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Draft Site Closure Report

Site Location:

Atlas Graphics, Inc.
567 Main Street
Westbury, NY 11590
VCP Site # 01-30-034B

Prepared for:

New York State Department of Environmental Conservation
625 Broadway, 11th Floor
Albany, NY 12233-7015

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Date:

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Site Closure Report
Atlas Graphics Inc.
Table of Contents

1.0 Introduction

The New York State Department of Environmental Conservation (NYSDEC) has performed an environmental investigation at the Atlas Graphics, Inc. (Atlas) site that identified contamination in the former cesspool. Trichloroethene (TCE) and toluene were accidentally discharged to the pool when Atlas initiated operations. This accidental discharge resulted in soil and groundwater contamination. These findings resulted in the site being designated a New York State Inactive Hazardous Waste Disposal Site, # 130034B. Based on NYSDEC's Remedial Investigation/Feasibility Study, a Record of Decision (ROD) was prepared that identified soil vapor extraction and air sparging as the selected remedial technologies.

A Remedial Design/Remedial Action work plan, dated September 20, 2000, addressing the on-site soil remediation and groundwater remediation at Atlas was prepared. Activities conducted pursuant to the Work Plan were conducted under NYSDEC oversight; the implementation of the Work Plan was pursuant to an Order on Consent between Atlas and the NYSDEC. The objective of the Work Plan was to remediate on-site contaminated subsurface soils using Soil Vapor Extraction (SVE) as well as air sparging (AS) to address the contamination in the groundwater on-site. Annual groundwater sampling was performed in adjacent off-site existing groundwater-monitoring wells.

This report summarizes the groundwater sampling data and formally request that the Atlas Graphics, Inc. site be reclassified to a Class 5 Site on the Registry of Inactive Hazardous Waste Sites in New York State.

2.0 Summary of Existing and background Information

2.1 Site Location, Ownership and Access

The NYSDEC designated Inactive Hazardous Waste Disposal Site, Atlas Graphics, Inc., is located at 567 Main Street, Westbury, Nassau County, New York. The site is approximately 0.2 acres in size. The designation on the New York State Registry of Inactive Hazardous Waste Disposal Sites (Registry) is # 1-30-034B. HDP Printing, Inc. owns the property. The site and its proximate environs are shown on Figure 1.

2.2 Site Description

The property is roughly rectangular in shape, and is approximately 72 feet by 122 feet in size. There is a two story commercial building on site that occupies approximately 4,330 square feet (roughly ½) of the site's plan area. It is built on a concrete slab and has no basement, except for a small boiler room in the southwestern corner of the building.

It was erected in the 1950's and past site occupants include a heating company, a construction company, a development association, and a mill supply company. Atlas began operations at the site in 1977 and continues to utilize the site today.

It is presently connected to the municipal water and sewer systems.

The site is bounded by Swalm Street on the west, commercial building and parking lots on the north and east, and Main Street on the south. It is wholly within that area designated by NYSDEC as the New Cassel Industrial Area (NCIA).

2.3 Background Information

2.3.1 Hydrogeology

The site is located near the southern perimeter of the Town of North Hempstead. The groundwater reservoir underlying the Town of North Hempstead is composed of unconsolidated deposits of Holocene Age, glacial deposits of Pleistocene Age, and coastal-plain deposits of continental and marine origin of the Late Cretaceous Age. The deposits consist of clay, silt and bedrock. Weathered and crystalline bedrock of Low Paleozoic and/or Precambrian Age underlies the unconsolidated deposits and forms the virtually impermeable base of the groundwater reservoir.

From oldest (deepest) to youngest (shallowest) these sediments have been identified and divided into a series of hydrogeologic units: the Lloyd Aquifer; the Raritan clay confining unit; the Magothy Aquifer; and the Upper Glacial Aquifer.

The Upper Glacial Aquifer consists of late Pleistocene and Holocene Age poorly sorted san, gravel, silt and clay deposits. The upper surface of the Upper Glacial deposits comprise present day land surface except in areas such as the Westbury site where they

are overlain by recent Holocene deposits and/or fill materials. The Upper Glacial Aquifer at the site is found in this aquifer at a depth of approximately 60 feet below grade.

The southernmost part of the Town is underlain by a highly permeable glacial outwash consisting of stratified sand and gravel and occasional thin clay layers. The deposits forming the Upper Glacial Aquifer range in thickness from 6 feet to more than 350 feet. The extreme variation in thickness results from the highly eroded surface upon which these materials were deposited and the irregularity of their upper surface that is the present land surface. The outwash deposits range in thickness from 14 feet to about 165 feet.

