

LAWRENCE LIVERMORE LABORATORY

November 10, 1978

Office of Assistant Secretary for Environment
Division of Biomedical and Environmental Research ←
Division of International Security Affairs
Division of Safeguards and Security
Division of International Affairs
DOE/SAN

FOREIGN TRAVEL REPORT FOR: Phillip N. Dean

The enclosed foreign travel report is submitted in accordance with ERDA Appendix 1501, Part VIII.

Edward H. Fleming
Special Assistant to the Director

Enclosures: As stated above.

US DOE ARCHIVES
RG 326 U.S. ATOMIC ENERGY COMMISSION
Collection 1320
Box 16 - Spain
Folder 1

1
Annex
Info

OFFICIAL USE ONLY

FOREIGN TRIP REPORT

Phillip N. Dean

Biomedical Sciences Division
Lawrence Livermore Laboratory, University of California
Livermore, California

A trip was made to Spain during the period September to October 1978, as part of Project Indalo. The Junta de Energia Nuclear (JEN) laboratories in Madrid were visited along with the Palomares site. Discussions were held with Dr. Emilio Iranzo, Dr. Francisco de los Santos, and Sr. Roman Gonzalez del Campo of the JEN and with Dr. Duncan Clement, Scientific Attache of the U.S. Embassy in Madrid. The trip had two major purposes, the 1978 annual visit to review Project Indalo and the installation of new counting equipment.

DOE ARCHIVES

Madrid

Since Dr. Iranzo, head of Spanish efforts under Project Indalo, was recently in the United States to review data accumulated up to early 1978 discussions in Madrid were limited to current and future plans. The latter depend strongly upon recommendations of the Department of Energy, through the proposal currently under review. At this time the JEN will continue their efforts as in the past, with minor modifications. More people from Palomares are being brought to Madrid, starting in November, for physical and radiological examination, many of them for the first time. Dr. Iranzo is also starting to define a specific group of Palomares residents for long term, repetitive observation, as suggested in previous recommendations. He will also begin soon to collect urine samples in Palomares. I feel that these efforts must still be considered tenuous since they involve additional expenditures in time and money. Their realization probably awaits additional support from the DOE.

I also undertook to install a new counting system consisting of 16 alpha spectrometers (solid state silicon diodes) including a computer-based pulse height analyzer. This equipment, purchased with funds made available by the DOE, dramatically increases the JEN capabilities, from 4 counters to 20. The new system also automatically computes and prints out net count rates in all three regions of interest, ^{235}U , ^{239}Pu , ^{238}Pu and ^{236}Pu , and will expedite analyses. Unfortunately, due to an error in the shipping department, only the electronic part of the equipment was shipped to Madrid and available upon my arrival. The counting chambers and rack were not shipped until one week later. I delayed my departure three days but was unable to free the equipment from Spanish customs. I did, however, install and check-out all of the electronics, which operated perfectly. I also trained the Spanish physicist and two technicians who will work with the equipment. I am confident that the physicist will be able to complete the installation once the remaining equipment clears customs.

OFFICIAL USE ONLY

-2-

OFFICIAL USE ONLY

The other equipment at the JEN, alpha and beta scintillators, chest and whole-body counters were also checked and found to be operating satisfactorily. The new graded metal shielding for the steel room was completed and has resulted in a somewhat lower background. The JEN is currently engaged in surveying its radioisotope laboratory personnel for contamination, after which more Palomares residents will be counted.

Palomares

A one day trip was made to Palomares to ascertain the state of cultivation of contaminated areas and to provide input to the proposal currently being developed. Considerable farming activity is now occurring in Areas II-0 and II-1. The valley floors are being farmed and new terraces formed. Some of the hillsides in Area II-1 that were not plowed in 1966 are now being tilled. The entire Palomares area shows a rather vigorous economy, with much new construction and new irrigation methods. A house originally east of the II-2 air sampling station has now been expanded to the point that it effectively shields the air sampler. We selected a new location for the station, about 100 feet west of its present site. Dr. Iranzo and I looked at the original location of the II-1 air sampler and agreed that the new station should be established at a point about 100 feet to the northeast. To do this will require installing a new power line, at a cost of about \$5000. Dr. Iranzo and I also walked over the part of Area II that we feel should be re-surveyed. From the very rocky nature of the terrain it is quite clear that such an effort will require detectors other than proportional gas flow instruments. The status of Area III is well understood and stable and this area was not reviewed.

U.S. Embassy

Dr. Duncan Clement, Scientific Attache at the U.S. Embassy will retire soon, probably in December, to be replaced by the current Scientific Attache in Brasilia. Since Dr. Clement is the person at State most knowledgeable about Project Indalo, and he admittedly isn't very well informed, the new man should be carefully briefed. Dr. Clement's major effort at this time is a very large solar power program with a facility under construction near Almeria, financed partly by DOE and involving Spain, France, Germany and the USA.

DOE ARCHIVES

Regarding the Palomares situation, in March there was a very strong article in one Madrid newspaper dealing with the water purification plant built by the USA in Palomares in 1966. The reporter pointed out that the plant which we built as a result of the accident has never worked. He demanded that the Spanish Government force the United States to put the plant into operation and maintain it. The Embassy, and apparently the Spanish Government as well, chose to ignore the article and heard no more about the matter.

The political situation in Spain is very unsettled. There are frequent strikes, it seems like once a week, principally by the technician

OFFICIAL USE ONLY

OFFICIAL USE ONLY

level people. These people now belong to unions, which have begun to feel their power and are exercising it. It is very disruptive in all parts of the industry, but particularly at the JEN. Management people at the JEN have told me confidentially that Spain was not prepared for the kind of democracy it has now. Things have changed too quickly.

Conclusions and Recommendations

1. The expanded efforts within Project Indalo should be put into effect as soon as possible. The JEN is well aware of the proposal, and roughly its contents, and is awaiting DOE action before proceeding with any new or expanded efforts. With regard to the proposal, Dr. Iranzo made it very clear to me that he wants no Americans involved in the Palomares efforts and will never have more than four of his own people there at one time. This may slow the program some but he believes it to be a political necessity. **DOE ARCHIVES**
2. We should continue to use the U.S. Embassy in Madrid as an entry point for the shipment of equipment and supplies to the JEN. The procedure is to ship the material from the DOE to the Scientific Attache. Neither the JEN nor Project Indalo should be mentioned on the shipping orders or the waybill. The Scientific Attache should be notified as far in advance as possible and given the Waybill Number when available. After the shipment arrives in Madrid, ten days will be required to clear it through customs. I strongly recommend that if travel is to be performed in conjunction with the shipment, said travel not be initiated until delivery of the equipment to the JEN is confirmed by the JEN.

OFFICIAL USE ONLY