Roll Call Number
21-1390

Agenda Item N	umber 
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Date September 13, 2021

APPROVING SUPPLEMENTAL AGREEMENT NO. 1 TO THE PROFESSIONAL SERVICES AGREEMENT (PSA) WITH BARKER, LEMAR & ASSOCIATES, INC. d/b/a EVORA CONSULTING, LTD. FOR ADDITIONAL PROFESSIONAL SERVICES FOR DICO 2021 ANNUAL SERVICES – OPERATION, MAINTENANCE, AND SAMPLING OF TREATMENT SYSTEM, NOT TO EXCEED \$115,000

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DES MOINES, IOWA: That Supplemental Agreement No. 1 between the City of Des Moines and Barker, Lemar & Associates, Inc. d/b/a Evora Consulting, Ltd., Mary Thomsen, President/CEO, 1801 Industrial Circle, West Des Moines, Iowa 50266, for an additional amount not to exceed \$115,000, based on hourly rates and reimbursable costs, to provide additional professional services for DICO 2021 Annual Service — Operation, Maintenance, and Sampling of Treatment System, a copy of which is on file in the office of the City Clerk, is hereby approved as to form and content.

BE IT FURTHER RESOLVED: That the Mayor and City Clerk are hereby authorized and directed to execute and attest, respectively, said Supplemental Agreement No. 1 for and on behalf of the City of Des Moines, Iowa.

	(Council Letter Number <u>21-376</u>	attached)
	Activity ID 01-2021-018	
Moved by _	to adopt.	

FORM APPROVED: s/Kathleen Vanderpool

SLNpw

Kathleen Vanderpool Deputy City Attorney

Funding Source: 2021-2022 CIP, Page 44, DICO Site Improvements, MS023, General Fund

COUNCIL ACTION	YEAS	NAYS	PASS	ABSENT
COWNIE	V			
BOESEN	V			
GATTO	V			
GRAY				
MANDELBAUM				
VOSS	~			
WESTERGAARD				
TOTAL	6			
MOTION CARRIED			APP	ROVED

#### **CERTIFICATE**

I, P. Kay Cmelik, City Clerk of said City hereby certify that at a meeting of the City Council of said City of Des Moines, held on the above date, among other proceedings the above was adopted.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year first above written.

May melik City Clerk

# CITY OF DES MOINES SUPPLEMENTAL AGREEMENT NO. 1 TO AGREEMENT FOR PROFESSIONAL SERVICES DICO 2021 ANNUAL SERVICES - OPERATION, MAINTENANCE, AND SAMPLING OF TREATMENT SYSTEM Activity ID 01-2021-018

WHEREAS, on January 25, 2021, by Roll Call No. 21-0071, the City of Des Moines, Iowa, hereinafter referred to as the "City", and Barker, Lemar & Associates, Inc. d/b/a Evora Consulting, LTD, Mary Thomsen, President/CEO, 1801 Industrial Circle, West Des Moines, Iowa 50266, hereinafter referred to as the "Consultant", entered into a Professional Services Agreement (the Agreement) in connection with the DICO 2021 Annual Services - Operation, Maintenance, and Sampling of On-Site Groundwater Remediation Treatment System, not to exceed \$120,000.00; and \_\_\_\_\_

WHEREAS, the City staff has negotiated a Supplemental Agreement No. 1 for additional professional services with the Consultant for cleaning and repairs to monitoring wells, provision of groundwater sampling and field screening services and required equipment, sampling and analytical testing of groundwater, preparing and submitting required reports and permit applications, and providing additional professional assistance to the City; and

**NOW, THEREFORE, IT IS MUTUALLY AGREED,** that the Agreement for Professional Services, DICO 2021 Annual Services - Operation, Maintenance, and Sampling of On-Site Groundwater Remediation Treatment System is amended as follows:

SECTION 1 - GENERAL, Paragraph M, SUBLETTING OR ASSIGNMENT TO CONSULTANT, is amended by adding the following: Thorpe Well Development Co.

