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907018

FORMER CHEMICAL STORAGE SHED SURFACE AND SUBSURFACE SOILS REMOVAL PROGRAM

FINAL REPORT

DOWCRAFT Corporation
Ellison Bronze Company
Falconer, New York

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APRIL 1993

REFERENCE NO. 5020 (1)
This report printed on recycled paper.

CONESTOGA-ROVERS & ASSOCIATES

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1.0 INTRODUCTION

In June 1992, a subsurface soil investigation was completed at the Ellison Bronze Company (Site), Falconer, New York, by Empire Soils Investigations, Inc. (ESI). The investigation was conducted in the vicinity of a former chemical storage shed to determine whether chemicals were present and, if present, to determine the nature and extent.

The analytical test results of the soil sampling indicated there was toluene present directly below the ground surface in the center of the former shed area and that the perimeter area was clean.

Based upon this information, it was determined that the most expedient course of action was to remove the impacted soils and transport them to a permitted disposal facility.

This report details and documents the surface and subsurface soils removal work activities which occurred on April 12, 1993 at the Site. The surface and subsurface soils removal was performed by Barnes Construction (Barnes), Falconer, New York, a Contractor to DOWCRAFT Corporation (DOWCRAFT) and was directed by Conestoga-Rovers & Associates (CRA) who was retained by DOWCRAFT to provide health and safety oversight, soil sampling and direction of the Contractor.

2.0 PREVIOUS SAMPLING PROGRAM

The investigation of the former chemical storage area was conducted by ESI in June 1992. Four test borings were advanced on the approximate corners and one in the center of the former location of the chemical storage shed. An HNU photoionization detector was used to obtain a qualitative indication of the presence of volatile organic compounds (VOCs). Organic vapors measuring 70 to 92 parts per million (ppm) were recorded while scanning the soil sample obtained from 0 to 2 feet below the ground surface (BGS) in the center test boring. Background or near background measurements were recorded for the other soil samples from all five test borings.

One grab sample was collected from approximately 3 inches BGS in the center test boring. The soil at this depth exhibited the highest HNU readings. Four composite soil samples were collected from the test borings advanced on the corners of the former shed location. Each composite sample was collected between 0 and 10 feet BGS.

Based on the subsurface soil investigation and sampling and analytical testing of the soil, it was determined that the extent of toluene presence was limited to between 3 inches and 2 feet in the vertical direction. The horizontal extent of toluene presence was determined to be within the limits of the four test borings advanced at the four corners of the former shed location.

3.0 REMEDIATION ACTIVITIES

3.1 GENERAL

The surface and subsurface soils removal program included the following remedial activities:

i) re-establish the location of the former chemical storage shed;

ii) excavation of surface and subsurface soils;

iii) collection of a confirmatory soil sample;

iv) installation of a temporary fence around the open excavation; and

v) upon analytical confirmation, the removal of the fence and backfilling of the excavated area with clean imported fill.

3.2 RE-ESTABLISH THE LOCATION OF THE FORMER CHEMICAL STORAGE SHED

Upon arriving at the Site, the DOWCRAFT Maintenance Manager furnished the Site plan from which we were able to measure and re-establish the exact location of the former chemical storage shed and prior sample collection points. Wooden stakes were placed at the four corners of the former location of the chemical storage shed and one stake was placed at the location of the prior sample collection point in the middle of the shed area. Appendix A provides pictures that were taken of the location prior to the commencement of the soils removal activities.

3.3 EXCAVATION OF SURFACE AND SUBSURFACE SOILS

The soil removal began in the center portion of the shed area. A small backhoe was used to excavate the soil. As the soil was removed, the excavated area was screened with an MSA photoionization detector, an instrument capable of detecting VOCs such as toluene. The soil removal proceeded with the equipment operator excavating and removing soil in six inch lifts and the excavated areas continuing to be screened with the photoionization detector. The soil removal continued in all directions until the photoionization detector readings indicated that the area was clean. The excavated material consisted primarily of topsoil and light brown colored soils which contained gravel. The soils were wet due to recent rainfall events. All soils were removed and placed directly into a lined dump trailer which was supplied by Chemical Waste Management (CWM). The soil left the Site under manifest NYB6335946. The scale weight ticket showed 25,460 pounds of soil were removed from the Site and disposed at CWM's Treatment, Storage and Disposal Facility in Model City, New York.

Approximately 8 cubic yards of soil was removed. The depth of the excavation ranged from 6 inches to 3 feet and sloped from west to east. Appendix B provides a set of pictures which were taken after the excavation was completed. The length of the excavation at the longest point was 15 feet running west to east while the width of the excavation at its widest point was 13 feet running north to south. The width of the excavation on the surface ran outside the boundary of the location of the former chemical storage shed.

Upon completion of the soil removal activities, the bucket of the backhoe was decontaminated. The bucket was then screened using the photoionization detector to ensure that all contaminated soils had been removed.

3.4 SOIL SAMPLING AND ANALYSIS

One confirmatory soil sample was collected upon completion of the excavation. It was taken at 2 feet 8 inches in depth, from the bottom of the excavation directly below the location of the original sampling point which had previously been determined by an HNU to have the highest VOC chemical presence. The sample was placed in a cooler and immediately delivered to the laboratory at Advanced Environmental Services, Inc. (AES), Niagara Falls, New York, where the analysis was performed. The laboratory followed United States Environmental Protection Agency (USEPA) Method SW-846 8020. The sample was analyzed for toluene, the known Site contaminant. Appendix C provides a copy of the analytical result from the sampling at the Site. The results show that toluene was not present in the underlying soil at a detection level of 2 µg/kg (ppb).

