Boeing Realty Corporation
4060 Lakewood Blvd., 6th Floor
Long Beach, CA 90808-1700
Telephone: (562) 627-3200
FAX: (562) 627-3109

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MAR 19 1999
BOEING REALTY CORPORATION

WORK AUTHORIZATION

February 18, 1999

Authorized to:
HARDING LAWSON & ASSOCIATES
30 Corporate Park Suite 400
Irvine CA 92606

Project: TORRANCE
Groundwater Testing and Drilling
Contract No.: **05160-HAR008**

Dear HARDING LAWSON:

This document constitutes your formal authorization to perform work for the above mentioned project in the amount **Not to Exceed $45,639.00. Scope of Work:** Groundwater Testing and Drilling. Refer to your proposal dated December 21,1998. **Completion date: Estimate 4–6 Months. Total contract amount shall not exceed $45,639.00,** subject to our receipt of:

- Executed copy of this letter,
- Current certificate of insurance evidencing your coverage for General Liability, Automobile Liability, and Worker's Compensation per Exhibit H previously submitted.
- Copy of your contractor's license showing license number (if applicable).

Any revisions to this contract will be issued by a contract amendment. Any work performed without such documentation is not formally authorized. All work is to be the direction of and coordinated with Mario Stavale at (562) 627-3014.

The following Exhibits are enclosed and are incorporated as part of this Work Authorization:

Exhibit C:	(C1 thru C7) Lien release forms and Lien Waivers & Pay Procedure - *must be submitted on BRC format*
Exhibit F:	CONDITIONS FOR CONTRACTORS WHO WORK FOR BOEING REALTY CORPORATION (BRC)
Exhibit G:	BRC GENERAL CONDITIONS OF CONTRACT
Exhibit H:	INSURANCE ENDORSEMENT
Exhibit I:	NOTICE TO OWNER PROVIDED IN ACCORDANCE WITH SECTION 7018.5 OF THE BUSINESS AND PROFESSIONS CODE

When invoicing for this work, PLEASE REFER TO THE CONTRACT NUMBER AND PROJECT NAME NOTED ABOVE, and submit invoices to BOEING REALTY CORPORATION Attn: ACCOUNTING DEPARTMENT at 4060 Lakewood Blvd 6th Floor, Long Beach, CA 90808-1700. If Insurance Verification is required, payments are subject to a hold if not current.

Please sign your acceptance of this contract agreement at the location provided below and deliver the original to us for our file prior to commencement of work.

Should you have any questions, please call our office at 562-627-3075.

Sincerely,
BOEING REALTY CORPORATION

MARIO STAVALE

Approved:

BRC MANAGEMENT
cc: Chris Stoker- Integrated Environmental

Contractor's acceptance in accordance with the above noted conditions:

HARDING LAWSON & ASSOCIATES

Harding Lawson Associates

December 21, 1998

02801 99.1

Mr. Christopher Stoker
Integrated Environmental Services, Inc.
3990 Westerly Place, Suite 210
Newport Beach, California 92660

Revised Fixed-Price Bid To Implement
Final Offsite Groundwater Characterization Workplan
Lockheed Martin Corporation / International Light Metals (ILM) Facility
Boeing Realty Corporation / Lockheed Martin Corporation Joint Investigation
Los Angeles, California

Dear Mr. Stoker:

In response to your request dated December 8, 1998, Harding Lawson Associates (HLA) is providing Integrated Environmental Services, Inc. (Integrated), contractor to Boeing Realty Corporation (BRC), this revised fixed-price bid to provide the subject services. Our proposed cost is based on the revised scope set forth in the *Offsite Groundwater Characterization Workplan* (Final Workplan) prepared by Integrated Environmental Services, Inc. (Integrated) on behalf of BRC (December 1998). It is our understanding that data generated by the characterization will be used by the Regional Water Quality Control Board – Los Angeles Region (RWQCB) and the Department of Toxic Substance Control (DTSC).

Based on our review of the Final Workplan, our revised bid is based on the following tasks:

- Task 1: Underground Utility Clearance
- Task 2: Soil Sampling
- Task 3: Installation, Development, and Sampling of Temporary Groundwater Monitoring Wells
- Task 4: Management of Investigation-Derived Waste
- Task 5: Land Survey

Details regarding these tasks are provided in the following subsections.

