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**U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION REPORT**

I. HEADING

Date: November 20, 2007

Subject: Lightman Drum Company Site, Winslow Township, Camden County, New Jersey

From: David Rosoff, OSC
Removal Action Branch

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POLREP NO. : 3 (BB1)**II. BACKGROUND**

Site No:	MS
CERCLIS No:	NJD014743678
Response Authority:	CERCLA
Removal Type:	Time Critical
NPL Status:	Listed
ROD Signed:	N/A
State Notification:	NJDEP Notified
Start Date:	October 29, 2007
Completion Date:	N/A
Status of Action Memorandum:	N/A
Delivery Order Number:	N/A

III. SITE INFORMATION

A. Incident Category

CERCLA incident category: Soil contamination (groundwater contamination source area)

B. Site Description

1. Site description

The Lightman Drum Company property (Property) covers approximately 15 acres and is located in Winslow Township, Camden County, New Jersey. The Property is narrow (approximately 300 feet wide) with access from Route 73. The majority of the Property is wooded. There is very little topographic relief across the Property with a maximum elevation range of 15 feet.

The eastern portion of the Property is currently used as a drum brokerage business operating under the name United Cooperage. Drums are stored in truck trailers and in open areas, and a small office is located near the entrance along Route 73.

Historic waste storage areas on the Property include the former location of two 5,000 gallon underground storage tanks previously located in the north-central area of the Property (the former Waste Storage Tank Area). The tanks were reportedly used to store waste paint pigments, ink sludges, and thinners between November, 1978 and April, 1979. Reportedly, NJDEP observed the removal of the tanks in 1984.

A Remedial Investigation (RI) for the Lightman Drum Site (Site) was conducted between 2002 and 2007 and included a comprehensive soil and groundwater investigation. The results from the groundwater investigation indicate that groundwater has been impacted with chlorinated VOCs, namely trichloroethene (TCE) and tetrachloroethene (PCE), as well as aromatic (BTEX) compounds. There are two main plumes present, one originating from the former Waste Storage Tank Area, and a smaller plume from the former Unlined Waste Disposal Pit Area in the western part of the Property. The results from soil sampling conducted as part of the RI indicated that seasonally saturated soils in a localized zone close to the water table in the former Waste Storage Tank Area remain contaminated with volatile organic compounds (VOCs) and continue to constitute a source for contaminated groundwater leaving the Property.

Source removal of saturated soils in the former Waste Storage Tank Area is being addressed through a Removal Action pursuant to an Administrative Settlement Agreement and Order on Consent dated September 13, 2007 between USEPA and the Lightman Drum Source Removal Group (the Group) that became effective on September 17, 2007.

2. Description of threat

The VOC contamination in the saturated zone in the former Waste Storage Tank Area represents a continuing source to groundwater contamination and a threat to the environment.

C. Preliminary Assessment Results

In April and May, 2006, 18 soil borings were collected in accordance with the Addendum Remedial Investigation/Feasibility Study Work to assess the potential presence of residual product soil contamination in the seasonally saturated zone at the former Waste Storage Tank Area, the former southwest Drum Storage Area, and the former Unlined Waste Disposal Pit Area.

The soil borings were conducted utilizing a Geoprobe to obtain continuous core samples. Each core sample was screened at 6-inch intervals with a photoionization detector (PID) commencing approximately 3 feet above the water table and extending until PID readings were below background, subject to a minimum depth of 20 feet below the water table. Headspace PID readings were also taken over every two-foot interval; samples with headspace PID readings greater than 50 ppm were also field screened for the presence of NAPL using a ultraviolet (UV) lamp method and the hydrophobic dye "Oil Red O" method. Three samples for laboratory analysis were taken from each boring: one sample from the bottom of the boring, and two from the discrete 2-foot intervals that indicated the greatest potential for residual NAPL. Each soil sample was analyzed for target compound list (TCL) VOC analytes and for 1,4-dioxane. The most impacted sample, based on field screening, was also analyzed for target analyte list (TAL) metals in order to provide comprehensive analytical data for the most impacted sample.

Thirteen borings were completed in the area of the former Waste Storage Tanks, three borings in the former Unlined Waste Disposal Pit and two borings in the former Southwest Drum Storage Area.

There were no detections of 1,4-dioxane in any of the samples. There were also no positive results from the UV lamp test. The laboratory results were compared to the NJDEP Residential and Non-Residential Direct Contact Soil Cleanup Criteria (SCC) and the NJDEP Impact to Groundwater SCC for screening

purposes. There were no inorganic parameters that exceeded the NJDEP SCC values. The VOCs detected included chlorinated ethanes, chlorinated ethenes, and aromatic compounds. There were no exceedances for organic or inorganic parameters in borings taken in the former Unlined Waste Disposal Pit Area or the former Southwest Drum Storage Area.

