BRAUN INTERTEC
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Braun Intertec Corporation
11001 Hampshire Avenue S
Minneapolis, MN 55438

Phone: 952.995.2000
Fax: 952.995.2020
Web: braunintertec.com

April 25, 2019 Proposal QTB098142

Mr. Scott Zurn
Manager Environmental Remediation
Canadian Pacific
120 South Sixth Street, Suite 700
Minneapolis, MN 55402

Re: Work Plan and Cost Proposal for Phase II Environmental Site Assessment
Canadian Pacific
East of the Intersection of Farson Road and the Railroad Tracks
Farson, Iowa

Dear Mr. Zurn:

Braun Intertec Corporation is pleased to present this proposal to conduct a Phase II Environmental Site Assessment (ESA) of the referenced site. The objective of the Phase II ESA is to investigate magnitude and extent of the petroleum impacted soil identified during water well sealing work completed during Fall 2018. This proposal will outline the Scope of Services and provide estimated costs for the proposed work.

Background

In November 2018, Braun Intertec was contracted by Canadian Pacific (CP) to locate and seal a former depot dug water supply well. Excavation activities located the former well and continued to approximately 15 feet below ground surface during the well sealing activities. Based on Site observation, apparent petroleum contaminated soil was encountered. A soil sample was collected for laboratory analysis for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), lead, diesel range organics (DRO), and gasoline range organics (GRO). Analytical results indicated that relatively low level petroleum impacts were present. CP reported a petroleum release to the Iowa Department of Natural Resources (IDNR). The IDNR assigned it project number #2530.

Scope of Services – Phase II ESA

The Scope of Services for the Phase II ESA includes the following components:

- Utility Clearance
- Soil Borings
- Soil Screening
- Soil Sampling and Analytical Testing
- Groundwater Sampling and Analytical Testing
- Soil Vapor Sampling and Analytical Testing
- Reporting

Staking and Utility Clearance

A site-specific Health and Safety Plan (HASP) will be created prior to initiation of Site work.

Braun Intertec will obtain surface elevations at those locations using GPS (Global Positioning System) technology.

Prior to starting the investigation, Braun Intertec or the licensed subcontractor will make a request that for the appropriate public utility companies to identify locations of public underground utilities at the Site. In addition, Braun Intertec will clear private utilities (CP's Call-Before-You-Dig).

Soil Borings

The drilling contractor will advance up to seven soil borings at the Site to obtain soil samples for field screening and laboratory analysis. The borings will be advanced to depths of approximately 35 feet bgs, or 5 feet into groundwater, whichever is shallower, using push probe drilling method. One soil boring will be advanced at the location where impacts were previously detected, and then one soil boring will be advanced approximately 40 feet in each cardinal direction. The two remaining soil boring will be used to potentially step out another 40 feet, if needed. Soil samples for field screening will be collected at 2.5-foot intervals. The work will be completed following Braun Intertec Standard Operating Procedure (SOP) 203 – Soil Boring Observation and Sampling (SOPs are attached). Following completion, the boreholes will be sealed in accordance with state guidelines.

Soil Screening

During drilling, a field technician will monitor the subsurface materials encountered at each boring location. Soils will be classified in the field in accordance with ASTM D 2487 "Unified Soils Classification System (USCS)" and ASTM D 2488 "Recommended Practice for Visual and Manual Description of Soils." Samples for photoionization detector (PID) headspace analyses will be collected at 2.5 foot intervals in accordance with Braun Intertec SOP 202 – Organic Vapor Soil Screening. In addition, the soil will be observed for stained soil, the presence of ash, asbestos-containing material, slag, or other debris with potential to contain hazardous materials, or a petroleum-like or chemical-like odor.

Soil Sampling and Analytical Testing

Soil samples will be collected from the soil borings for laboratory analysis in accordance with Braun Intertec SOPs 208 and 209. Soil samples will be collected from depth intervals in the unsaturated zone where indications of contamination are observed in the field. If no indications of contamination are observed, the soil samples will be collected from the depth interval just above the water table.

