

Pond holt

STATUS REPORT ON DIAND LABORATORY

- the laboratory changed its name to the Arctic Environmental Laboratory as another lab in the Yukon held the rights to the name Northern Analytical Laboratory
- the AEL processed ~1200 samples for chemical analyses in 1995 including samples from Water Resources Yukon and IWD Env. Can NWT
- the exercise Resourcing Our Priorities identified that the DIAND laboratory initiate a cost recovery program and develop a business plan
- a market survey was completed in Jan. 1996 and provided market forecast and potential for the period 1995 - 1998
- the market study identified that the AES program accounted for 62 % of the 1994/95 sample analysis costs (refer to summary)
- a business plan for the AEL was completed in March 1996; several action items were identified from the report (refer to summary)
- discussions concerning the appropriate mechanism for receiving funds through special revenue spending authorities are on the table at the RDG level
- the laboratory has signed a contract worth \$ 27,000 with IWD- EC (NWT), has leased lab space to GNWT (RR) and has developed and submitted cost and capability proposals to major mining companies and environmental consultants
- the AEL will introduce a new networked Windows based lab information data system which should improve data import/export and QC reports
- the AEL is producing a cost schedule brochure and will initiate a promotional campaign
- recently the reporting structure of the AEL has changed from Regional Manager of Water Resources to the Director of Renewable Resources and Environment ; the implications of this action (admin assistance, O&M - Abase budget) has not been discussed

The future of the AEL and its professional employees looks bright but a lot of extra work will be required to become self sufficient.

Bill Coedy

May 06, 1996.

ACTION PLAN SUMMARY OF THE "ARCTIC ENVIRONMENTAL BUSINESS PLAN"

A summary of the ARCTIC ENVIRONMENTAL BUSINESS PLAN prepared in March 1996 by MacKay and Partners is intended to highlight the major action items which must be addressed prior to March 1997 by the Arctic Environmental Laboratory.

The Arctic Environmental Laboratory (AEL) intends to achieve self-sufficiency through the development of a cost recovery program structured at arms length to the Department of Indian Affairs and Northern Development. Although the procedure for cost recovery has not been determined with DIAND and Treasury Board, the AEL has undertaken a market survey (Lutra Associates, January 1996) and a business plan (MacKay & Partners, March 1996).

In the development of the business strategy, several weakness of the AEL were identified:

- general lack of awareness by public - low public profile
- lack of experience in providing services outside of its core competencies - need a wider array of resources to offset the "low" season
- viewed as government operated which may limit the types of organizations willing to conduct business
- major competitors offer long term continuity with over 20 years experience

ACTION:

A letter from the RDG is required to provide a detailed explanation of the change in the DIAND laboratory and its need to move into a service for fee organization. The letter must be directed to clients who have received analytical services in the past from AEL at no cost.

A pamphlet could be developed by Communications which would outline the changes in the AEL organization. It would explain the objective of AEL and its philosophy of being revenue self-sufficient.

The letter or pamphlet would have to be distributed to all clients who have received the service for free (including the Water Boards) so the organizations could prepare appropriate budgets well in advance. Establish a standing offer with MACA.

ACTION:

A comprehensive inventory of skills from staff need to be developed.

The staff need skills training in :

- financial management (accounts receivable/payable)
- equipment utilization
- staff time/ project billing
- expenses per activity

ACTION:

The AEL needs to develop its own Management and Financial Reporting Systems. A low end accounting system such as Simply Accounting coupled with Timeslips would provide appropriate invoicing, accounting and auditing of project time.

ACTION:

Lab staff need to develop other markets and resources for a well rounded business.

- training of environmental samplers in sample collection, preservation & shipping (members of the Nunavut and MVR Water Boards)
- field activities
- preparation of data reports including QAQC
- review of QAQC Plans for the Water Boards
- environmental assessment, toxicological risk assessment and policy development
- rental of equipment and space - analysis training and pilot studies
- baseline studies and consulting

ACTION:

Establish a promotional campaign which would promote AEL services.

- produce a marketing brochure - low cost high quality - identifying tests capability, field services, policy guidance/advise and equipment/space rental
- produce a detailed product manual with special service, fees, terms and conditions
- produce a visual display and appear at trade fairs, geoscience forums and meet with potential clients
- become a member of the Chamber of Commerce and the NWT Association of Municipalities

ACTION:

Establish joint ventures with engineering firms (Dillon, Reid Crowthers, ect), environmental consulting firms (Golder, Bryant) and other private laboratories (NorWest Labs, Envirotest) who would require chemical testing and interpretation in an effective entrepreneurial arrangement.

These are the major action items from the Business Plan. I have attached a summary from the Business Plan and a schedule of activities which must be accomplished in order to establish our cost recovery goal by March 1997.