Task 1 - Underground Utility Clearance

HLA will "clear" all investigation areas prior to drilling by (1) marking locations for clearance by Underground Service Alert and associated utility field personnel (USA), Boeing Douglas Products Division personnel, and International Light Metals personnel, and (2) hand-augering to a minimum of 5 feet below ground surface (bgs). It has been our experience that USA will limit its clearance to offsite locations along perimeter, public rights-of-way (i.e., roads and sidewalks bordering the facilities);

Engineering and
Environmental Services

30 Corporate Park, Suite 400, Irvine, CA 92606 714/260-1800 Fax: 714/260-1830

therefore, it is expected that the proposed hand-augering will provide higher quality utility clearance data.

Task 2 - Soil Sampling

As specified in the RFP, soil samples will be collected at 2.5, 5, and at 10-foot intervals thereafter until groundwater is encountered. Based on data collected by HLA during the recent monthly groundwater sampling events in October and November 1998, the depth to the top of the first water-bearing zone is anticipated to be approximately 65 feet bgs.

The soil samples will be submitted to Orange Coast Analytical, Inc. (OCA), a state-certified laboratory located in Tustin, California, for analysis and quantification of:

- Volatile organic compounds (VOCs) per EPA Method 8260
- Total petroleum hydrocarbons (TPH fuel fingerprint) per EPA Method 8015 (modified) if field readings exceed the threshold limit established by the RWQCB

It is our understanding that the additional analyses for polychlorinated biphenyls (PCBs) using EPA Method 8080 may be conducted based on the EPA Method 8015 (modified) results.

Field monitoring and decontamination procedures specified in the Final Workplan will be strictly adhered by HLA and our subcontractors. QA/QC samples, including trip blanks, equipment rinsate blanks, and field duplicates, will be collected and submitted to OCA in accordance with Section 4.3 of the SAP. All samples will be identified, labeled, contained, and preserved in accordance with Section 4.4 of the SAP. HLA personnel will ensure that the field and laboratory custody procedures set in the SAP are strictly adhered to.

It is our understanding that OCA will invoice Integrated for services rendered; therefore, laboratory analytical costs are not included in our cost estimate.

Task 3 - Installation, Development, and Sampling of Groundwater Monitoring Wells

It is estimated that eight temporary monitoring wells will be installed at the locations shown on Exhibit 9 of the Final Workplan, developed, and sampled to assess groundwater quality. Specifically, the temporary monitoring wells will be used to confirm groundwater elevations, the presence or absence of COCs, and the nature and concentration of contamination. It is our understanding that permanent wells may be constructed pending the results obtained for groundwater samples collected from the temporary monitoring wells. Because it is unknown how many, if any, permanent wells will be constructed, our

proposed cost does not account for the construction, development, sampling, and surveying of permanent wells.

Monitoring well drilling and construction will be conducted using a hollow-stem auger drill rig in accordance with Section 3.4 under the supervision of a California Registered Geologist. The temporary monitoring wells will be constructed using a single slotted interval with 10 feet of screen below the estimated groundwater surface and 10 feet above the groundwater surface in accordance with Section 3.4.1 of the Final Workplan. Based on data collected by HLA during the October and November monthly groundwater sampling events, it is expected that the total depth of the monitoring wells will be approximately 80 feet bgs. The monitoring wells will be developed no sooner than 48 hours after installation and gauged prior to and after development in accordance with Section 3.4.3 of the Final Workplan.

The monitoring wells will be purged, sampled, and field monitored in accordance with the specifications of the Final Workplan. Field parameters (i.e., conductivity, pH, temperature, and turbidity) will be deemed "stable" in accordance with Section 3.4.3 of the Final Workplan. To reduce the cost associated with the disposal and profiling process, our proposed cost is based on the use of polyethylene (poly) tanks, as opposed to drums.

The groundwater samples will be collected from the temporary monitoring wells and field measurements (i.e., depth to water, conductivity, temperature, pH, and turbidity) made using calibrated meters in accordance with Section 4.2 of the SAP. PID readings will also be used to monitor well headspace immediately after the cap has been removed prior to groundwater purging and sample collection. It is our understanding that OCA will invoice Integrated for services rendered; therefore, laboratory analytical costs are not included in our cost estimate.