**SECTION 1 – GENERAL, Paragraph E, is amended by adding the following:** 

"Attachment 1 is replaced with Attachment 1 to Supplemental Agreement No. 1. The Consultant shall purchase and maintain insurance in accordance with the insurance requirements set forth in Attachment 1 to protect the Consultant and City throughout the duration of the Agreement and all Supplemental Agreements. The Consultant shall not commit any act which shall invalidate any policy of insurance. The Consultant shall defend, indemnify and hold harmless the City in accordance with the indemnification requirements set forth in Attachment 1. The Consultant shall be subject to all terms and provisions set forth in Attachment 1 and the exhibits thereto."

# SECTION 2 - SCOPE OF SERVICES, Paragraph A, SERVICES PROVIDED BY CONSULTANT, is amended by adding the following:

"Consultant shall provide additional professional services and other services as set forth in Attachment 2 to this Supplemental Agreement."

#### **SECTION 3 – COMPENSATION, Paragraph A**, is amended by adding the following:

"Compensation for services under this Supplemental Agreement shall be in accordance with the terms of said original Professional Services Agreement for an additional not-to-exceed amount of \$115,000.00 to be paid on the basis of hourly labor rates and reimbursable costs as shown in Attachment 3 to the original Agreement.

#### **SECTION 4 – COMPLETION OF WORK**, is amended by adding the following:

"The Consultant shall complete all services outlined in Supplemental Agreement No. 1 on or before March 31, 2022, providing no unforeseen delays are experienced beyond the control of the Consultant."

**BE IT FURTHER AGREED,** that all other terms and conditions of the original January 25, 2021 Agreement, shall remain in full effect except as modified by this Supplemental Agreement No. 1.

**IN WITNESS WHEREOF**, the parties hereto have executed this Agreement, in triplicate, as of this 13<sup>th</sup> day of September, 2021.

CITY OF DES MOINES, IOWA

BARKER, LEMAR & ASSOCIATES, INC. d/b/a EVORA CONSULTING, LTD

T.M. Franklin Cownie, Mayor

Mary Thomsen President/CEO

Form Approved:

Kathleen Vanderpool, Deputy City Attorney

Attest:

P. Kay Cmelik, City Clerk

#### **ATTACHMENT 1**

#### CITY OF DES MOINES, IOWA DICO SITE SERVICES

#### **INSURANCE & INDEMNIFICATION REQUIREMENTS**

For the purposes of this Attachment and all provisions included herein, the term "CITY" shall mean the City of Des Moines, Iowa, including its elected and appointed officials, employees, agents, volunteers, boards, commissions and others working on its behalf.

#### 1. GENERAL

The CONTRACTOR shall purchase and maintain the following insurance to protect the CONTRACTOR and CITY throughout the duration of the Contract. Said insurance shall be provided by insurance companies "admitted" or "non-admitted" to do business in the State of Iowa having no less than an A. M. Best Rating of "B+." All policies shall be written in form and amounts satisfactory to the CITY and on an occurrence basis, unless otherwise indicated below. Certificates of Insurance confirming required insurance coverage shall be submitted to the CITY prior to Contract execution or commencement of work and/or services under the Contract.

