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FYN PAINT & LACQUER CO., INC.
230 KENT AVENUE
BROOKLYN, NEW YORK

SUPPLEMENTAL REMEDIAL INVESTIGATION WORK PLAN

Prepared For

Fyn Paint & Lacquer Co., Inc.

July 2002

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TABLE OF CONTENTS

LIST OF FIGURE
(at end of report)

Figure

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INTRODUCTION

The Fyn Paint & Lacquer Co., Inc. is the subject of a Voluntary Cleanup Program (VCP), Index Number W2-0873-00-10 pursuant to the New York State Department of Environmental Conservation (NYSDEC) VCP. The purpose of the proposed Supplemental Remedial Investigation Work Plan (SRIWP) is to respond to the NYSDEC comments submitted in a letter dated May 30, 2002.

The proposed SRIWP includes the following:

- revisions of the Investigation Work Plan prepared by Fenley & Nicol and submitted to NYSDEC on January 30, 2001;
- additional investigation work to define the horizontal and vertical extent of contamination downgradient of the site;
- Site-Specific Health and Safety Plan;
- including a Community Air Monitoring Plan;
- soil-gas survey inside of Fyn Paint Building;
- schedule regarding the implementation of SRIWP following NYSDEC approval.

SITE LOCATION AND DESCRIPTION

The Fyn Paint & Lacquer Co., Inc. is located in an industrial/commercial area at the intersection of Kent Avenue and North Street in the Borough of Brooklyn, New York City. The Fyn Paint site consists of a one story industrial/warehouse building. The facility is currently

utilized as a paint and lacquer factory. The vicinity of the property consists of industrial and commercial properties.

The footprint of the building is approximately 55,000 ft^2 (square feet) on the first floor and approximately 3,500 ft^2 on the second floor. The building's heating system is provided by steam heat and the electrical service enters the building from Kent Avenue. A small basement (approximately 25 feet by 10 feet) is used for the heating oil tank controls for the sprinkler system and air compressor. A second basement approximately 20 feet by 15 feet contains the furnace. The site is connected to the New York City municipal sewer system.

GEOLOGY AND HYDROGEOLOGY

The Site is located in the Atlantic Coastal Plain physiographic province. The geology of this province is comprised of interbedded layers of sand, clay and marl. In Long Island the marine deposits are overlain by drift. The marine deposits are Cretaceous and Quaternary. The drift deposits are derived from glacial activity that occurred during the Pleistocene. The total thickness of the marine and glacial deposits in Kings County ranges from 0 foot in northwest Brooklyn to 1,100 feet thick in northeastern Brooklyn.

The ground-water resources that underlie western Long Island is composed of a series of unconsolidated deposits of sand, gravel and clay of late Cretaceous and Pleistocene age. The principal water-bearing units that provide usable quantities of water are the Upper Glacial Aquifer, the Jameco Aquifer, the Magothy Aquifer and the Lloyd Aquifer. Except for the Upper Glacial Aquifer and Jameco Aquifer, these units are vertically separated from each other by confining clay units.

The topography of the area is generally level. The vicinity of the Site is approximately 11 to 15 ft msl (feet above mean sea level). The ground surface at the Site consists of poured concrete and asphalt pavement. The shallow sediments beneath the Site consist of medium and coarse grained brown sand with some silt and trace gravel. In general, the subsurface beneath the area consisted of interbedded layers of sand, gravel, clay and silt to approximately 75 feet below ground surface. Bedrock beneath the Site is approximately 75 feet below ground surface. The regional direction of ground-water flow beneath the property is toward the west.

SUPPLEMENTAL REMEDIAL INVESTIGATION WORK PLAN

The following work plan was developed for the supplemental remedial investigation.

Task 1 – Soil Investigation

A total of 12 soil borings, will be drilled at the following locations as shown on figure 1.

- 2 soil borings along the eastern side of Fyn Paint building on Kent Avenue;
- 4 soil borings along the southern side of Fyn Paint building on North First Street;
- 2 soil borings along the western side of Fyn Paint building on River Street;
- 2 soil borings on south side of River Street in the vicinity of MW-4.

Each soil boring will be drilled by the geoprobe drilling method from grade to the ground water. During the drilling, soil samples will be collected continuously using a 4-foot macrocore sampling device. Each soil sample will be visually inspected by an LBG hydrogeologist, described on a geologic log and screened for the presence of volatile organic compounds (VOCs) using a photoionization detector (PID).

The soil sample which will exhibit the highest head-space vapor concentration will be submitted to a New York State certified laboratory for analysis (NYSDEC ASP-95). It is expected that 1 sample per soil boring will be analyzed in laboratory for VOCs.

A total of 4 soil samples, one sample from a selected soil boring, will be analyzed for Target Compound List (TCL) and Target Analyte List (TAL) metals. It is expected that 1 sample from soil borings drilled on the eastern side of the Fyn Paint building, 2 samples from soil borings drilled on the southern side of Fyn Paint and 1 sample from soil borings drilled on the western side of Fyn Paint building will be analyzed for full span parameters.

