



AGRA Earth & Environmental

ENGINEERING GLOBAL SOLUTIONS

**AGRA Earth &
Environmental Limited**

95 Scurfield Blvd.

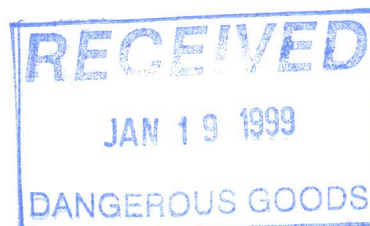
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January 14, 1999

WX-04528.2



C.O 243

Mr. Edwin Yee
Manitoba Environment
Suite 160
Winnipeg, MB
R3C 1A5

**RE: Remedial Action Plan for 1655 18th Street, Brandon, MB - Canadian Tire
Development**

Dear Ed,

Introduction

Please find attached copies of our Phase I and II Environmental Site Assessment (ESA) reports for the above noted property. As you may be aware, Canadian Tire is planning to redevelop the site with a new store to the south of the existing store. A number of different building location options were investigated and **option 3D was chosen based on environmental, geotechnical and architectural considerations.** The approximate footprint of this proposed building is shown on the attached figure.

Summary of Phase II ESA Results

The shaded areas on the attached figure illustrate the estimated horizontal extent of impacted soils within the footprint, based on our Phase II ESA in 1998 and investigations by others in 1990. The shaded areas represent approximately 2500 m³ of soil. The extent of the westernmost of the two shaded areas is based on information from nearby boreholes TH14, TH15, TH17, TH18 and TH20. The extent of the eastern shaded area is based on nearby borehole data as well as the presence of a branch of the horizontal vapor extraction system installed in 1991. As noted above, only impacted areas within the building footprint are shaded. Generally speaking, **much of the area to the north of the building footprint is impacted and the area between the proposed building and the existing building consists of a parking lot underlain by the vapor extraction system. Note that the southernmost extension of the VES would be removed during construction.** Land to the immediate east of the proposed building is not impacted above CCME Commercial levels. The area to the south (off-site) has not been investigated by AEE and is occupied by a cemetery.

Groundwater monitoring over the past 4 to 5 years has indicated a west to east flow direction for the shallow surficial aquifer. Groundwater at the site has been impacted by historical activities. BTEX / TVH / TSH analysis of four wells on site, including TH14 near the proposed building, did not show any exceedances of MOE Commercial criteria for fine-grained soil in a non-potable situation. Vapor monitoring in wells TH14, TH16 and TH17 showed vapor levels of 770, 440 and 110 ppm approximately one week after drilling. Quarterly vapor monitoring results in the vicinity of the southern extension of the VES (the eastern shaded area) indicated occasional combustible vapor readings of 1-2% LEL.

Construction of New Building

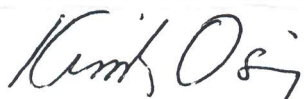
At present, it is proposed to remove only as much soil (approximately 1 m) as is required for placement of engineered fill under the slab-on-grade of the proposed building. Very little impacted soil is present in the near surface area where the base fill would be placed. It is proposed that soil impacted above CCME Soil Quality Guidelines for a commercial site would be left in place beneath the new building. This practice is consistent with both present conditions (the existing CTC store was built in an impacted area also) and with previous correspondence with Manitoba Environment (Mr. Dave Ediger indicated in a letter in 1995 to CTC that remediation would likely not be required under a new building).

Any impacted soil which is removed during construction will be disposed of at the City of Brandon landfill. At this time, the construction schedule has not been finalized. A construction report will be completed and forwarded to the ME Brandon office.