MARKET SURVEY : SUMMARY OF RESULTS

A market survey was performed by LUTRA ASSOCIATES LTD. Between Nov. '95 and Jan. '96 to determine the market potential for the DIAND Arctic Environmental Laboratory (AEL). A questionnaire/ telephone interview was conducted on 136 potential users in the NWT and Yukon. The response was good - 71% - of which 67% indicated that they had used AEL.

Environmental Activity:

- a total of 19,274 samples were collected in 1995 by respondents for environmental, industrial and health activities.
- 65% of respondents identified complying with regulation
- 74% required Physical, Nutrients and Metals (in water and solids)
- 56% indicated the need for combined organic and inorganic services
- results indicate a 3 year increase from 1993 to 1995 in the ratio of sampling for environmental baseline and regulation and a decline in sampling for health related activities

AEL Sample Analysis Costs (1994):

- sample analysis costs totalled \$433,917 ; however only 25% of the clients were invoiced for services rendered (refer to Table 5)
- Arctic Env. Strategy (AES) accounted for 62% of the total costs

Forecast and Market Potential (1995 - 1998):

- 85% of respondents are optimistic that sampling activity will continue at current levels or increase
- market potential expected to increase from 21% (1994 level) to 25% in the 3 year forecast
- analysis costs could exceed \$2 million (refer to Table 9)

User Perception of AEL Services:

- respondents indicated that a high quality service was delivered by a professional, courteous and helpful technical staff
- improvements in sample timeliness were desired (Note: the lab staff have improved turn around time to 2 weeks)

Most Important Factors in Service Delivery:

- lab certification and accreditation with a national QA/QC organization
- high quality results
- quick turn around times

Changes to Consider for Improving the Market Share:

- take a more business-like approach implementing cost recovery for all services rendered to all clients
- ensure high quality service in a timely manner
- develop a market strategy targeting existing and potential new markets (for example, organic scans, diamond valuation service, environmental toxicological evaluations ect.)
- develop and market an electron or laser microprobe analysis service to meet the needs of diamond exploration
- maintain QA/QC accreditation and seek certification on new tests

LABORATORY BUSINESS PLAN:

Objective:

- to prepare a business plan for the next 3 years incorporating the results from the market survey
- the terms of reference include Lab Management, Sales and Marketing, Operations, Human Resources, Financial and Forecasts

Status:

- contract was awarded on Feb. 6, 1996 to MacKay & Partners (John Laratta)
- first meeting held Feb. 20
- 1st draft due Mar. 01; final draft due March 22.

Client Group	Cost (\$)
DOE/IWD	\$ 31,563.50
Municipalities	\$ 61,659.50
DFO	\$ 19,602.00
AES	\$ 274,057.00
Industrial	\$ 7,964.00
GNWT	\$ 20,292.00
Environmental Health	\$ 1,960.00
Other	\$ 28,778.75
Total	\$ 443,916.75

Table 9 summarizes current sampling activity and expected changes for environmental and health markets for the next three years.

Table 9: Three Year Forecast of Environmental and Health Analytical Service Market Potential, NWT and Yukon

	Year 1		Year 2		Year 3	
	Samples	Cost	Samples	Cost	Samples	Cost
Environmental						
Water/Effluent	10,466	\$1569900	10,638	\$1595700	10,810	\$1621500
Biota, Plants, Animals	2,041	\$ 289822	1,738	\$ 246796	1,434	\$ 203628
Sediment/Soil	<u>1,351</u>	<u>\$ 202650</u>	<u>1,419</u>	<u>\$ 212850</u>	<u>1,486</u>	<u>\$ 222900</u>
Sub-Total	13,858	\$2062372	13,795	\$2055346	13,730	\$2048028
Health Samples¹⁴						
Water (Bacteria)	2,279	\$ 227900	2,297	\$ 229700	2,315	\$ 231500
Body Fluids	217	\$ 15190	148	\$ 10360	79	\$ 5530
Air - Inorganics,						
Asbestos	<u>116</u>	<u>\$ 5220</u>	<u>154</u>	<u>\$ 6930</u>	<u>192</u>	<u>\$ 8640</u>
Sub-total	2,612	\$ 248310	2,599	\$ 246990	2,586	\$ 245670
Industrial						
Glycol/hydrocarbon	19	\$ 1425	21	\$ 1575	22	\$ 1650
TOTAL	16,489	\$2312107	16,415	\$2303911	16,338	\$2295348

Note: Sampling activity and three year expected changes reported by:

◆ Environmental: DIAND - NWT District Offices, Water Resources Network and Yukon

¹⁴The potential for body fluids sampling is restricted by insufficient data from NWT health and hospital boards. Hospital and health boards currently service day-to-day body fluid analytical needs in-house, and sample analysis is occasionally contracted to commercial labs when in-house service capacity is exceeded.