



 ENUSA

Presentation of case studies at the  
Salamanca Workshop 2005

Impacto social de una fábrica de  
elementos combustible: El  
caso de Juzbado

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- La fábrica de Combustibles de oxido de uranio, produce elementos combustibles para CC NN. Está muy próxima (1.5 km) al pueblo de Juzbado, y a 26 km de Salamanca.
- ENUSA's Nuclear Fuel Fabrication Plant. It makes fuel elements for Nuclear Power Stations. It is located in the country-side, close to a small village called Juzbado, 26 kilometres away from the city of Salamanca.



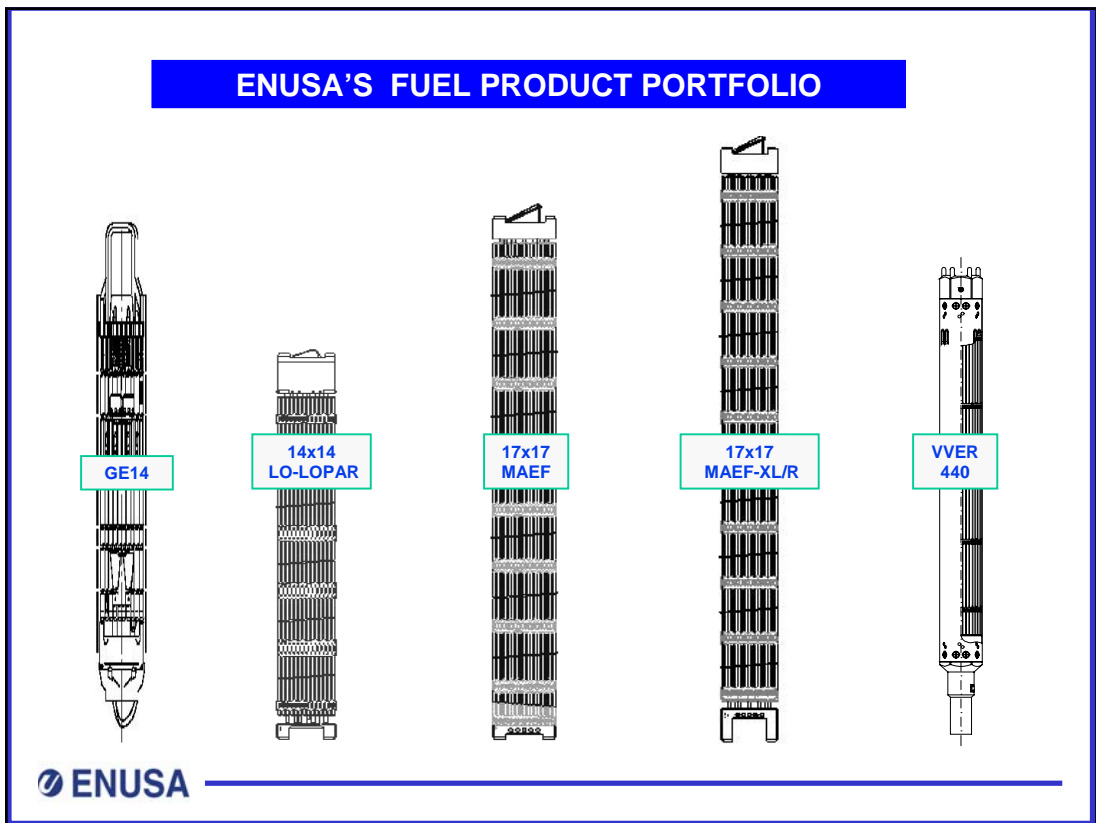
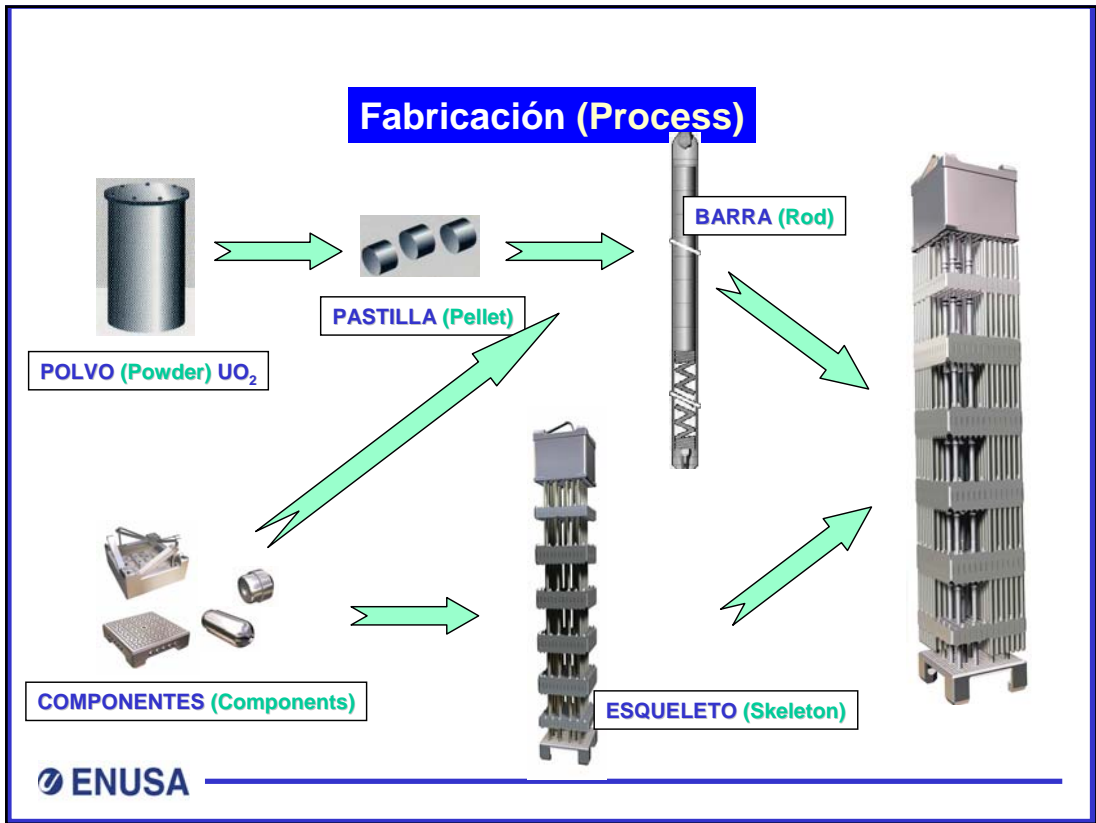
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## JUZBADO FACTORY