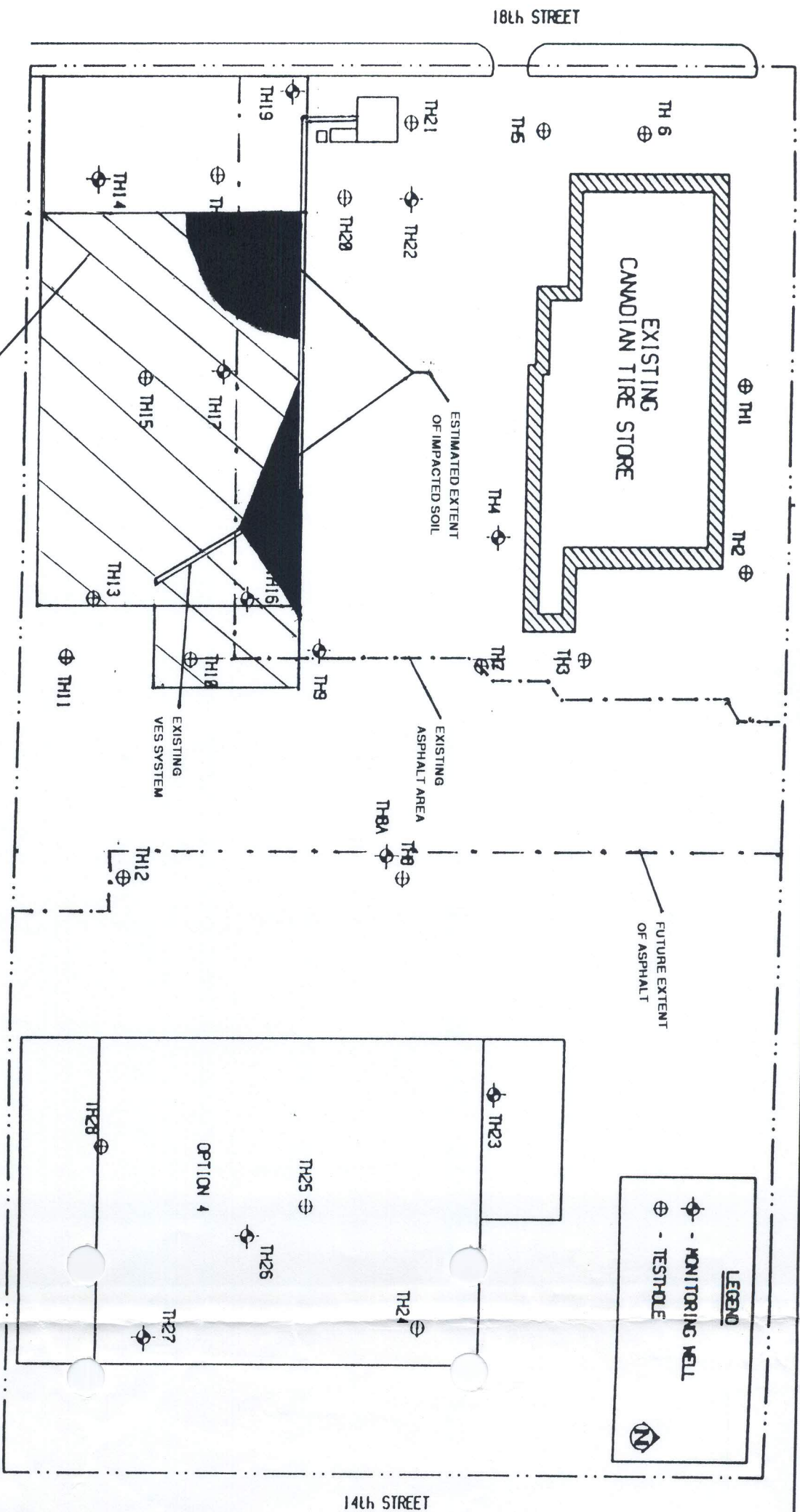
We would appreciate your comments and response to this plan at your earliest convenience. If you have any questions, please do not hesitate to call me.

Yours very truly,

AGRA Earth and Environmental Ltd.



Kimber Osiowy, M.Sc., P.Eng.
Group Leader, Environmental Assessment



Earth & Environmental Limited

**CANADIAN TIRE CORPORATION
LIMITED**

OPTION 3D - ESTIMATED EXTENT OF IMPACTED SOIL

**1655-18TH STREET
BRANDON, MANITOBA**

Drawn : KO/PDC Scale: ≈ 1:1,500

Date: NOV/98 Project No.: WX-04528

Figure: A2