

**U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION REPORT (POLREP)**

I. HEADING

Date: October 15, 2004
Subject: Troy Mills Superfund Site
Troy, NH
From: Athanasios Hatzopoulos, OSC
USEPA Region I, Boston, MA
Polrep No.: 2
To: Troy Mills Superfund Site Distribution list
Response Authority: CERCLA
CERCLIS: NHD980520217
NPL Status: NPL
State Notification: NH notified
Action Memorandum: May 13, 2004
Start Date: May 19, 2004
Completion Date: NA

II. BACKGROUND

The Site is located in Troy, Cheshire County, New Hampshire, along an unpaved, gravel access road originating from Rockwood Pond Road in Fitzwilliam, Cheshire County, New Hampshire. The Site is an approximately 10-acre inactive landfill. It consists of an estimated 2-acre area where approximately 6,000 to 10,000 55-gallon drums are buried and an estimated 8-acre inactive solid waste landfill. Historical information shows that from 1967 until 1978, Troy Mills Inc., used the 2-acre area as a landfill for the disposal of solid and liquid wastes generated at its off-site facility located in the Town of Troy, New Hampshire. Drummed wastes consisted primarily of plasticizers including bis(2-ethylhexyl)phthalate (DEHP); and Varsol, a petroleum-based solvent, also known as mineral spirits or Stoddard Solvent.

An estimated 3,886 people reside within 4 radial miles of the Site. Approximately, 3,111 are served by public or private drinking water supply wells. The nearest private drinking water supply well is presumed to be located within 0.5 radial miles of the Site. The nearest public drinking water supply well is located 2.8 miles southeast of the Site. Sensitive environments located within 4 radial miles include 2,173 acres of wetlands, a CWA-protected water body, and habitats for eight State-listed endangered or threatened species.

A September 2002, EPA conducted a Preliminary Assessment and Site Investigation Report (PA/SI) consisting of a geophysical survey, test pit excavation and sample collection activities, which confirmed historical information that the 2-acre area of the Site contains approximately 6,000 to 10,000 55-gallon buried drums. Drums excavated during the pit excavation activities were analyzed for content. Analytical results of the drum contents reveal liquids/sludges, consisting of flammable substances, volatile and semivolatile organic compounds (VOCs and SVOCs) as well as inorganic contaminants. Analytical results of surficial and subsurface soil samples, as well as surface water samples collected immediately down gradient from the drum

burial areas, confirm visual observations that the buried drums are releasing the above mentioned substances.

Based on the conditions of the Site, EPA in a September 23, 2002, Closure Memorandum, determined that a time critical removal action under section 300.415 of the National Contingency Plan (NCP) is necessary and appropriate.

The actions required to protect public health, welfare, and the environment from the conditions of the Site are given below as well as given in detail in an Action Memorandum dated May 13, 2004. The activities to be performed under this Action Memorandum will include the removal of the drums and the surrounding contaminated soil.

III. REMOVAL ACTIVITIES TO-DATE

May 17-21, 2004

A Site Walk is conducted on May 19, 2004 with EPA, NHDES and ERRS personnel. Discussion focuses primarily on site access issues. Brainstorming session is conducted on May 20, with EPA OSC and ERRS personnel. Discussion involves a general review of existing historical information and the characteristics of the site and material buried there.

On May 19th EPA, NHDES and ERRS meet with the Town of Troy officials to discuss the drum and soil removal activities.

May 24-28, 2004

ERRS conducts preliminary test pit excavations on the western face of the drum burial area to assess/confirm general condition and configuration of the drums. ERRS finds that the condition, configuration, and contents of the drums are consistent with the findings of previous investigations. Some of the drums are empty, others contain liquids and sludges, and most are rusted and in poor condition. ERRS conducts preliminary estimates on drum excavation production rates.

A Project Scoping meeting between EPA and ERRS is held to discuss project goals and task order requirements. The meeting followed the agenda prepared by ERRS. The meeting is documented through meeting minutes prepared by Kathy Hunt (EPA CO). One key outcome of the meeting is the approval to proceed with site setup tasks.