Task 2 – Ground-Water Investigation

Three geoprobe soil borings will be completed as 4-inch diameter monitor wells using the hollow-stem auger method. The location of the proposed 4-inch diameter wells is shown on figure 1.

Each monitor well will be constructed with a 10 foot length of 4-inch diameter, 0.020–slot PVC well screen and 4-inch diameter, PVC riser pipe extending from the top of the well screen

to grade. Each screen will be installed at approximately 2 feet above the ground-water level. The annular space around the well screens will be filled with No. 2 sand from the bottom of the boring to 2 feet above the top of the screen. A 1 foot thick bentonite seal will be placed above the sand pack and the remaining annular space will be filled with sand.

Each well will be completed at grade with a bolt-down roadbox set in concrete and a locking plug. A geologic log and a construction diagram will be prepared for each monitor well.

Three geoprobe soil borings will be completed as 1-inch diameter microwell (figure 1). Each microwell will be constructed with a 5 foot length of 1-inch diameter, 0.020–slot PVC well screen. The top of well screen will be set approximately 2 feet above the ground water. Four-inch diameter PVC riser pipe will be extended from the top of the screen to grade. Each well will be equipped with a bolt-down roadbox and a locked plug. Geologic logs and construction diagrams will be prepared for each well.

Task 3 – Well Development and Survey

Following installation, all new monitor wells will be developed by pumping until the water is free of sediment. Each well top of casing will be surveyed and the elevations will be adjusted to the Brooklyn Topographic Datum on the basis of a previously established elevation on Monitor Well MW–3. During the survey the existing wells status will be inventoried and evaluated.

Task 4 – Ground-Water and/or Fluid-Level Measurements and Ground-Water Sampling

In approximately 2 weeks after completion, the ground water and/or fluid levels will be measured in all of the existing and new monitor wells. These measurements will be used to construct a ground-water elevation contour map and to determine the direction of ground-water flow based on the data obtained from the new monitor wells.

Ground-water samples will be collected from all of the existing and new monitor wells located onsite and offsite. The ground-water sampling will be conducted using the low-flow equipment and techniques which will minimize the turbulence and result in a stable turbidity. Prior to sampling, a minimum of three well water volumes will be removed from the monitor well and a ground-water sample will be collected after a stable pH, specific conductivity and temperature are achieved. Ground-water samples will be collected using the low-flow sampling techniques.

The ground-water samples collected from the onsite and offsite monitor wells will be delivered to a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) and hold a certificate of approval to be analyzed for VOCs and semivolatile organic compounds (SVOCs). Ground-water samples from 2 downgradient monitor wells located in the vicinity of Fyn Paint will be analyzed for TCL and TAL. All ground-water sampling data will be reported in parts per billion (ppb) or micrograms per liter (ug/l).

Task 5 – Indoor Air Sampling

Indoor air samples will be collected from inside of the Fyn Paint building. Each air sample will be analyzed by EPA Method TO-14 or TO–15.

Task 6 – Soil-Gas Survey and Sampling

A soil-gas sampling program around the perimeter of the Fyn Paint building is recommended in the NYSDEC May 6, 2002 letter. The letter also indicates that the sampling program should be done in conjunction with limited indoor air sampling as specified in Task 5.

Soil-gas sampling will be conducted at every 50 feet around the perimeter of the Fyn Paint property and a sample will be collected at a depth of 2 ft bg (feet below grade). Each sample will be analyzed for VOCs by EPA Method TO-14.

Task 7 – Preparation of Report

An investigation report summarizing the results of the additional work will be prepared and submitted to NYSDEC for review and approval.

The report will include the following:

- description of the field work procedure related to drilling of soil borings and installation of monitor wells (geologic logs and well construction diagrams);
- procedure of soil and ground-water sampling (low-flow ground-water sampling);
- description of soil-gas sampling and indoor sampling;
- results of soil and ground-water investigation (soil and ground-water quality summary tables and maps);
- results of soil-gas sampling and indoor air sampling;

- characterization and disposal of soil cuttings for soil boring drillings and purge water from ground-water sampling; and,
- conclusions and recommendations.

Task 8 – Schedule

The Supplemental Investigation work will start in 45 days after the NYSDEC approval of the SRIWP. The following schedule was developed for the implementation of the SRIWP.

•	Task 1	Soil investigation	10 days
•	Task 2	Ground-water investigation	10 days
•	Task 3	Well development and survey	5 days
•	Task 4	Ground-water measurements and sampling	10 days
•	Task 5	Indoor air sampling	10 days
•	Task 6	Soil-gas survey and sampling	10 days
•	Task 7	Report preparation	60 days

It is estimated that the completion of the SRIWP following the NYSDEC approval will take approximately 115 days.

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dmd
July 29, 2002
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