Positive results from the "Oil Red O" test were obtained in three borings taken at the water table in the former Waste Storage Tank. Three VOCs (ethylbenzene, tetrachloroethene, and total xylenes) exceeded the most stringent of the NJDEP SCC (Impact to Groundwater) in four samples from two borings located in the former Waste Storage Tank Area.

The RI concluded that the seasonally saturated soils in a localized zone close to the water table in the former Waste Storage Tank Area remain contaminated with VOCs and continue to provide a source for contaminated groundwater. Excavation of these contaminated soils will, therefore, mitigate the source of groundwater contamination in this area.

IV. RESPONSE INFORMATION

A. Planned Response Actions

The proposed area of excavation is approximately 33 foot by 16 foot in plan dimensions and encompasses those borings where there was a positive field test result for residual product and borings that contained samples that exceeded the most stringent New Jersey Soil Cleanup Criteria (NJDEP SCC) in the former Waste Storage Tank Area.

The highest levels of VOC contamination are between 12-18 feet below ground surface (ft bgs). There is a distinct decrease in PID readings between 18 and 20 feet and the vast majority of the PID readings drop to below 10 ppm at depths greater than 20 feet. Consistent with the PID readings, the positive results from the "Oil Red O" test were found in samples taken from depths ranging from 12 to 18 ft bgs. All samples taken below 20 feet were non-detect or detected only trace levels of VOCs. The proposed excavation will extend to a depth of 25 feet. This depth corresponds to the excavation capacity of standard construction equipment.

In general, the excavation will be conducted by initially installing a temporary excavation support system, consisting of an interlocking sheet pile barrier, around the zone of excavation in order to isolate the excavation from surrounding soils and control groundwater seepage. The unsaturated soils that were determined not to be contaminated subject to a maximum depth of 12-feet¹ will be staged on-site in a controlled manner, for potential later re-use as backfill. Soils will be excavated from 12-feet below ground surface or the saturated-unsaturated

interface, whichever is encountered first, down to a depth of 25-feet and stockpiled on a temporary containment pad. The containment pad will be designed to capture contaminated pore water drained from the stockpiled soil, and will be covered to prevent wind dispersion of soil and contact with rain water. The collected water will be containerized and characterized for off-site disposal, as necessary. Excavated contaminated soil will be sampled for waste classification purposes prior to off-site transportation and disposal, as necessary. The excavation will be backfilled with imported clean soil and unsaturated soils removed from the excavation that are not contaminated, and the area restored. Monitoring wells displaced during the excavation will be replaced.

The overall objective of the removal action is to remove the continuing source to groundwater contamination in the former Waste Storage Tank Area. This removal action will be beneficial to the Remedial Action at the Site by reducing the time it will take to remediate the aquifer through the removal of contaminant source material.

B. Situation

1. **Response activities:** Between November 13, 2007 and November 20, 2007

Containment pad construction began on November 14, 2007 and was completed on November 20, 2007.

Unsaturated soil in the Waste Storage Tank Area was excavated down to 10 feet BGS and placed in a containment area on November 16, 2007. PID screening of this soil did not reveal elevated concentrations of VOCs. However, purple pigment was discovered in this soil and is now mixed in the unsaturated soil stockpile. Sampling of the unsaturated soil stockpile took place on November 19, 2007.

Weather and delays in the construction of the saturated soil containment pads caused the postponement of the saturated soil excavation until next week. The project is approximately one week behind schedule as a result.

EPA approved the Dunrite Sand & Gravel Company quarry in Monroe Township, New Jersey as a backfill source for the Site via letter dated November 16, 2007.

2. **Enforcement**

The Administrative Settlement Agreement and Order on Consent USEPA Index No. CERCLA-02-2007-2007 between EPA and the Group for the performance of this removal action was executed on September 13, 2007.

C. Next Steps

Excavation of saturated soils in the Waste Storage Tank Area will begin on November 26, 2007.

D. Key Issues

Buried pigment and pigment stained soil have been discovered throughout the work area on the Site. The colors of the pigment included purple, green, blue/green and yellow. The largest area of visible color was purple material found adjacent to the Waste Storage Tank Area. This material was also uncovered and excavated during the removal of unsaturated soil in the Waste Storage Tank Area. A sample of the purple pigment was collected and sent for laboratory analysis. Results indicate that the dye is organic in nature but the majority of the constituents are tentatively identified compounds or unspecified organic compounds.

The areas of pigment and discolored soil were covered with a geo-textile fabric and a layer of 1-1 1/2 inch crushed stone. EPA and the Group are currently discussing the best way to handle the investigation of this buried pigment. The temporary cover will allow planned work under the Order to continue without interruption. However, use of the unsaturated soil containing pigment as backfill in the excavation is now in question.

V. COST INFORMATION

N/A

VI. DISPOSITION OF WASTES

N/A