START provides ERRS additional documentation on previous site investigations (GeoInsight Reports) and electronic drawings.

ERRS begins planning the activities necessary for site setup work (road construction for access through Troy and Fitzwilliam, storage cell construction, clearing and grubbing, erosion and sedimentation (E&S) controls, command post/satellite office setup, removal of overburden/benching in upper landfill area).

EPA and NHDES meet with the Town of Fitzwilliam to discuss the drum and soil removal action activities to be undertaken by EPA. The town requests EPA to sample, on a weekly basis during the summer months, their summer swimming recreation area (Sand Dam Pond) to assure that contaminants from the landfill are not migrating into the pond.

June 1–4, 2004

ERRS begins work on the Technical Alternatives Analysis Report (TAAR) and mobilizes personnel on site to work on widening the earthen bridge at the “Fitzwilliam” entrance to the landfill so that material can be delivered for the road work. ERRS works on the containment system, to prevent overflow during heavy rain events.

ERRS develops and submits to EPA a draft Troy Mills Traffic Plan.

EPA begins weekly collection and analysis of surface water samples taken from Sand Dam pond per Town of Troy’s request. Samples are sent to NERL for analysis.

June 7–11, 2004

On June 7, EPA meets with DRED to discuss access issues in order to use the railbed (haul road) for the transportation of the drums and soil to the treatment facilities.

ERRS continues to work on the TAAR which is 85% complete. ERRS continues to work on gathering additional information on waste characterization and continues the site preparation activities including road construction, storage cell construction, clearing and grubbing and E&S controls. Site preparation work is estimated to be 65% complete. Two office trailers, a decon trailer, a storage container and a 150 KW generator are delivered to the main command post area on site. A crew of 1 RM, 5 equipment operators and 5 laborers and one Chemical Technician are currently being used for site work. Access to the DRED rail bed for use as a haul road has not yet been approved.

ERRS awards the subcontract for aggregate materials to Pike Industries, who has been delivering crushed base for internal site road construction.

On June 9, EPA and ERRS meet with the Troy and Fitzwilliam Fire and Police Departments to discuss project approach, public safety (truck access to and from the landfill, traffic control, security, signage, hours of operation, etc).

June 14-18, 2004

On June 15, a “dry run” was made in down town Troy with a large trailer dump truck which verified that Water Street would be the best route to transport the wastes from the landfill to the disposal facilities. A police detail was used to assist with Traffic Control during the dry run. EPA contacts the NHDOT regarding obtaining a permit to place signage along Route 12. NHDOT stated that they will provide suggestions on signage/permits.

Approximate location of drum area perimeter gets delineated based on a magnetometer survey conducted by START.

ERRS continues work on site preparation activities including road construction, storage cell construction, clearing and grubbing, installation of E&S controls, and begins to strip overburden materials in drum area. A crew of 1 RM, 6 equipment operators, 1 truck driver, 3 laborers, and 1 Chemical Technician are being used for site work. Site preparation work is estimated to be 75% complete.

One trailer is delivered to Satellite command post location and is placed approximately 150 feet south of Former RR Depot Bldg based on a conversation with the Troy Chairman of the Board of Selectman.

June 21-25, 2004

ERRS awards subcontract for the 30 mL liner to Texas Environmental Plastics with delivery set for June 28, 2004. ERRS begins to solicit bids for the liquid waste materials on June 23, 2004.

ERRS completes road construction and continues to work on other site preparation activities including storage cell construction, clearing and grubbing and installation of E&S controls in the railbed. A crew of 1 RM, 4 equipment operators, 1 truck driver, 3 laborers, and 1 Chemical Technician are currently being used for site work. Site preparation work is estimated to be 90% complete.

A 2nd trailer is delivered to the satellite command post. The 16 oz. Geotextile fabric for the cell is delivered on June 25.

ERRS continues on planning and procurement for the upcoming drum removal activities. T&D RFPs for soil and liquids were put out and responses are being evaluated. Bids are also solicited for the installation of gates to secure the entrances to the site.

Manned security, during non-working hours, begins on site. The security will continue on a daily basis throughout the removal activities.