#### 2. INSURANCE REQUIREMENTS

- A. <u>COMMERCIAL GENERAL LIABILITY INSURANCE</u>: Commercial General Liability insurance on an occurrence basis with limits of liability not less than \$2,000,000 per occurrence and aggregate combined single limit covering Personal Injury, Bodily Injury and Property Damage. Coverage shall include: (a) Contractual Liability, (b) <u>Premises and Operations</u>, (c) <u>Products and Completed Operations</u>, (d) <u>Independent Contractors Coverage</u>, (e) <u>Personal and Advertising Injury</u> and (f) <u>Explosion, Collapse and Underground- XCU (when applicable</u>). The policy shall be endorsed to provide an Aggregate Per Location or Per Project Endorsement. *Waiver of Subrogation in favor of the CITY is required as per Paragraph 2.J. below.*
- B. <u>AUTOMOBILE LIABILITY INSURANCE</u>: Automobile Liability Insurance with limits of liability of not less than \$2,000,000 per occurrence and aggregate combined single limit covering Bodily Injury and Property Damage. Coverage shall include all owned, non-owned, and hired vehicles. If the CONTRACTOR'S business does not own any vehicles, coverage is required on non-owned and hired vehicles. Policy shall include Contractual Liability coverage. *Waiver of Subrogation in favor of the CITY is required as per Paragraph 2.J. below.*
- C. <u>UMBRELLA/EXCESS INSURANCE</u>: An Umbrella or Excess Liability Insurance policy with limits of liability of \$5,000,000 designed to follow the form of the underlying CGL and Auto Liability policies. If the Umbrella or Excess Insurance policy does not follow the form of the primary policies, it shall include the same endorsements as required of the primary policies including a *Waiver of Subrogation in favor of the CITY as per Paragraph 2.J. below.*
- D. WORKERS' COMPENSATION & EMPLOYER'S LIABILITY INSURANCE: As required by State of Iowa Workers' Compensation Law, the CONTRACTOR shall procure and maintain Worker's Compensation Insurance, including Employer's Liability Coverage. The Workers' Compensation Insurance shall be written with State of Iowa statutory limits. If, by Iowa Code Section 85.1A, the CONTRACTOR is not required to purchase Workers' Compensation Insurance, the CONTRACTOR shall have a copy of the State's Nonelection of Workers' Compensation or Employers' Liability Coverage form on file with the Iowa Workers' Compensation Insurance Commissioner, as required by Iowa Code Section 87.22. Waiver of Subrogation in favor of the CITY is required as per paragraph 2.J. below.

JULY2018 - Engineering - Demolition Services

- E. POLLUTION LIABILITY INSURANCE: Pollution Liability Insurance with limits of not less than \$2,000,000 per occurrence and \$5,000,000 aggregate. The CONTRACTOR shall be responsible for any and all deductibles or retentions. Said deductibles and retentions shall be indicated on the Certificate of Insurance. Any Pollution Liability: Coverage shall include the handling, removal and disposal of all hazardous materials from the City of Des Moines property identified in this Contract. Coverage must provide for the transportation of the hazardous materials. The insurance policy must provide coverage at any and all temporary storage facilities or sites as well as at any processing and final disposal facilities or sites. The insurance must include Contractual Liability coverage. CONTRACTOR shall maintain this coverage for a period of three (3) years following the expiration of the Contract. Waiver of Subrogation in favor of the CITY is required as per Paragraph 2.J. below.
- F. <u>PROFESSIONAL LIABILITY INSURANCE</u>: If the CONTRACTOR will be providing professional services in regard to the contract, Professional Errors and Omissions Insurance with limits not less than \$1,000,000 per claim and in the aggregate.
- G. <u>ADDITIONAL INSURED ENDORSEMENT</u>: All <u>General Liability and Pollution Liability Insurance</u> policies shall include the CITY as an Additional Insured. The CONTRACTOR'S <u>General Liability and Pollution Liability Insurance</u> policies shall be primary to that of the CITY and noncontributory to any other insurance or similar coverage available to the CITY, whether the other available coverage is primary, contributing or excess.
- H. <u>GOVERNMENTAL IMMUNITY ENDORSEMENT</u>: The <u>General Liability and Pollution Liability Insurance</u> policies shall include the CITY'S Governmental Immunities Endorsement language as provided below. <u>Standard ISO or insurance carrier "Waiver of Immunity" endorsements are not acceptable.</u>

