associated earth sciences incorporated

April 28, 2014
Project No. KV140096A

City of Kirkland
Department of Public Works
123 5th Avenue
Kirkland, Washington 98033

Attention: Mr. Aaron McDonald, P.E.

Subject: Estimate of Remediation Costs
Petroleum Hydrocarbon Contamination
Kirkland Stormwater Decant Facility
904 8th Street
Kirkland, Washington

Dear Mr. McDonald:

In accordance with your request, Associated Earth Sciences, Inc. (AESI) has prepared the following summary of tasks and estimated costs for remediation of petroleum-contaminated soil and ground water at the subject site. The costs presented below are not intended as a bid for services, but have been presented for budgetary purposes based on the currently available information as described in our March 28, 2014 "Phase II Environmental Site Assessment" report. We have included in our scope of work some additional exploration and testing to better characterize the extent of contamination that may extend off-site into the 8th Street right-of-way.

Additional (pre-remediation) Subsurface Exploration, Sampling, and Testing ..... $7,500
Grading Permit (application and SEPA checklist preparation/fees) ..... $2,000
Remediation Contractor
(Does not include shoring, removal or replacement of any conflicting underground utilities or trees (if applicable); please refer to the attached IO Environmental & Infrastructure, Inc. cost estimate for estimated soil volumes and other applicable details)..... $161,000
Water/Sludge Disposal (assumes 20,000 gallons of water, 400 gallons of sludge)..... $6,500
Chain-Link Fence Removal/Replacement..... $1,000

IO Environmental & Infrastructure, Inc.
2200 118th Avenue SE
Bellevue, WA 98005
**425-454-1086**
C (425) 698-3093

April 21, 2014
Tim Peters
Associated Earth Sciences
911 5th Avenue, Kirkland WA

Attn: Mr. Peters

RE: **CONTAMINATED SOIL REMOVAL ENGINNERING ESTIMATE –CITY OF KIRKLAND DECANT FACILITY**

We herewith submit our proposal package in response to the above referenced project.

This engineering estimate was prepared based on information provided from you and telephone, email communications, and a Site visit with you on April 18, 2014. Our staff averages over **20-years** in the environmental remediation and construction industry. **IOEI employees an over 40% veteran work force.**

Scope of Work:

- Prepare a Site specific health and safety plan;
- Contact one call utility notifications and private utility locates;
- Mobilize equipment and personnel to the Site;
- Saw cut a 50-foot by 40-foot area and remove asphalt for disposal;
- Excavate up to 1,925 tons of overburden for re-use/disposal;
- Dewater excavation as needed with temporary well point and 20,000 gallon baker tank and pumps;
- Remove and transport up to 900-tons of diesel contaminated soil for offsite disposal and permitted facility;
- Backfill excavation to 1-foot above groundwater level with 2 to 4 inch quarry spall and cover with filet fabric;
- Utilize up to 450 tons of clean overburden as backfill if deemed suitable for backfill;
- Backfill remainder of excavation with 1 ¼ minus structural fill and compact;
- Compaction test and perform proctor testing for 95% compaction in excavation (1-foot lifts);
- Restore up to 3,000 sf of 3-inch thick asphalt; and
- Demobilize equipment and materials from the Site.

Assumptions/Exclusions:

1. Work can be performed during normal business hours (M-F 7am to 5pm);
2. Estimate assumes two mobilizations and demobilizations;
3. No permits are included;
4. Level D PPE only;
5. Entrance gate will be removed by others;
6. Sampling by others on 24-hour TAT;

Field Screening, Testing, and Reporting

| | |
|---|---|
| AESI field screening, sample collection, field documentation (assumes 10 days at $800 per day) | $8,000 |
| Laboratory subcontractor | $4,500 |
| Preparation of final report | $2,500 |
| **TOTAL** | **$193,000** |

We appreciate this opportunity to have been of service to you with your project. Should you have any questions, or require additional information, please do not hesitate to call.

Sincerely,
**ASSOCIATED EARTH SCIENCES, INC.**
**Kirkland, Washington**


Timothy J. Peter, L.E.G., L.Hg.
Senior Project Geologist

Jon N. Sondergaard, L.G., L.E.G.
Senior Principal Geologist

Attachment: IO Environmental & Infrastructure, Inc. Estimate

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7. Hydrant and tree removal not required;
8. Utility disconnect and reconnect by others;
9. Disposal of water is not included;
10. No shoring is required;
11. Vault removal and replacement by others;
12. Work can be completed in 7-10 days; and
13. Price does **not include** Washington State Sales Tax (WSST@ 9.5%).

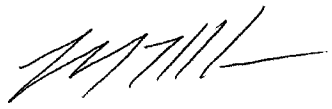
The **time and materials** engineering estimate to perform the above scope of work is **$161,000.00.** IOEI recommends that the end user add a contingency of 25-percent to this estimate.

The following unit prices may apply for additional work:

| | |
|---|---|
| **Excavation, loading, transportation, and disposal of contaminated soil per15-tons:** | **$90/ton** |
| **Backfill and placement of soil per 15-tons:** | **$35/ton** |

We appreciate the opportunity to provide you with a proposal on this project. Please do not hesitate to contact me if there is anything else that you require at this time or if you have any questions regarding the contents of this proposal.

Thank you,



Jeff Keller
Senior Project Manager
425-698-3093
IO Environmental and Infrastructure LLC.