3.5 INSTALLATION OF A FENCE AROUND THE OPEN EXCAVATION

Upon completion of the surface and subsurface soils removal program a temporary fence was installed around the open excavation to secure the area while awaiting the analytical results for the collected sample.

3.6 REMOVAL OF THE FENCE AND BACKFILLING OF THE EXCAVATION WITH CLEAN IMPORTED FILL

Upon notification that the sample was non-detectable for toluene at a concentration of 2 ppb, arrangements were made to have the temporary fence removed and clean imported fill brought in by Barnes. The area was left unseeded due to future paving activities scheduled for this area. This work was completed on April 15, 1993.

4.0 CONCLUSION

The toluene presence at the Site is thought to be a result of leakage or spillage from a toluene drum which had been stored in the former chemical storage shed.

Based upon visual and instrument observations and the results of the confirmatory soil sample, it is believed that all of the contaminated surface and subsurface soils have been appropriately removed and properly disposed.

A

APPENDIX A

PICTURES TAKEN PRIOR TO EXCAVATION


4 12'93


4 12'93


4 12'93

B

APPENDIX B

PICTURES TAKEN AFTER EXCAVATION

APPENDIX C

ANALYTICAL RESULTS

QA/QC VERIFICATION FOR PROJECT ID 327V

The following report, as well as the supporting data, have been carefully reviewed for accuracy, adherance to the cited methods, and completeness. All data contained in this report was generated in accordance with the AES Laboratory Quality Assurance/Quality Control Program.

Denise R. Tuhovak
Laboratory Manager

Paul T. McMahon
Quality Control Officer

Catherine Mocniak
Manager, Industrial Hygiene

All 'Total' results on soil matrices are calculated on a dry weight basis, unless otherwise noted.

The following are standard abbreviations:

BQL - Below Quantifiable Limits
ND - None Detected
NG - No Growth of Colonies
NR - Not Requested

CLIENT: Conestoga - Rovers & Associates
SAMPLE ID: 5020-4-12-1
COLLECTION METHOD:
COLLECTION DATE(S): 04/12/93
SAMPLE TYPE: Soil

AES CLIENT ID: CRANF1
AES SAMPLE ID: 327V-1
PROJECT ID: 327V

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Toluene	BQL	µg/kg	2.0	SW 846 8020

CLIENT: Conestoga - Rovers & Associates
SAMPLE ID: METHOD BLANK
COLLECTION METHOD:
COLLECTION DATE(S):
SAMPLE TYPE:

AES CLIENT ID: CRANF1
PROJECT ID: 327V

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Toluene	BQL	µg/kg	2.0	SW 846 8020

CLIENT: Conestoga - Rovers & Associates

AES CLIENT ID: CRANF1
PROJECT ID: 327V

ACCURACY

Analytical Parameter(s)	Method	Sample ID	Type	Percent Recovery
Toluene	SW 846 8020	---	Independent Standard	78

ADVANCED ENVIRONMENTAL SERVICES, INC.
LABORATORY REPORT

JOB# 219

Type of Analysis: Surrogate Recoveries
Client Name: Conestoga-Rovers & Associates

A.E.S. Job Code: FSL
Units: Percent (%)

			A.E.S. Lab Number.	1			
			Customer ID.	5020-4-12-1	INDEPENDENT STANDARD		
				4/12/93 SOIL			
alpha,alpha,alpha-trifluorotoluene	SW 846 8020	44-142		47	104		

Advanced Environmental Services

Sample Traceability Report

Organics Analysis

AES Job Code FSL

AES Job No. 327V

		Sample Prep			Analysis		
AES Sample No.	Sample Date	Method Number	Date	Analyst	Method Number	Date	Analyst
-1	4-12-93				8020	4-13-93	SCS

ADVANCED
ENVIRONMENTAL SERVICES, INC.
2186 LIBERTY DRIVE
NIAGARA FALLS, NY 14304 • (716) 283-3120

CHAIN OF CUSTODY RECORD

PROJECT NAME: Dowcraft - Ellison Bronze

SAMPLER'S SIGNATURE: Craig Gebhardt

JOB CODE: FSL 327V

IDENTIFICATION OF BLIND FIELD DUPLICATE SITE: ______

DATE	TIME	SAMPLE IDENTIFICATION	GRAB	COMP	SAMPLE TYPE	UNPRESERVED	HNO_3	H_2SO_4	HCL	NAOH	VIAL (PRES.)	VIAL (UNPRES.)	TOTAL	PARAMETERS/REMARKS
4-12-93	10:40 AM	5020-4-12-1			Soil	X							1	toluene

24 HOUR TURNAROUND
A.S.A.P

TOTAL NUMBER OF CONTAINERS: 1

NOTE: Please indicate required analysis, and whom we may contact with questions, if you have not yet done so through your customer service representative.

If there are any questions call Lisa Reyes 283-6720

	DATE	TIME	RECEIVED BY:
1. RELINQUISHED BY: Craig Gebhardt	4/12/93	1:35 P.M	William S. Perrello
2. RELINQUISHED BY:			
3. RELINQUISHED BY:			