## CITY OF DES MOINES, IOWA GOVERNMENTAL IMMUNITIES ENDORSEMENT

- 1. <u>Nonwaiver of Government Immunity</u>. The insurance carrier expressly agrees and states that the purchase of this policy and the including of the City of Des Moines, Iowa as Additional Insured does not waive any of the defenses of governmental immunity available to the City of Des Moines, Iowa under Code of Iowa Section 670.4 as it now exists and as it may be amended from time to time.
- 2. <u>Claims Coverage</u>. The insurance carrier further agrees that this policy of insurance shall cover only those claims not subject to the defense of governmental immunity under the Code of Iowa Section 670.4 as it now exists and as it may be amended from time to time. Those claims not subject to Code of Iowa Section 670.4 shall be covered by the terms and conditions of this insurance policy.
- 3. <u>Assertion of Government Immunity</u>. The City of Des Moines, Iowa shall be responsible for asserting any defense of governmental immunity, and may do so at any time and shall do so upon the timely written request of the insurance carrier. Nothing contained in this endorsement shall prevent the carrier from asserting the defense of governmental immunity on behalf of the City of Des Moines, Iowa.
- 4. Non-Denial of Coverage. The insurance carrier shall not deny coverage under this policy and the insurance carrier shall not deny any of the rights and benefits accruing to the City of Des Moines, Iowa under this policy for reasons of governmental immunity unless and until a court of competent jurisdiction has ruled in favor of the defense(s) of governmental immunity asserted by the City of Des Moines, Iowa.

- 5. No Other Change in Policy. The insurance carrier and the City of Des Moines, Iowa agree that the above preservation of governmental immunities shall not otherwise change or alter the coverage available under the policy.
- I. <u>CANCELLATION & NONRENEWAL NOTIFICATION ENDORSEMENT</u>: <u>All</u> Insurance policies shall include a policy endorsement providing the CITY with no less than fifteen (15) days Advance Written Notice of Cancellation or Nonrenewal, and ten (10) days Written Notification of Cancellation due to non-payment of premium. *Written notifications shall be sent to: City of Des Moines, Risk Management, City Hall, 400 Robert D. Ray Drive, Des Moines, Iowa 50309.*
- J. WAIVER OF SUBROGATION: To the fullest extent permitted by law, CONTRACTOR hereby releases the CITY from and against any and all liability or responsibility to the CONTRACTOR or anyone claiming through or under the CONTRACTOR by way of subrogation or otherwise for any loss without regard to the fault of the CITY or the type of loss involved including loss due to occupational injury. This provision shall be applicable and in full force and effect only with respect to loss or damage occurring during the time of this Contract. The CONTRACTOR'S policies of insurance shall contain either a policy provision or endorsement affirming the above stated release in favor of the CITY including its elected and appointed officials, agents, employees and volunteers, and other working on its behalf.
- K. <u>PROOF OF INSURANCE</u>: The CONTRACTOR shall provide the following proof of insurance to the CITY:
  - <u>Certificates of Insurance</u> evidencing all insurance coverage as required in paragraphs A through I above utilizing the latest version of the ACORD form. The Certificate(s) of Insurance shall specify the <u>Title of the Agreement</u> under "Description of Operations/Locations/Vehicle/Special Items" and indicate <u>Waiver of Subrogation</u> by marking the corresponding boxes on COI and/or including a statement of compliance under Description of Operations.
  - A copy of the <u>Cancellation and Nonrenewal Notification Endorsements</u> required in paragraph 2.H. above, or its equivalent.
  - Copies of Additional Insured Endorsements.

Mail Certificates of Insurance to: City of Des Moines, Risk Management, City Hall, 400 Robert D. Ray Drive, Des Moines, Iowa 50309.

L. <u>AGENTS AND SUBCONTRACTORS</u>: The CONTRACTOR shall require that any of its agents and subcontractors who perform work or services on its behalf under this Contract purchase and maintain the type of insurance customary to the industry or trade related to the services provided.

#### 3. INDEMNIFICATION REQUIREMENTS

For other than professional services rendered, to the fullest extent permitted by law, CONSULTANT agrees to defend, pay on behalf of, indemnify, and hold harmless the CITY against any and all claims, demands, suits, damages or losses, together with any and all outlay and expense connected therewith including, but not limited to, attorneys' fees and court costs that may be asserted or claimed against, recovered from or suffered by the CITY by reason of any injury or loss including, but not limited to, personal injury, bodily injury including death, property damage including loss of use thereof, and economic damages that arise out of or are in any way connected or associated with CONSULTANT'S work or services under this Agreement, including that of its officers, agents, employees, subconsultants, subcontractors and others under the control of CONSULTANT.

