



MINISTERIO DE INDUSTRIA, COMERCIO Y TURISMO

CENTRO DE INVESTIGACIONES ENERGETICAS
MEDIOAMBIENTALES Y TECNOLOGICAS
(C.I.E.M.A.T.)

Madrid, 6 de Julio de 1992

DR. C.RICK JONES
Director
Office of Health Physics
and Industrial Hygiene
D.O.E. Washington, DC 20585. USA

Dear Dr C.Rick Jones:

I would like to thank you newly for your interest in joint collaboration. We have received your letter of June 16, 1992, and I am mailing to you by the U.S. Embassy (Dr. R.Morris) the budgetary information about the Indalo Project.

Enclosed document nº 1 contains best estimation of 1992 cost of normal work, and additional data on 1991 cost in order to show that the different periods covered by this budget and by the U.S. fiscal year are not significant. As you can see in document 1, we are asking for 25% support.

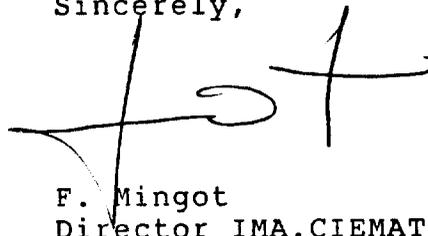
There are other associated research works mainly in the fields of marine environment and of resuspension, that are not included in the budget appearing in document 1. This is because this work is already being partially supported by other organisations and we prefer to discuss it with you in some detail before asking for support. Anyway we are ready to include these aspects in our collaborative work for the coming years.

In addition I am enclosing the economic view graphs presented on occasion of our last meeting in Madrid, last November. As it can be seen doc. 1 and doc. 2 are based on different approaches (doc. 1 is more close to accounting practices) but they are essentially coherent in total cost.

We maintain our intention to send you the Summary Technical Report (including forecast for future work) and a proposal of schedule for contacts and visits next fall before the end of this month.

Best regards to Dr. Pettengill and to you.

Sincerely,



F. Mingot
Director IMA.CIEMAT

DOCUMENT 1

INDALO PROJECT - BUDGET 1992

INDALO PROJECT. BUDGET 1992

1. Staff cost (assuming 1 \$ = 100 ptas.)

Scientists	6738 hours	55.51 Mpts	555,100 \$
Technicians	9384 hours	39.17 Mpts	391,700 \$
TOTAL	16122 hours	94.68 Mpts	946,800 \$

note 1: staff costs are composed of direct costs and overheads (119% of the direct costs)

note 2: hours estimate is a projection over 1992 based on presently available data.

2. Other costs (assuming 1 \$ = 100 pts)

. Palomares maintenance	2.2 Mpts	22,000 \$
. Whole body counter	0.7 Mpts	7,000 \$
. Travel and subsistences for Palomares people	6.8 Mpts	68,000 \$
. Durable equipment amortization	4.0 Mpts	40,000 \$
. Consumables	2.4 Mpts	24,000 \$
. Sampling	1.6 Mpts	16,000 \$
. Medical Services	6.0 Mpts	60,000 \$
	<u>23.7 Mpts</u>	<u>237,000 \$</u>

TOTAL BUDGET	118.3 Mpts	1,183,000 \$
Support Requested (25%)	30.0 Mpts	300,000 \$

PALOMARES FACILITIES MAINTENANCE (PTS. 1991)

HOUSE RENT	474.340
ELECTRICITY	368.000
FACILITIES AND EQUIPMENT	1.200.000
(House, Car, Samplers, Others)	
VARIOUS	193.000
(Cleaning, Garden, Phone)	
<u>TOTAL</u>	<u>2.234.565</u>

COST ESTIMATION PER YEAR (Million pts. referred to 1991)

PALOMARES MAINTENANCE	2.2
PALOMARES STAFF	6.5
ENVIRONMENTAL ANALYSES AND MEASUREMENTS(1)	30.0
SAMPLING(2)	4.7
URINE ANALYSES(1)	16.5
MEDICAL SERVICES(3)	6.0
WHOLE BODY COUNTER(4)	0.7
METEOROLOGICAL STUDIES	6.8
TRAVELS AND SUBSISTENCE FOR PALOMARES PEOPLE	6.5
MANAGEMENT AND REPORTING ACTIVITIES	37.9
TOTAL	117.8

- (1) Based on an averaged year for the period 1986-1990
- (2) Based on travel and subsistence costs
- (3) Presently in review. Estimation made from 1988 cost
- (4) Based on 20 measurements per year

DOCUMENT 2
Economical view graphs

November 1991

SAMPLING AND ANALYSES ACTIVITIES. PERIOD 1986-1990

	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>TOTAL</u>	<u>AVERAGE PER YEAR</u>
SOIL							
SAMPLING	187	73	75	100	50	485	97
Pu ANALYSES	70	100	85	59	70	384	77
Am ANALYSES	115	394	30	0	0	539	108
AIR							
SAMPLING	183	156	156	102	144	741	148
Pu ANALYSES	122	102	131	165	446	966	193
Am ANALYSES	26	35	33	88	182	364	73
VEGETATION							
SAMPLING	61	62	71	71	98	363	73
Pu ANALYSES	65	133	0	262	73	533	107
Am ANALYSES	396	211	125	32	0	764	153
ANIMALS							
SAMPLING	6	11	17	8	2	44	9
Pu ANALYSES	14	13	28	5	3	63	13
Am ANALYSES	14	13	28	5	3	63	13
BIOASSAY							
PERSONS	141	149	151	151	149	741	148
Pu ANALYSES	141	149	151	151	149	741	148
Am ANALYSES	141	149	151	151	149	741	148
WHOLE BODY COUNTER	45	68	20	19	24	176	35

ENVIRONMENTAL AND URINE ANALYSES AND MEASUREMENTS

REFERENCE TABLE PER UNIT SAMPLES
SCIENTIST(1)

		<u>TECHNICIAN(2)</u>	<u>SUPPLIES</u>	<u>EQUIPMENT(3)</u>	<u>TOTAL</u>
SOIL	Pu	1,5 h	5.000 pts	8.767 pts(a)	40.224,5 pts
	Am	4 h			21.433 pts(4)
VEGETATION	Pu	1,5 h	3.000 pts	26.289 pts(b)	55.746,5 pts
	Am	4 h			21.433 pts(4)
AIR	Pu	1,5 h	4.000 pts	21.534 pts(c)	51.991,5 pts
	Am	1,5 h	2.000 pts	26.289 pts	50.766,5 pts
ANIMALS	Pu	1,5 h	5.000 pts	26.289 pts	73.666,5 pts
	Am	1,5 h	5.000	26.289 pts	53.766,5 pts
URINE	Pu	1,5 h	3.000 pts	26.289 pts	55.746,5 pts
	Am	1,5 h	3.000 pts	26.289 pts	55.746,5 pts

(1) 1 h = 7.025 pts; (2) 1 h = 3.980 pts; (3) Based on a cost equipment of 14.10⁶ pts plus 2.10⁶ for maintenance and 365 days per year of operation; (4) Official price of CIEMAT for 1991.

(a) Measurement time of 1 day; (b) Measurement time of 3 days; (c) Measurement time of 2 days plus 4.000 pts. for furnace equipment.