## RECEIVED



## JUN 05 1997

## DEPT. OF ECOLOGY

June 3, 1997

Consulting Engineers and Geoscientists Offices in Washington, Oregon, and Alaska

Washington State Department of Ecology Northwest Regional Office 3190 - 160th Avenue Southeast Bellevue, Washington 98008-5452

Attention: Glynis Carrosino

Report Addendum #2
Orillia Industrial District Property
(Lots 1 through 4)
Kent, Washington
File No. 5538-002-85

Based on a telephone conversation with Mr. Glenn Woo of Orillia Industrial District Associates I on May 28, 1997, we understand that additional clarification is necessary regarding institutional controls recommended for the site. The subject site consists of Lots 1 through 4 and is located southwest of the East Valley Highway and South 180th Street intersection in Kent, Washington. Our "IRAP Summary Report" dated April 16, 1997 summarizes subsurface soil and ground water analytical results for the site.

Because of the presence of slag fill and contaminants identified during our subsurface characterization of the site we recommended that institutional controls be implemented at the site in order to prevent direct human contact with the slag fill and ground water in the area of slag fill. The institutional controls, which include an asphalt cap or an equivalent surface barrier, ground water monitoring of downgradient well GMW-1, and a restrictive covenant on the use of ground water beneath the site, are recommended to be protective of human health and the environment. An excerpt from our recommendations for long-term controls at the site presented in our "IRAP Summary Report" is as follows: "All areas not covered by a building must be capped by asphalt pavement of an adequate thickness that will decrease the potential of cracking and excessive wear. The asphalt pavement cap should be used to limit human exposure to the slag fill and reduce infiltration of stormwater." The following further clarifies this recommendation:

GeoEngineers, Inc. 8410 154th Avenue N.E. Redmond, WA 98052 Telephone (206) 861-6000 Fax (206) 861-6050

- The asphalt cap or equivalent surface barrier should be placed in areas where slag fill is present. The cap does not need to be placed in areas where buildings will be constructed. The areas where slag fill has been identified include the southeast portion of Lot 3 and the majority of Lot 4. See Figure 4 of our "IRAP Summary Report" for approximate slag fill locations.
- We understand that the City of Kent may require that about 10 percent of the development consist of landscaped areas. Slag fill could be removed from areas that require landscaping or in areas where institutional controls cannot be feasibly implemented. If slag fill is excavated, we recommend that it be characterized by an environmental professional prior to off-site disposal at an approved landfill or recycling facility. In areas where slag fill has been removed, a cap would not be necessary.
- Alternatively, a cap consisting of an impermeable liner beneath 12 to 24 inches of soil and topsoil could be placed in landscape areas where slag remains. The liner should be "keyed" into the asphalt pavement or should be designed to slope to an engineered drainage system that prevents infiltration of surface water into the slag fill.
- Based on the current subsurface information, it is our opinion that institutional controls are not necessary for Lots 1 and 2 because (1) slag fill has not been encountered on these lots, and (2) ground water samples obtained from GMW-1, which is located between the known slag fill and Lots 1 and 2, are in regulatory compliance.

These recommendation clarifications are based on current subsurface information. If slag fill or contaminants of regulatory concern are observed during construction in areas not identified in our previous reports, we recommend that institutional controls be implemented in those areas. These recommendations do not represent design specifications. They are intended to provide a general description of institutional controls necessary for Ecology's consideration of a no further action determination for this site.

We recommend that a work plan and specifications be prepared prior to construction to address cap and/or liner design. We also recommend that the construction controls summarized in our "IRAP Summary Report" be followed and that the key points presented in our "Development Considerations for Slag Fill" report dated April 17, 1997 be considered in development plans prior to construction at the site.



Please call if you have questions or comments regarding this submittal.

Yours very truly,

GeoEngineers, Inc.

David A. Cook Project Geologist

Kurt R. Fraese Associate

DAC:KRF:vvl

Document ID: P:\5538002.RA2

One copy submitted

cc: Glenn Woo, P.E.

1928 Clise Place W.

Seattle, WA 98199