June 28-July 2, 2004

The 30 mL liner is delivered on June 29.

On June 30, EPA attends Fitzwilliam Selectman's meeting to discuss the ongoing activities at the site. Access to the DRED rail bed gets approved as a result of the EPAs June 7 meeting with DRED.

ERRS completes rail bed road and cell construction. A crew of 1 RM, 4 equipment operators, 1 truck driver, 3 laborers, and 1 Chemical Technician are currently being used for site work. Site preparation work is estimated to be 97% complete. The ERRS Health and Safety Officer

mobilized on July 6 and a foreman mobilized on July 7 to prepare for drum and soil removal activities.

July 5-9, 2004

On July 7, ERRS meets with Meadowood Fire Department personnel to discuss using them to supply breathing air.

The ERRS fence subcontractor arrives on site on July 7 to discuss gate installation. Gates are scheduled to be installed next week. ERRS decides not to fit new gates to existing gate posts on the railbed due to complications with installation. Posts on both existing swing gates on the rail bed will be extended to improve visibility by truckers.

ERRS receives bids on both existing stockpiled soil and anticipated bulk liquids. ERRS is investigating the options to send the soil without fabric to ESMI in New Hampshire. The soil with fabric may go to either GSI in Canada or Waste Management in New Hampshire. ERRS is investigating the option to send the bulk liquids to Cycle Chem in New Jersey.

EPA Remedial Program and NHDES representatives visit site on July 7, to see the progress and discuss waste characterization and disposal issues.

START collects surface water samples from Sand Dam pond for chemical analysis. Samples are sent to NERL for analysis.

July 5–10, 2004

START establishes grids using a GPS in the upper drum area. ERRS completes the site preparation and initiates the excavation of drums and soil to be temporarily staged on site. ERRS starts to bench down and conducts trench excavations in the northeast corner of the upper drum area. Drums are located in the vicinity of groundwater in the upper drum area during initial trenching activities.

ERRS completes the Updated Traffic Control and Erosion and Sedimentation Plans and submits them to EPA on July 9.

ERRS fence subcontractor begins gate installation on July 13. The drum shredder arrives on site on July 8, and a 21k baker tank for collection of stormwater runoff at the pad arrives on site on July 14.

ERRS meets with personnel from local fire departments of Troy, Fitzwilliam and Meadowood on July 10 to discuss fire and emergency response procedures.

ERRS meet with NHDES personnel on July 13 to discuss soil characterization issue. Dave Bowen from NHDES RCRA is working on characterization determination and comfort letter for disposal facilities. Determination should be completed within 2 weeks. Additional samples were obtained from the stockpiled soil at the site for disposal characterization.

START collects surface water samples from Sand Dam pond for chemical analysis. Samples are sent to NERL for analysis.

July 12-31, 2004

ERRS continues excavation of drums and soil. Drums are segregated by content (liquid/sludge/solid) and placed in designated areas of the drum staging pad. After contents are removed from drums the drums are shredded and staged. Approximately 1000, 55-gallon drums and 600 tons of soil is excavated. The drums are found four feet from the surface down to a depth of 12 feet. Drums contain sludge and liquids and a mixture of fabric and/or sludge. Liquids are segregated and containerized in the excavation and removed using a vacuum skid for transport to the drum staging/processing pad. Once liquids are removed the drums are transferred to the pad and processed through a drum shredder. The shredded drums and solid/sludge waste are solidified and staged in a designated part of the cell. An estimated 900 gallons of liquid and 120 tons of sludge have been segregated during processing of the 1000 drums. The visibly contaminated soil surrounding the drums is excavated and staged. In addition any soil during the drum excavation activities that looks discolored is excavated and staged. EPA samples the staged soil, sludge and liquid waste streams for disposal characterization.

ERRS begins and completes the construction of railbed bypass so that Troy and Fitzwilliam residents may use instead of the rail bed currently closed to the removal action activities.

On July 22, EPA, ERRS, NHDES and NHDOH attend a public meeting held to inform the Town of Troy and Fitzwilliam on the removal activities at the Site. EPA, ERRS, and NHDOH are the speakers. Approximately 45 residents attend.