2.3.2 Public Water Supply Wells

The NCIA is immediately north of and serviced by public water provided by the Bowling Green Water District. As the Record of Decision (ROD) dated February 2000 for the site states, "(a) supplemental treatment system, air striping followed by carbon polishing, was constructed in 1996 to mitigate the impact of groundwater contamination (emanating from the NCIA) on the Bowling Green public water supply wells. Presently, no site-specific contaminants exceeding the drinking water standards have been detected in water distributed to the public. Guard wells have been installed south of Old Country Road, in locations down gradient of the NCIA hazardous waste disposal sites and up gradient of the water supply wells as a precautionary measure. Therefore, use of groundwater in the area is not currently considered to be an exposure pathway of concern."

Moreover, the public water supply wells are located southeast of the site. The groundwater beneath the site flows southerly. Hence, the public wells are cross rather than down gradient of the Atlas site, and contaminated groundwater from beneath the Atlas site would not impact the public supply wells.

2.3.3 Previous Investigations

The building at 567 Main Street was built in 1950, and used as a warehouse for construction vehicles until 1977 (see Section 2.2 supra). IN 1977, the property was taken over by Atlas, which currently operates a photo engraving manufacturing operation. This operation reportedly utilized approximately 300 gallons of trichloroethene (TCE) annually. At the time, Atlas originally commenced operations on site there was a documented discharge of approximately 50-gallons of TCE to the site's on-site sanitary system. In 1978 the on-site cesspool collapsed. As a result of this collapse, the site was connected to the public sewer system and the on-site sanitary system was abandoned.

In 1988, the NYSDEC classified the entire NCIA as a class 2 inactive hazardous waste disposal site. Based on the results of a subsequent Site Investigation (SI) and Preliminary Site Assessment (PSA performed by Lawler, Matusky and Skelly, LLP (LMS) the individual sites responsible for contamination were identified and placed on the Registry as class 2 sites. Atlas is one such site.

LMS conducted an Immediate Investigation Work Assignment (IIWA) at the Atlas site pursuant to a NYSDEC commission. The IIWA concluded that the contamination appeared to be the result of past disposal practices. LMS concluded that on-site waste disposal to the site's former cesspool was the most likely source of this contamination. However, as the OD states, "(t)he overall nature and extent of groundwater contamination is difficult to determine since the Atlas site is directly up gradient of the Former IMC Magnetics (IMC) site...Past investigations of this (IMC) facility indicate that the soils and groundwaters (sic) at this (IMC) site were heavily contaminated with similar contaminants as those used at the Atlas site. It is likely that the large contaminant concentrations found in HP-05, NC-2 and NC-2D (the off-site down gradient ground water monitoring wells proximate to Atlas) are the result of past disposal practices at IMC Magnetics."

2.3.4 Soil Vapor Extraction and Air Sparge Systems

In accordance with the September 20, 2000 Remedial Design/Remedial Action (RD/RA) work plan, AEL installed a soil vapor extraction (SVE) system and air sparging (AS) system at the Atlas site in October 2000. The system became operational during January 2001.

A Soil Vapor Extraction and Air Sparge Systems Design Report dated May 31, 2001 was submitted to the NYSDEC.

3.0 Groundwater Sampling

3.1 Nassau County Department of Health Investigation June 1986

The Nassau County Department of Health (NCDH) and Dvirka and Bartilucci Consulting Engineers (D&B) installed 35 wells in the New Cassel area as part of the Investigation of Contaminated Aquifer Segments. The wells were sampled one to three times from October 1984 to February 1986. The table below summarizes the sampling results from wells NC-2s and NC-2d the off-site down gradients ground water monitoring wells proximate to the Atlas Site.

