Final Plan of Remedial Action

Del Chapel Place – Operable Unit II
Newark, Delaware

DNREC Project No. DE-1124

March 2000

Department of Natural Resources and Environmental Control
Division of Air and Waste Management
Site Investigation and Restoration Branch

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I. INTRODUCTION

The Del Chapel Place property occupies approximately 21 acres along Delaware Avenue in Newark, Delaware. The property is comprised of an eastern parcel (11.4 acres) designated as Operable Unit II ("OU2') and an adjacent parcel (8.5 acres) designated as Operable Unit III ("OU3") along the western side of the Penn Central right-of-way. This document addresses the eastern parcel designated as OU2 and will evaluate remedial action objectives for shallow soils only. Ground water, stream surface water, and sediments were investigated and the findings for these media will be addressed as part of OU3.

Courtyard Communities, L.L.C. plans development of a residential complex for University of Delaware students. Due to findings of contamination at the site during a previous investigation conducted by the Department of Natural Resources and Environmental Control, Site Investigation and Restoration Branch ("DNREC-SIRB"), Courtyard Communities, L.L.C. agreed to further characterize the potential risks posed to the public health and the environment through the Voluntary Cleanup Program ("VCP").

In June 1998, Courtyard Communities, L.L.C. entered into a VCP Agreement with the DNREC-SIRB to perform a Facility Evaluation ("FE") of the Del Chapel Place property. The purpose of the FE was to: 1) understand the nature and extent of any soil or ground water contamination at the site, 2) evaluate risks to the public and environment associated with identified contamination, and 3) determine if further response action is necessary.

This document is the DNREC-SIRB's Final Plan of Remedial Action for the site issued under the provisions of the Delaware Hazardous Substance Cleanup Act ("HSCA") and the Regulations Governing Hazardous Substance Cleanup ("Regulations"). It follows the Proposed Plan of Remedial Action, which was presented to the public on November 26, 1999. It is based on the results of previous investigations performed at the site, and presents the Department's assessment of the potential health and environmental risk posed by the site.

The DNREC-SIRB provided public notice and a 20 day public comment period on the Proposed Plan in accordance with Section 12 of the Regulations. A public hearing was held on January 12, 2000 at Girls Inc. in Newark, Delaware. No comments were received outside of the Public hearing, however, Public hearing comments were addressed in the Department Responsiveness Summary for Public hearing comments, which is available to the public. The Final Plan, which designates the selected procedures and stipulations concerning current and future activities, the Proposed Plan, comments received, the Department's response to comments, and all of the site documents forming the basis for the Proposed and Final Plans will constitute the remedial decision record required for issuing the Final Plan.

II. SITE DESCRIPTION AND HISTORY

The eastern parcel (OU2) extends from the Penn Central right-of-way, east toward Newark High School, and toward the south next to the Christina School District property. The site is described

as open field on the northern portion and is covered by a thick stand of trees at the southern portion of the parcel. A small stream flows across the southern wooded portion of this site. The origin of the stream is from two culverted drains beneath the adjacent western parcel (OU3) and from along the Penn Central right-of-way to the north.

III. INVESTIGATION RESULTS

Results of a Brownfield Preliminary Assessment II for Del Chapel Place, conducted by the DNREC-SIRB in June 1997, were used to focus the scope of the Facility Evaluation ("FE"). The FE findings are presented in Facility Evaluation Report, Del Chapel Place: OU-2, Newark, Delaware, November 16, 1998.

During the DNREC-SIRB Brownfield Preliminary Assessment, site characterization was conducted for the entire property including parcels OU2 and OU3. Information obtained from the eastern parcel (OU2) during this assessment involved three test pit excavations (TP-8, TP-9, and TP-15) at random locations. Two samples, shallow and deep, were collected from each location and screened for volatile organic compounds (VOC's), pesticides, polychlorinated hydrocarbons (PAH's), and metals. From the three sample locations, one shallow soil sample, TP-9, was selected for Total Analyte List ("TAL") and Total Compound List ("TCL") laboratory analysis to verify screening results. Arsenic and manganese in TP-8 and TP-9 slightly exceeded the DNREC Remediation Standards Guidance under the Delaware Hazardous Substance Cleanup Act ("Remediation Standards") for both samples. No other constituents exceeded the Remediation Standards for soil samples.