EPA meet with ERRS and NHDES personnel regarding soil characterization and disposal options. EPA is currently awaiting NHDES's waste determination memo regarding NHDES criteria for soils remaining on site.

August 2-14, 2004

ERRS continues excavation of drums and soil. A total of 1,884 drums are excavated by 8/14/2004. During the drum removal process, the stained soil is screened with the PID. Anything over 1000 over the PID scale is removed and transferred to the contaminated soil stockpile area. The contaminated soils are segregated in approximate 200 ton piles. Sampling for disposal is conducted from each end-dump and consolidated into 8-point composites. During this time period, most of the processing of the waste streams is being done in the excavation area. The pad is used primarily for shredding of drums and equipment decontamination. Measurement of waste streams collected indicates approximate 3700 gallons of liquid, 300 tons of sludge and 1,800 tons of soil.

ERRS conducts test to compare adsorption of Dri-Zorb (corn cob product) to sawdust. Corn cob product adsorbed 50% more. However, due to the higher cost of the corn cob when compared to sawdust, ERRS will use sawdust to solidify the sludge waste. The empty drums are shredded and added to sludge pile.

Conference call is held between EPA, ERRS and START personnel regarding downgrading from Level B to Level C in the drum pad area. Amendment is to be drafted by START and personal air monitoring is to be conducted by ERRS.

EPA receives determination letter from the NHDES indicating that they considered MEK in the waste material as F-listed, but soils would not carry the F-list provided materials were disposed in NH at levels below 30,000 mg/kg, which is the NH Risk S2 level. Held conference call with EPA, ERRS and agreed that waste would carry F-list and that ERRS will continue to seek profile approval at ESMI for the soils. Back-up facility for soil would be Waste Mgmt in NH.

On 8/11/04 Charter Environmental is on site to remove liquids from 10k tanks. Transporter is All-State Power Vac. Approximately 4,610 gallons of waste flammable liquids are transported to Cycle Chem. Inc., in New Jersey to be burned as alternate fuel. ERRS hires the services of the Town of Troy Police Department to assist with traffic control. The police detail will be provided on any future day that wastes are to be transported from the site to the disposal facilities.

The ERRS T&D coordinator indicates that soils are accepted by ESMI and that loadout will commence next week. ERRS and EPA discuss screening the soil to remove solidified product and fabric and rocks.

August 16-28, 2004

ERRS continues excavation of drums and contaminated soils. Contaminated soils are screened for rock and fabric volume reduction and staged for transport and disposal. The unearthed drums are emptied and the wastes are segregated into two waste streams (liquid and sludge). The empty drums are shredded and added to the waste stream pile. The sludge is further solidified for transport with sawdust.

From August 16-28, approximately 2,090 tons of contaminated soil is transported to ESMI for thermal desorption. In addition 4,700 gallons of waste flammable liquids generated from the drums are transported off site by Clean Harbors.

Charter arrives on site with representatives from Stablex Canada to collect a sample of the sludge material. At this time, ERRS is trying to gain acceptance of the sludge waste stream into Stablex, Canada. If Stablex cannot accept it, ERRS is concurrently investigating the Clean Harbors, Sarnia facility located in Canada as a backup facility.

August 30-September 18, 2004

ERRS continues excavation of drums and contaminated soils. Contaminated soils are screened for rock and fabric volume reduction and staged for transport and disposal. The unearthed drums are emptied and the wastes are segregated into two waste streams (liquid and sludge). The empty drums are shredded and added to the sludge waste stream pile. The sludge is further solidified for transport with sawdust.

From August 30- September 18, approximately 1,110 tons of contaminated soil is transported to ESMI for thermal desorption. In addition 3,483 gallons of waste flammable liquids generated from the drums are transported off site by Clean Harbors.

Operations meeting is held between EPA ands ERRS to review ways to increase productivity considering screening operation and potentially mixing sludge with kiln dust.

NHDES on site as well as Metcalf and Eddy personnel for the RI/FS work when the drum and soil removal work is complete.

ERRS receives notification from Stablex that they rejected the sludge waste because of the high leaching content. However ERRS, receives approval of sludge waste into Clean Harbors at Sarnia, Canada.