Table 1
Summary of Laboratory Analytical Results
Nassau County Department of Health Investigation
October 1984 thru February 1986

Compound	NC-2s 12/4/84	NC-2s 3/13/85	NC-2s 3/26/85	NC-2s 12/27/85	NC-2s 1/31/86	NC-2d 11/25/85	NC-2d 1/31/86	NYSDOH TOGS
1,1,2-Trichlorotrifluoroethane	**14**	**11**	**11**	*	**24**	*	**310**	5
c & t-1,2-Dichloroethylene	*	*	*	**17**	**22**	*	*	5
1,1- Dichloroethane	*	*	*	*	*	*	71	5
1,1,1- Trichloroethane	**40**	**130**	**150**	**390**	**560**	**430**	**260**	5
Trichloroethylene	**1,300**	**2,100**	**2,300**	**2,200**	**1,500**	**68**	**64**	5
1,1,2- Trichloroethane		**2**	**2**		1			1
Tetrachloroethylene	**1,200**	**420**	**470**	**950**	**2,200**	**41**	**90**	5

Notes:
Numbers in **BOLD** exceed the New York State Department of Health Technical and Operation Guidance Series (TOGS) 1.1.1
*= Not Detected

3.2 NYSDEC IIWA Monitoring Well Samples March 1999

A total of four existing monitoring wells were sampled during the IIWA field sampling. The wells included NC-17, NC-2, NC-2d and N-11843. NC-2 and NC-2d are located down gradient of the Atlas site. Wells NC-17 and N-11843 are located up gradient of the Atlas site. Well NC-2 showed a decrease in the concentrations of contaminants since the last sampling conducted by the NCDH in 1986. Where the concentrations of contaminants in NC-2d showed a slight increase since the last sampling in 1986. The concentrations in NC-17 and N-11843 are significantly less than the down gradient monitoring wells. The below table summarizes the laboratory results of the monitoring well sampling.

Table 2
Summary of Laboratory Analytical Results
New York State Department of Conservation
March 1999

Compound	NC-2D	NC-2S	N-11843	NC-17	NYSDOH TOGS
1,1- Dichloroethane	*	2j	*	*	5
1,2-Dichloroethylene (total)	*	24	7j	3j	N/A
1,2- Dichloroethane	**7j**	*	*	*	0.8
1,1,1-Trichloroethane	**29**	**100**	3j	*	5
Trichloroethylene	**81**	**290 d**	**19**	5j	5
Tetrachloroethylene	**160**	**510 d**	**20**	**41**	5

Notes:
Numbers in **BOLD** exceed the New York State Department of Health Technical and Operation Guidance Series (TOGS) 1.1.1
*= Not Detected
j= Estimated concentration; compound present below quantitation limit
d= Concentration recovered from diluted 5:1 sample

3.3 Anson Environmental Ltd. Sampling October 10, 2001

On October 10, 2001, AEL conducted a round of groundwater sampling from two monitoring wells on-site NC-2s and N-11843. The wells were first purged of 3-5 well volumes then groundwater samples were collected and submitted to a laboratory for analysis via EPA Method 8601. The results of the sampling showed a significant decrease in the levels detected during the previous investigation conducted by the NYSDEC in March 1999. The below table summarizes the laboratory results of the monitoring well sampling.

Table 3
Summary of Laboratory Analytical Results
Anson Environmental Ltd.
October 10, 2001

Compound	NC-2s	N-11843	NYSDOH TOGS
Trichloroethylene	**20**	2	5
Tetrachloroethene	4	**6**	5
1,2 Dichloroethene	**24**	*	5

Notes:
Numbers in **BOLD** exceed the New York State Department of Health Technical and Operation Guidance Series (TOGS) 1.1.1
*= Not Detected

3.4 Anson Environmental Ltd. Sampling November 19, 2002

On November 19, 2002 AEL conducted a round of groundwater sampling on-site and down gradient of the Atlas site. The groundwater samples were collected from one down gradient monitoring well NC-2D and one on-site piezometer P-3. The well and piezometer were first purged of 3-5 well volumes then groundwater samples were collected and submitted to a laboratory for analysis via EPA Method 8260. The results of the sampling showed a significant decrease in the levels detected during the previous investigation conducted by the NYSDEC in March 1999. The below table summarizes the laboratory results of the monitoring well sampling.

Table 4
Summary of Laboratory Analytical Results
Anson Environmental Ltd.
November 19, 2002

Compound	NC-2D (AEL)	NC-2D (NYSDEC)	P-3 (AEL)	P-3 (NYSDEC)	NYSDOH TOGS
c & t-1,2 Dichloroethylene	**41**	**42**	*		5
Trichloroethylene	**58**	**68**	*	**10J**	5
Tetrachloroethylene	**150**	**130**	*	2J	5

Notes:
Numbers in **BOLD** exceed the New York State Department of Health Technical and Operation Guidance Series (TOGS) 1.1.1
*= Not Detected

3.5 Anson Environmental Ltd. Sampling May 14, 2003

On May 14, 2003 AEL conducted a round of groundwater sampling on-site and down gradient of the Atlas site. The groundwater samples were collected from one down gradient monitoring well NC-2D and one on-site piezometer P-3. The well and piezometer were first purged of 3-5 well volumes then groundwater samples were collected and submitted to a laboratory for analysis via EPA Method 8260. The results of the sampling showed a slight decrease in the levels detected during the previous sampling conducted in November 2002. The below table summarizes the laboratory results of the monitoring well sampling.

