley (OSC)

START
Jim Petersen (PM)
Brad Martin (PD)
Ryan Whitchurch
Eric Nuchims
Mike Worden
Chris Whitehead

ERRS
Jerry Wade (PM)
Pat Heyneman (PM, H2O)
Doug McManamy (Equipment Operator)
Randy Rhoads
Two subcontractors from Global Diving and Salvage

HAZMAT TEAM 5
Ryan Bond (UC)

CITY OF ALBANY FIRE MARSHAL

CITY OF ALBANY FIRE DEPARTMENT

OREGON STATE FIRE MARSHAL

5. Definition of Terms

PM = Project Manager
OSC = On Scene Coordinator
UC = Unified Command Commander

6. Additional sources of information

6.1 Internet location of additional information/report

6.2 Reporting Schedule

POLREPS completed as milestones are achieved on TBD basis.

7. Situational Reference Materials

No information available at this time.