<u>For professional services rendered</u>, to the fullest extent permitted by law, CONSULTANT agrees to pay on behalf of, indemnify, and hold harmless the CITY against any and all claims, demands, suits, damages or losses, together with any and all outlay and expense connected therewith including, but not limited to,

attorneys' fees and court costs and economic damages that may be recovered from or suffered by the CITY that arise out of any negligent act, error or omission of the CONSULTANT including that of its officers, agents, employees, subconsultants, subcontractors and others under the control of CONSULTANT.

CONTRACTOR'S obligation to indemnify the CITY contained in this Contract is not limited by the amount or type of damages, compensation or benefits payable under any workers' compensation acts, disability benefit acts, or other employee benefits acts.

The CITY shall not be liable or in any way responsible for any injury, damage, liability, claim, loss or expense incurred by CONTRACTOR arising out of or in any way connected or associated with CONTRACTOR'S work or services under this Contract, including that of its officers, agents, employees, subcontractors and others under the control of CONTRACTOR, except for and only to the extent caused by the negligence of the CITY or the CITY'S employees, consultants, agents or others for whom the CITY is responsible.

CONTRACTOR expressly assumes responsibility for any and all damage caused to CITY property arising out of or in any way connected or associated with CONTRACTOR'S work or services under this Contract, including that of its officers, agents, employees, subcontractors and others under the control of CONTRACTOR.

CONTRACTOR shall ensure that its activities on CITY property will be performed and supervised by adequately trained and qualified personnel, and CONTRACTOR will observe all applicable safety rules.

#### ATTACHMENT NO. 2 SUPPLEMENTAL AGREEMENT NO. 1 SCOPE OF SERVICES

# DICO 2021 ANNUAL SERVICES – OPERATION, MAINTENANCE, AND SAMPLING OF ON-SITE GROUNDWATER REMEDIATION TREATMENT SYSTEM Activity ID 01-2021-018

#### 1.0 PROJECT UNDERSTANDING

The City of Des Moines (**CITY**) has taken ownership of the property located at 200 SW 16<sup>th</sup> Street (former DICO facility, hereinafter referred to as "the site") in Des Moines, Iowa in 2021. The current groundwater remediation system at the DICO property requires weekly site visits, monthly sampling, and reporting. An annual site inspection is required to ensure the site is in compliance with current guidelines set forth in the approved Environmental Protection Agency (EPA) documentation, and semi-annual reporting shall be completed in conjunction with the groundwater sampling that occurs in April and October.

Additional services outlined in this Attachment No. 1 are related to pump replacement, well cleaning, additional reporting, well repair, work plan preparation, sample analysis, provision of sampling equipment, and additional meeting attendance and technical support, as requested of the **CONSULTANT** by the **CITY**.

#### 2.0 SCOPE OF SERVICES

Based on the above understanding, the **CONSULTANT** shall provide the following scope of services to assist the **CITY** with required actions associated with owning and operating the site and to comply with the requirements set forth in the Appendix D of the EPA Consent Decree (No. 4:10-cv-00503-RP-RAW), with the exception being work to be performed by the **CITY** as described in Section 5 regarding maintenance and operation of the asphalt cap:

- Complete the Acidification, Cleaning and Pump Replacement of Extraction Well ERW#7 CONSULTANT shall provide for refurbishing of the well screen at Extraction Well ERW#7 to enhance the contaminant removal capabilities of the well and shall coordinate the replacement of the ERW#7 pump.
- <u>Provision of Groundwater Sampling and Field Screening Equipment</u> CONSULTANT shall provide groundwater sampling and field screening equipment as required for the April and October sampling events. The following equipment shall be provided for use at the site:
  - o Peristaltic Pump and Associated Tubing
  - o YSI Multiparameter Meter (ProDDS), Case, Battery, and Calibration Fluids
    This equipment shall be utilized at the DICO property to complete the EPA required semi-annual sampling.
- Well Repair CONSULTANT shall complete repairs on the monitoring wells associated with the site.
  Well repairs include, but are not limited to, replacement or repair of hasps and hinges, replacement of
  manways, installation of peri caps required for sampling, installation of j-plugs, and miscellaneous
  parts. The repairs shall be completed for any monitoring well that will be included in the October 2021
  sampling event