Table 5
Summary of Laboratory Analytical Results
Anson Environmental Ltd.
May 14, 2003

Compound	NC-2D	P-3	NYSDOH TOGS
c & t-1,2 Dicholorethene	**31**	*	5
1,1,1-Trichloroethane	**6J**	*	5
Trichloroethene	**23**	*	5
Tetrachloroethane	**57**	*	5

Notes:
Numbers in **BOLD** exceed the New York State Department of Health Technical and Operation Guidance Series (TOGS) 1.1.1
*= Not Detected
j= Estimated concentration; compound present below quantitation limit

3.6 Anson Environmental Ltd. and NYSDEC Sampling November 13, 2003

On November 13, 2003 AEL and the NYSDEC conducted a round of groundwater sampling on-site and down gradient of the Atlas site. The groundwater samples were collected from one down gradient monitoring well NC-2D and one on-site piezometer P-2. The well and piezometer were first purged of 3-5 well volumes then groundwater samples were collected and submitted to a laboratory for analysis via EPA Method 8260. The results of the sampling showed a decrease in the levels detected during the previous sampling conducted in May 2003. The below table summarizes the laboratory results of the monitoring well sampling.

Table 6
Summary of Laboratory Analytical Results
Anson Environmental Ltd. & NYSDEC
November 13, 2003

Compound	NC-2D (AEL)	NC-2D (NYSDEC)	P-2 (AEL)	P-2 (NYSDEC)	NYSDOH TOGS
c & t-1,2 Dichloroethene	4J	3J	*	*	5
1,1,1 Trichloroethane	1J	*	*	*	5
Trichloroethene	**7J**	4J	1J	*	5
Tetrachloroethene	**42**	**23**	4J	2J	5

Notes:
Numbers in **BOLD** exceed the New York State Department of Health Technical and Operation Guidance Series (TOGS) 1.1.1
*= Not Detected
j= Estimated concentration; compound present below quantitation limit

4.0 Conclusions

Based on the above sampling events, the on-site and down gradient groundwater are either below the New York State Department of Health Technical and Operation Guidance Series (TOGS) 1.1.1 standards or have reached an asymptotic condition. The below tables and graphs show the trend in the up gradient and down gradient monitoring wells.

At this time AEL is requesting that the Atlas Graphics VCP Site # 01-30-034B be classified as a Class 5 site on the NYSDEC registry of Inactive Hazardous Waste Sites.

Table 7
Summary of Laboratory Analytical Results
Up Gradient Monitoring Wells

Compound	N-11843 1999	NC-17 1999	N-11843 10/10/01	P-3 (AEL) 11/19/02	P-3 (NYSDEC) 11/19/02	P-3 5/14/03	P-2 (AEL) 11/13/03	P-2 (NYSDEC) 11/13/03
c & t-1,2-Dichloroethylene	7	3	0	0	0	0	0	0
Trichloroethylene	19	5	2	0	10	0	1	0
Tetrachloroethylene	20	41	6	0	2	0	4	2