Based on the Brownfield Preliminary Assessment, an FE was conducted at the eastern parcel to further characterize all environmental media, verify previous investigative data, and determine potential impact from historical land use of both parcels. The FE consisted of six test pit excavations in the area of a former reservoir, four monitoring wells (MW-5 through MW-8) installed on the eastern parcel, three temporary hydraulic probe ground water sample locations, and one stream sample location.

Test pit excavations around the former reservoir were visually inspected and monitored with a field instrument photoionization detector ("PID") to screen for organic compounds. Based on field observations and monitoring, the soils in the reservoir area were not characterized further.

Selected soils collected during the installation of the four monitoring wells were analyzed for specified constituents (VOC's, SVOC's, TPH, and metals). The well boring for monitoring well, MW-8, detected minor concentrations of TPH. Arsenic and beryllium were detected at concentrations slightly exceeding Uniform Risk Based Standards ("URS"), but below the general background levels for this region. MW-8 is located in a low wet area between the stream and railroad right-of-way.

The surface water sample results verified previous investigation results indicating elevated levels of zinc and detectable concentrations of trichloroethene. Ground water sampling results during this FE also verified previous investigation results detecting elevated concentrations of VOC's

and metals. The findings relevant to the stream and ground water media will be addressed as part of OU3.

Results from the soil investigation identified minor concentrations of metals on the eastern parcel (OU2). These results, slightly above the URS, do not appear to present any potential threat to human health or the environment based on the overall information gathered from the site and from utilizing a risk based exposure analysis software. The spreadsheets for this model are presented in the FE report.

IV. REMEDIAL ACTION OBJECTIVES

According to HSCA Regulation 8.4(1), remedial action objectives must be established for all Plans of Remedial Action. The remedial action was evaluated for soil only, utilizing the qualitative and quantitative objectives and the following considerations:

- The site land use is expected to be a residential housing complex with paved parking areas, and
- The risk to human health.

QUALITATIVE REMEDIAL OBJECTIVES:

Based on the above considerations, the following qualitative objective was developed:

- Control human contact (dermal and ingestion) with contaminated soil, if any.

QUANTITATIVE REMEDIAL OBJECTIVES:

Based on the above qualitative remedial action objective, the following quantitative remedial action objective was developed:

- Prevent human contact with soil having constituents which exceed 10 E – 05 cancer risk.

V. PROPOSED REMEDIAL ACTION PLAN

Since the soil contaminants do not exceed the 10 E-05 cancer risk, the Department of Natural Resources and Environmental Control's recommendation for the eastern parcel (OU2) is to propose no further action for shallow soils only and not ground water, surface water, or sediment, with the following stipulations:

1. Site activities will not interfere with the ground water monitoring program for both parcels OU2 and OU3.

2. The proposed remedial action will not inhibit the ongoing investigation of the stream area and any future proposed action, if necessary, for the stream.

3. The proposed action will not interfere with the ongoing investigation and future proposed remedial action of the adjacent western parcel (OU3).

VI. PUBLIC PARTICIPATION

The Department of Natural Resources and Environmental Control, Site Investigation and Restoration Branch provided public notice of a public hearing on this Proposed Plan on November 26, 1999 in the News Journal. The public comment period began on Friday, November 26, 1999 and ended on Friday, December 17, 1999. A public hearing on this Proposed Plan was scheduled on Tuesday, December 28, 1999 but was rescheduled to January 12, 2000 at 6:00 p.m. at Girls Inc., 489 Wyoming Road, Newark, Delaware. The News Journal advertised the rescheduled public hearing on January 5, 2000. Two comments during the Public hearing were later addressed by the DNREC-SIRB. A copy of the Department Responsiveness Summary for the Public Hearing comments is available at the DNREC-SIRB office, 391 Lukens Drive, New Castle, Delaware, 19720. For further information, contact Zsolt E. Haverland at (302) 395-2600.

VII FINAL PLAN

Secretary's Order No. 2000-A-0018 was issued on March 24, 2000 adopting the Proposed Plan Remedial Action for OUII as the Final Plan of Remedial Action for OUII.

VIII DECLARATION

This Final Plan of Remedial Action for the Del Chapel OUII Site is protective of human health, welfare and the environment and is consistent with the requirements of the Delaware Hazardous Substance Cleanup Act.

Denise Ferguson-Southard
Director, Division of Air and Waste Management

Date

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