HLA will secure well permits, as required by the Los Angeles County Department of Health Services, prior to drilling. It is our understanding that the temporary monitoring wells will be abandoned under a separate scope of work; therefore, abandonment costs are not included in our proposed cost.

Task 4 - Management of Investigation-Derived Waste

HLA will classify and recommend disposal options for the investigation-derived waste (IDW) based on the findings of the investigation. Our proposed cost includes two roll-off bins for containerization of soils and two poly tanks for 30 days. If the IDW remains onsite for more than 30 days, additional rental fees for the roll-off(s) and poly tank(s) will be incurred. In an effort to minimize disposal costs and increase disposal options, one roll-off bin and one poly tank will be used for "clean" soil and water (as determined in the field). Personal protective equipment will be containerized in 55-gallon drums.

Task 5 - Land Survey

HLA will contract Tait & Associates to survey the top-of-casing elevations and locations (northing/easting coordinates) of the newly constructed monitoring wells to the nearest 0.01 foot (relative to mean sea level) and 1 foot, respectively, as specified in Section 3.4.4 of the SAP. The outer protective casing (which will also be surveyed) and top of casing of each well will marked so as to provide a reference point for field measurements. Survey information will be documented on survey forms, on the master surveyed site plan, and in a computer database format. HLA will instruct the surveying crew to tie the newly constructed monitoring wells into existing, surveyed monitoring wells and/or surveyed structures to ensure data accuracy. For simplicity, the surveyor will be instructed to use the existing site coordinate system.

It is our understanding that Tait & Associates will bill HLA directly for services rendered. Therefore, surveying costs are included in our cost estimate.

CLOSING

It is our understanding that draft and final reports will be prepared by Geraghty & Miller and Integrated on behalf of ILM and BRC to be submitted to RWQCB and DTSC. HLA is prepared to perform these tasks, in accordance with the Sampling and Analysis Plan (SAP) as set forth in the Final Workplan, for the fixed price of $45,639. Task-specific costs are detailed in Attachment A.

The primary differences between our revised fixed-price bid (i.e., this bid) and our original bid based on the original workplan submitted to Integrated on September 2, 1997, include the:

- Replacement of Matthew McCullough, who is no longer with HLA, with Nicholas Hagen as project manager
- Reduction, from eleven to eight, in the number of temporary groundwater monitoring wells to be constructed
- Inclusion of soil sampling during the construction of the eight temporary monitoring wells
- Understanding that no permanent wells are to be constructed as part of this effort

The Final Workplan does not call for the abandonment of any of the temporary monitoring wells; therefore, our bid does not include abandonment costs. Finally, it is our understanding that Orange Coast Analytical, Inc. (OCA), the contract laboratory to Integrated and BRC, will invoice Integrated directly;

therefore, analytical costs (and the associated markup that would be incurred by BRC) are not included in our bid.

We thank Integrated and BRC for the opportunity to provide this revised bid and look forward to performing the services outlined in the Final Workplan for this critical project. We are fully prepared to execute the proposed work in accordance with the strict schedule and provisions set forth in the Final Workplan and the Non-Disclosure and Confidentiality Agreement previously executed by and between Integrated and HLA.

HLA and our selected drilling contractor, Gregg Drilling and Testing, have worked together at the C-6 facility and, as such, are familiar with the administrative and technical aspects of the project. Our experienced team will minimize disruptions and provide the high quality data required to meet the data quality objectives forth in the Final Workplan. If you have any questions, please do not hesitate to contact either of the undersigned at (949) 260-1800.

Very truly yours,

HARDING LAWSON ASSOCIATES

for James Van de Water, R.G., C.HG.
Associate Hydrogeologist

Steve P. Howell for
Managing Principal
Southern California

cc: Mr. Mario Stavale – Boeing Realty Corporation

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ATTACHMENT A

TASK-SPECIFIC COST DETAILS

TASK-SPECIFIC COST ESTIMATE

Task 1	Underground Utility Clearance (including HASP)	$653
Tasks 2 and 3	Soil Sampling and Installation, Development, and Sampling of Groundwater Monitoring Wells	$37,824
Task 4	Management of Investigation-Derived Waste	$3,219
Task 5	Land Survey	$3,943
	Project Total	**$45,639**

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