Atlas Graphics
Laboratory Analytical Data Up Gradient Wells

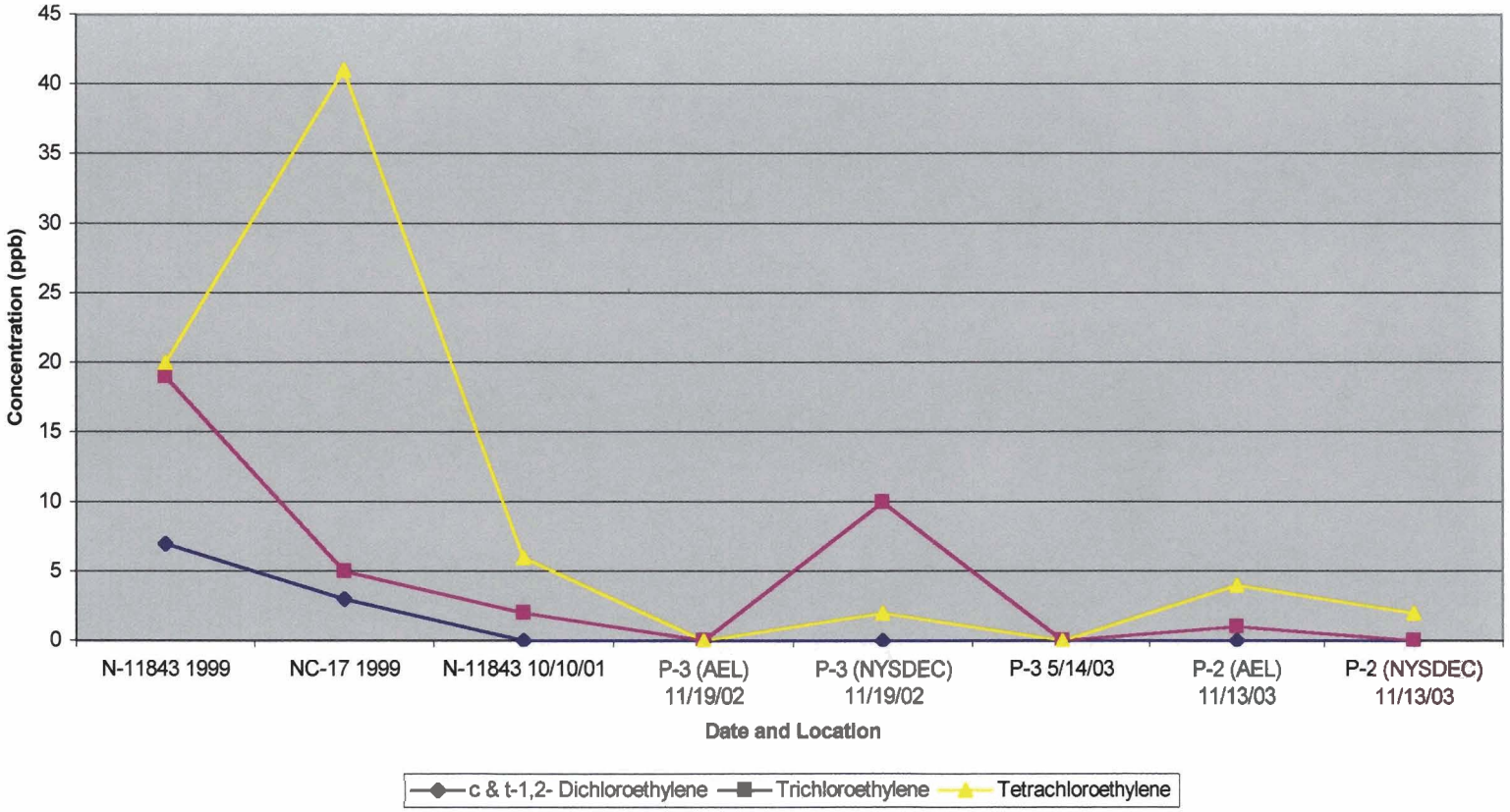

Table 8
Summary of Laboratory Analytical Results
Down Gradient Monitoring Wells

Compound	NC-2S 12/4/84	NC-2S 3/13/85	NC-2S 3/26/85	NC-2D 11/25/85	NC-2S 12/27/85	NC-2S 1/31/86	NC-2D 1/31/86	NC-2S 1999	NC-2D 1999
c & t-1,2-Dichloroethylene	0	0	0	0	17	22	0	24	0
1,1,1- Trichloroethane	40	130	150	430	390	560	260	100	29
Trichloroethylene	1300	2100	2300	68	2200	1500	64	290	81
Tetrachloroethylene	1200	420	470	41	950	2200	90	510	160

Compound	NC-2S 10/10/01	NC-2D (AEL) 11/19/02	NC-2D (NYSDEC) 11/19/02	NC-2D 5/14/03	NC-2D (AEL) 11/13/03	NC-2D (NYSDEC) 11/13/03
c & t-1,2-Dichloroethylene	24	41	42	31	4	3
1,1,1- Trichloroethane	0	0	0	6	1	0
Trichloroethylene	20	58	68	23	7	4
Tetrachloroethylene	4	150	130	57	42	23

Atlas Graphics
Laboratory Analytical Data Down Gradient Wells