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APPENDIX E

ENGINEERING EVALUATION

FOR THE

SITE CLOSURE ACTIVITIES
ON THE
"BEACON SALVAGE" PROPERTY

LOCATED AT

RED FLYNN DRIVE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK

Prepared by

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ESI File Number: SB2096.40

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APPENDIX E – ENGINEERING EVALUATION
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1.0 INTRODUCTION

This Engineering Evaluation is provided for the subject parcel as part of the voluntary clean-up agreement proposed to New York State as defined in the November 2001 Workplan prepared by Ecosystems Strategies Inc. (ESI). This report identifies the contamination present at the "Beacon Salvage" property located at Red Flynn Drive, City of Beacon, Dutchess County, New York and demonstrates the remedy proposed for the agreement. The remedy is critiqued according to 6 NYCRR Part 375-1.10(c) factors, these being elaborated upon in Section 4.0 of this evaluation.

1.1 Site History

The Site is an elongated, irregularly-shaped lot which is occupied by a house located in the central portion of the property and a barn located on the central northeaster portion of the property. Located to the east of the on-site barn structure is an area which has historically been used for the storage and processing of scrap metal. This area of the property consists of open areas with scrub, trees, and overgrown vegetation.

2.0 PROPOSED FUTURE SITE RE-USE

Proposed future use of the Site is undetermined at this time but is anticipated to include passive recreation, as well as commercial or residential uses. Remediation will be completed as if the entire Site will be used for the most restrictive use (residential).

3.0 PROPOSED ENVIRONMENTAL REMEDIATION

As described in the Workplan, two contaminants are present on the Site at levels warranting remediation:

- Lead is present at levels exceeding the action level of 400 ppm in on-site surface soils in the western and eastern portions of the site; soils in the central portion of the site do not contain elevated metals.
- PCBs are present at levels exceeding action levels in a defined area located east of the on-site barn.

The Workplan details a proposed remedial plan which includes the proper excavation and off-site disposition of PCB contaminated soils and the importation of a soil cover (or equivalent) to overlay the lead-contaminated soils.

3.1 Proposed Operation and Maintenance

No active maintenance programs are proposed. Institutional controls to ensure the long term integrity of the barrier layer(s) will be implemented.

4.0 EVALUATION OF ENVIRONMENTAL REMEDIATION

Factors listed in 6 NYCRR Part 375-1.10(c) are used qualify the remedial measures proposed. The proposed remedy addresses the factors noted in 375-1.10 (c) as discussed below:

4.1 Protection of Human Health and the Environment

The proposed remedy is protective of both human health and the environment by removing the contaminants of concern (PCBs) or providing a sufficient cover on top of lead containing soils to minimize the likelihood of direct human contact. Impacts to groundwater are not likely as lead is relatively immobile, and groundwater data support the conclusion that the existing lead levels on the site have not impacted groundwater to date.

All excavations performed during the site development (i.e. - foundation construction, utility trenching, etc.) shall be monitored using a photoionization detector (PID) in order to note the presence of any vaporous volatile organic compounds. Action levels and contingency measures will have been defined within the HASP.

This site is served by public water supply therefore exposure to groundwater contact for the areas of concern is effectively precluded. Central sanitary services are also provided by the municipality therefore any exposure to subgrade contamination is greatly reduced if not wholly improbable.

4.2 Standards, Criteria & Guidance

Site investigations to date have determined PCBs and lead to be the primary contaminants of the site. Action levels for these contaminants are defined in the Workplan.

The proposed remedial actions will result in SCG levels for PCBs.

4.3 Short-term Effectiveness and Impacts

Monitoring of all excavations for vaporous compounds in worker air space shall prevent hazardous work environments. Also the handling time for any contaminated soils shall be minimized to the greatest extent practicable. Additionally the Community Air Monitoring Program will provide assurance that the environmental local to the site is not impacted during or after construction. These construction monitoring measures are somewhat common practices for protection of human health.

4.4 Long-term Effectiveness and Performance

The excavation and disposal of the PCB contaminated soil shall effectively remove this contaminant source and the proposed capping system shall isolate any metals contaminated soils from human and ecological contact. PCB contaminated soils will be removed by a licensed hauler and delivered to a permitted treatment facility with appropriate waste handling and tracking forms maintained. Given groundwater data to date, it is highly unlikely that any contamination will migrate or pose a threat to the human community or environmental. The site is served with centralized utilities and exposure due to migrating residual contaminant in the groundwater appears highly unlikely. In this method, the remedy is considered to be permanent with institutional controls put in place to ensure that contact with soils beneath the cap is not made.

4.5 Reduction of Toxicity, Mobility or Volume

All PCB contaminated soils will be removed and thus the issue of this contaminant's toxicity and mobility are irrelevant. It is estimated that approximately 200 cubic yards of PCB contaminated soils will be removed and disposed of off-site. With respect to the lead contained in soils to be located beneath the proposed cap, the mobility of lead is minimal and groundwater data support the conclusion that the existing lead levels on the site have not impacted groundwater to date.

4.6 Implementability

Similar PCB contaminated soil removal and the soil cap installation programs have been utilized multiple times at similar sites with favorable results. No impediments to the implementation of these two remedial actions appear to exist.

4.7 Cost

Costs associated with the removal and disposal of the limited quantity of PCB contaminated soil are relatively small as compared with other technologies. Likewise the importation of a soil cover was determined to be more cost effective than the alternative of soil excavation; additionally, this option does not necessitate the exposure of contaminated soils as excavation/disposal would.

4.8 Community Acceptance

No major issues of public concern have surfaced through the course of the project to date.

5.0 CONCLUSION

The mitigative measures proposed in the Workplan appear well suited to the site conditions and contaminants present. The approach is quite simple and straight forward which leads to a high anticipated success rate in attaining the remedial action objectives in a cost-effective and efficient manner.

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New York State Department of Environmental Conservation
Division of Environmental Remediation
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Erin M. Crotty
Commissioner

January 7, 2002

Geoff Lacetti
Bureau of Environmental Exposure Investigation
NYS Department of Health
Flanigan Square, Room 300
547 River St.
Troy, NY 12180-2216

Dear Mr. Lacetti,

Re: Beacon Salvage Property, Beacon, NY
Voluntary Site Number V00443-3

Enclosed is one copy of a draft IRM work plan for the Beacon Salvage Voluntary Cleanup Site. This work plan has been submitted on behalf of the volunteer, Scenic Hudson Land Trust, Inc. The volunteer has requested that our agencies conduct an expedited review of this document to facilitate their short-term plans for the property.

While this work plan is for an IRM, we believe that this IRM will constitute a significant portion of the final remedy for the site. Therefore, we are treating it as a remedial action work plan and will seek the Department of Health's concurrence on the document before proceeding.

Also enclosed are copies of all previous reports for the site that this office has received to date. Mr. Joseph Moloughney of my staff is the assigned project manager and all communications regarding the site should be directed to him.

Your assistance in ensuring an expedited review of this work plan by January 23, 2002 is greatly appreciated.

Sincerely,

Edward R Belmore

Edward Belmore, Director
Bureau of Western Remedial Action
Division of Environmental Remediation

cc: S. Bates
R. Pergadia
J. Moloughney ✓