The budget for this task assumes that a total of seven soil samples will be submitted to Pace Analytical Services, LLC from Minneapolis, Minnesota (Pace), and analyzed for the following parameters:

- Volatile petroleum hydrocarbons – benzene, toluene, ethylbenzene, and xylenes using Iowa Method OA-1.
- Methyl-tertiary butyl ether (MTBE) using Gas Chromatography/Mass Spectrometry (GC/MS) version of OA-1.
- Semi-volatile petroleum compounds – all grades of diesel fuel, fuel oil, kerosene oil, and mineral spirits – known as Total Extractable Hydrocarbons (TEH) using Iowa Method OA-2.

In addition, three representative soil samples from a depth within the water table will be submitted for grain size analysis using a hydrometer in order to calculate estimated hydraulic conductivity.

Groundwater Sampling and Analytical Testing

Seven temporary monitoring wells will be installed to evaluate groundwater conditions at the Site. The wells will be permitted with the state. The groundwater samples will be collected according to Braun Intertec SOP 311 – Groundwater Sample Collection. The samples will be submitted to Pace and analyzed for:

- Volatile petroleum hydrocarbons – benzene, toluene, ethylbenzene, and xylenes using Iowa Method OA-1.
- MTBE using GC/MS version of OA-1.
- Semi-volatile petroleum compounds – all grades of diesel fuel, fuel oil, kerosene oil, and mineral spirits – known as TEH using Iowa Method OA-2.

Receptor Survey

As part of the investigation, we will do a search for potential receptors including drinking and non-drinking water wells, utilities, structures, and surface water receptors. Potential receptors will be mapped and recorded.

Reporting

Verbal results of the assessment will be provided to you as they become available. Upon completion of the on-Site work and receipt of laboratory analytical results, a report will be prepared detailing the methods, results, and conclusions/recommendations. A draft copy of the report will be forwarded to you prior to report finalization.

An electronic copy and two hard copies of the Braun Intertec report will be submitted to you unless you request otherwise.

Cost Estimate

Braun Intertec will provide the services described herein on an hourly and unit-cost basis. The estimated cost breakdown summary is attached.

Scheduling

Field work is anticipated to be scheduled within approximately 3-4 weeks of receiving your authorization, depending on drill rig/equipment availability. The field work is estimated to take 2 days to complete. Typical turnaround time on laboratory analysis is approximately 5 to 8 business days for all samples. A draft report will be forwarded to you within 3 weeks after receipt of laboratory analytical results.

If the proposed Scope of Services cannot be completed according to this schedule due to circumstances beyond control, Braun Intertec will notify and discuss with you the revised schedule.

Assessment Limitations

Please note the Scope of Services for the proposed investigation, in conjunction with the existing data, is designed to further evaluate impacts at the Site. However, because there is a fixed number of sampling locations proposed, the Scope of Services proposed herein may not fully define the extent of contamination that may be present at the Site.

Acceptance of Proposal/General Remarks

Braun Intertec appreciates the opportunity to present this proposal to you. It is being sent in an electronic version ***only***. A hard copy of the proposal will be supplied upon request.

The estimated cost presented in this proposal is based on the scope of services described and the assumption that the proposal will be authorized within 30 days and that the project will be completed within the proposed schedule. If the project is not authorized within 30 days, we may need to modify the proposal. If the project cannot be completed within the proposed schedule due to circumstances beyond our control, revising the proposal may be required for completion of the remaining tasks.

Terms of this agreement will be in accordance with the Master Service Agreement #5600020181 between Braun Intertec and Canadian Pacific.

Authorization will be provided in the form of a CP purchase order number.

If you have any questions regarding this proposal, please call Jeremy Hansen at 952.995.2464.

Sincerely,

BRAUN INTERTEC CORPORATION

Jeremiah R. Hansen
Associate Principal – Senior Scientist

Michael L. Bratrud
Vice President – Principal Scientist

Attachment:
Braun Cost Estimate
Standard Operating Procedures (Index Included)