- Work Plan Completion and Submittal CONSULTANT shall complete and submit a work plan documenting the proposed well sampling and analysis of the onsite wells for the October 2021 sampling event.
- Analysis of Groundwater Samples in the Proposed Work Plan— A total of 32 monitoring wells at the site shall be sampled by the CONSULTANT during the October 2021 sampling event. There are 39 monitoring wells associated with the site, however, seven monitoring wells are damaged and cannot be sampled and therefore will not be included in sampling. The groundwater samples shall be analyzed for the constituents in the approved work plan (listed in Attachment 3) and are based on the 1985 Remedial Investigation Report.
- <u>Supplemental Groundwater Report</u> CONSULTANT shall compile the data from the October 2021 analysis and compare the data to the historic values from the 1985 Remedial Investigation Report.
- <u>Complete the Water Usage Report and Permit Renewal</u> CONSULTANT shall complete the annual Water Use Permit Renewal and Water Use Report, due to DNR by January 31, 2022.
- Participate in meetings and provide technical assistance associated with the site. As requested by
  the CITY, the CONSULTANT shall participate in meetings with the CITY, EPA, DICO, and other
  parties, and provide technical assistance outside previously scoped work, and complete administrative
  tasks associated with tasks related to the site.
- Responsibility for work described herein. CONSULTANT shall be responsible for means, methods, sequences, or procedures, including health and safety measures, in performing all refurbishing, replacement and repair work described in the first and third bullet points of Section 2 (hereinafter "work"). The work shall be in the custody of and under the charge, care, and control of the CONSULTANT, who shall take every precaution against damage to all property, the groundwater remediation system, equipment and facilities. CONSULTANT shall continuously maintain adequate protection of all its work from damage and shall protect the property, the groundwater remediation system and all equipment and facilities from injury or loss arising in connection with the work. The CONSULTANT shall repair or restore any such damage, injury, or loss to the property, the groundwater remediation system, equipment and facilities. All defective work shall be removed and replaced at the CONSULTANT'S expense and no compensation will be paid for defective work or materials, or for the satisfactory removal, correction, or disposal thereof.

#### 3.0 SCHEDULE

**CONSULTANT** shall begin these services and work subsequent to receiving the signed Notice to Proceed in accordance with the services and work outlined in Table 1.

#### 4.0 HEALTH AND SAFETY

**CONSULTANT** has determined that applicable Level D safety precautions are adequate and confined space entry is not required. Site safety attire generally consists of a normal work uniform including safety shoes, reflective vest, hard-hat where required, and appropriate eye protection. If site-specific conditions require more stringent health and safety procedures, the **CONSULTANT** shall notify the **CITY** of the change and costs which may be addressed through a Supplemental Agreement.

#### 5.0 CONDITIONS

After **CONSULTANT** receives the Notice to Proceed, **CONSULTANT** is authorized to enter the DICO property to conduct on-site activities as authorized by the **CITY**. The **CITY** shall make **CONSULTANT** aware of any restrictions or special requirements that the **CITY** is aware of, regarding the site and its required activities prior to the commencement of the fieldwork.

Items to be provided by the **CITY** include access to information pertinent to the reviews and reports discussed herein. Specific documents include copies of the current QAPP and O&M Plan, and other related correspondence as necessary. The tasks in this Scope are based on the assumption that the majority of this information is currently available.

# TABLE 1 DICO 2021 ANNULAR SERVICES – OPERATIONS, MAINTENANCE, AND SAMPLING OF ON-SITE GROUNDWATER REMEDIATION TREATMENT SYSTEM CITY OF DES MOINES – DICO PROPERTY

#### **Activity ID 01-2021-018**

TASK
Well Acidification and Cleaning (ERW #7)
Well Pump (ERW #7) Replacement
Peristaltic Pump Purchase
Peristaltic Pump Tubing Purchase – LDPE Tubing
Peristaltic Pump Tubing Purchase – Silicone Tubing
YSI ProDDS Purchase
YSI ProDDS Case Purchase
YSI Calibration Fluids
YSI Battery
Sampling and Analysis Work Plan – October 2021
Groundwater Sample Analysis – October 2021, 32 wells
Supplemental October Groundwater Reporting – October 2021
Well Usage Report
Well Usage Permit Renewal
Well Repair Mobilization (3 mobilizations)
Well Repair Materials
Well Repair Time
Meetings, Technical Assistance, and Administrative Tasks