ENPRO Services on site with Vactor unit and operator to pump out sludge tanks for transfer to the staging pad for solidification. Shaw will no longer solidify in the mud tanks in order to preserve structural integrity of tanks. Approximately 2,400 gallons pumped and left in the Vactor. Vacuum pump used to transfer sludges instead of Vactor pump due to flammability concern.

ERRS constructs mixing cell in the northwest corner of the drum processing pad. All drum emptying and all sludge solidification will now take place in the drum staging pad.

ERRS changes sorbent pads and booms in the containment system. The contaminated pads are added to the sludge pile waste stream.

EPA and NHDES representatives visit site to discuss final soil disposition. Will use 1000 ppm PID screening level to determine contaminated versus clean. NHDES approves the reuse of the trench soils on site. ERRS updates Sampling and Analysis Plan to reflect discussions and will collect soil samples to confirm screening level.

ERRS begins clearing and grubbing of trees and installs E&S controls on the lower drum area.

September 20 to October 16, 2004

ERRS continues excavation of drums and contaminated soils. Contaminated soils are screened for rock and fabric volume reduction and staged for transport and disposal. The unearthed drums are emptied and the wastes are segregated into two waste streams (liquid and sludge). The empty drums are shredded and added to the sludge waste stream. The sludge is further solidified for transport with sawdust.

From September 20 to October 16, approximately 4,555 tons of contaminated soil is transported to ESMI for thermal desorption, and 3,080 gallons of waste flammable liquids generated from the drums are transported off site by Clean Harbors. During this period a representative from Clean Harbors and Capital Environmental visit site to discuss sludge loadout to Clean Harbors Sarnia facility in Canada. They assist ERRS with ignitability test to the sludge waste stream to test each load prior to loadout. 1,180 cubic yards are transported to Clean Harbors, Sarnia facility for landfill.

ERRS procures driller for abandoning wells in the area of the former dewatering pit MW-203P, 203D & 203S. ERRS contacts John Regan of the NHDES who agreed that grouting the wells is sufficient for abandonment. ERRS hires Technical Drilling to abandon wells MW-203P, 203D, and 203S

Because of heavy rains ERRS treats surface water from the pad (treated approx. 12,500 gallons).

Numerous representatives from NHDES visit site to tour operation. Two EPA OSCs also on site to view operations.

The EPA OSC and Roger Duwart of the EPA Remedial Program hold meeting with NHDES, START, Metcalf and Eddy (M&E) to discuss post excavation sampling. Two distinct purposes for sampling were identified as follows:

To determine what additional soil needs to be excavated (compare to NHDES Leachability GW-1) and to determine human health and ecological risk from remaining soils

M&E will develop a sampling plan to include sampling for both purposes. ERRS will provide information to M&E to assist them in putting their plan together. M&E will conduct groundwater and surface water sampling in November 2004 and will be able to use the ERRS facilities.

Wastes Generated As Of October 16, 2004

- 1) An estimated total of 10,500 tons of contaminated soil has been generated. Approximately 8,135 tons has been shipped off site. Segregation is being done based on the 800 ppm PID screening level based on comparison data from the off site laboratory.
- 2) An estimated total of 1,600 cubic yards of sludge has been generated from shredding and consolidation operations as of October 16, 2004. Approximately 1,215 cubic yards have been shipped off site to date.
- 3) An estimated total of 19,430 gallons of liquids have been generated as of October 16, 2004. Approximately 16,930 gallons has been sent off site.
- 4) 5,067 drums have been excavated.

IV. PLANNED REMOVAL ACTIVITIES

Continue with removal activities and modify removal operations as needed to maximize the capture of liquid waste product.

V. COST INFORMATION

	CEILING	SPENT	REMAINDER
ERRS	8,040,000	2,600,000	5,440,000
START	300,000	80,000	220,000
Total Project Ceiling	8,300,000	2,680,000	5,660,000

The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

VI. DISPOSITION OF WASTE

Waste Description	Waste Origin	Total Volume	Designated Facility	Treatment
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CASE PENDING