#### **ATTACHMENT NO. 3**

Base-Neutral Extractibles

## Table AB-1 ANALYTICAL PARAMETERS FOR ORGANICS

Aldrin Alpha BHC Beta BHC Gamma BHC Delta BHC Chlordane 4,4-DDD
Beta BHC Gamma BHC Delta BHC Chlordane 4,4-DDD
Gamma BHC Delta BHC Chlordane 4,4-DDD
Delta BHC Chlordane 4,4-DDD
Chlordane 4,4-DDD
4,4-DDD
A CONTRACTOR OF THE CONTRACTOR
4.4-DDE
4,4-DDT
Dieldrin
Alpha Endosulfan
Beta Endosulfan
Endosulfan Sulfate
Endrin
Endrin Aldehyde
Heptachlor
Heptachlor Experide
PCB 1016
PCB 1221
PCB 1232
PCB 1242
PCB 1248
PCB 1254
PCB 1260
Toxaphene

Pesticides

Acenaphthene
Acenaphthylene
Anthracene
Benzidine
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(ghi)perylene
Benzo(k)fluoranthene
Bis(2-Chloroethoxyl) Methane
Bis(2-Chloroethyl) Ether
Bis(2-Chloroisopropyl) Ether
Bis(2-Ethylheryl) Phthalate
4-Bromophenyl Phenyl Ether
2-Chloronaphthalene
Chrysene
4-Chlorophenyl Phenyl Ether
1,2,5,6-Dibenzanthracene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
3,3-Dichlorobenzidine
Diethyl Phthelate
Dimethyl Phthalate
Di-N-Butyl Phthalata
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Di-N-Octyl Phthalate
1,2-Diphenylhydrazine
Fluoranthene
Pluorene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Indeno(1,2,3-CD)pyrene
Isophorone
Napthalene
N-Butyl Benzyl Phthalate
Nitrobenzene
N-Nitrosodimethylamine
N-Nitrosodi-N-Propylamine
M-Nitrosodiphenylamine
Phenanthrene
Pyrene

2-Chlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
4,6-Dinitro-O-Cresol
2,4-Dinitrophenol
2-Nitrophenol
4-Nitrophenol
P-Chloro-M-Cresol
Pentachlorophenol
Phenol
2,4,6-Trichlorophenol

Acid Extractibles

**Volatiles** Acrolein Acrylonitrile Benzene Carbon Tetrachloride Chlorobenzene 1,2-Dicholroethane 1,1,1-Trichloroethane 1,1-Dichloroethane 1,1.2-Trichloroethane 1,1,2,2-Tetrachloroethane Chloroethane 2-Chloroethylvinyl ether Chloroform 1,1-Dichloroethene Trans-1, 2-Dichloroethene 1,2-Dichloropropane Trans-1,3-Dichloropropene Cis-1,3-Dichloropropene Ethylbenzene Methylene Chloride Chloropethane Bromomethane Bronoform Bromodichloromethane Fluorotrichloromethane Dichlorodifluoromethane Chlorodibromomethane Tetrachioroethene Toluene Trichloroethene

Vinyl Chloride

DE/DESMOI/031

1,2,4 Trichlorobenzene

#### Table AB-2 ANALYTICAL PARAMETERS FOR INORGANICS

### TASK 1

1. 2. 3. 4. 5.	Aluminum Chromium Barium Beryllium Cobalt Copper	8. 9. 10. 11. 12. 13.	Nickel Manganese Zinc Boron Vanadium Silver
7.	Iron		, .

#### TASK 2

1. 2. 3.	Arsenic Antimony Selenium	:	5. 6. 7. 8.	Mercury Tin Cadmium Lead
4.	Thallium		8.	Lead

DE/DESMOI/032