- ◆ **COMMISSIONING:** 1985
- ◆ **PRODUCTION SCOPE:**
  - \* PELLETIZATION  $UO_2+Gd$
  - \* RODS LOADING
  - \* FINAL ASSEMBLING
  - \* END PLUGS
- ◆ **MANUFACTURING LINES:**
  - \* THREE DEVOTED TO PWR/BWR/VVER FUEL.
  - \* ONE DEVOTED TO GADOLINIA RODS.
- ◆ **LICENSED ENRICHMENT:** Up to 5 w/o U-235
- ◆ **CAPACITY:** 400 tU/year.



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# El marco geográfico I (Location)



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# El marco geográfico II (Location)



Population

City (Distance Factory)	1986	1996	2003
Juzbado (2-3 km)	259	181	184
Almenara (6-7 km)	239	253	255
San Pelayo (4-5 km)	143	114	110
San Pedro del Valle (6-7 km)	291	134	131
Valverdon		270	288
Vega de Tirados (6-7 km)	221	235	204
Leidesma (9-10 km)	1888	2008	1882
Salamanca (26 km)		159225	157906

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## El entorno (Settlement)



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## Fábrica de Juzbado HITOS

(Juzbado Landmarcks)

- **Decisión gubernamental de construir una fábrica de Combustible Nuclear en Salamanca: 1976**

Government decision to build a nuclear fuel fabrication plant: 1976

- **Autorización preliminar: 1979-08-17**

Preliminary authorization : 1979-08-17

- **Autorización de construcción: 1980-12-12**

Authorization to build the plant: 1980-12-12

- **Autorización de puesta en marcha: 1985-01-15**

Authorization to start the operation: 1985-01-15

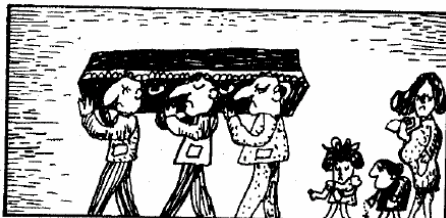
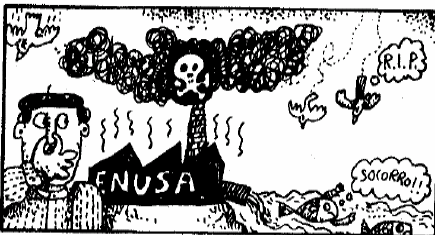
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## La elección del emplazamiento (The site election) 1976-1980

- **¿Por qué se elige la provincia de Salamanca para construir la planta?** i) ENUSA ya era conocida en la provincia por tener minas de uranio en Saelices (Ciudad Rodrigo), se consideró que ello facilitaría una aceptación social; (ii) Salamanca es una ciudad muy apetecible para vivir (Universidad, cómoda, etc.) lo que facilitaría la presencia de técnicos cualificados, (iii) Próxima a Madrid y bien comunicada con las centrales nucleares españolas.
- **Why was Salamanca chosen for building the plant?:** i) ENUSA was well known (the ENUSA had a uranium mine at Saelices, near Ciudad Rodrigo), which made public acceptance easier; (ii) Salamanca is a cultural city, very attractive for highly qualified people, (iii) Near an International Airport (Madrid) and it is well connected with Spanish nuclear power stations.
- **¿Por qué se elige Juzbado?:** i) la finca era de pocos propietarios lo que facilitaba la compra (4); (ii) Estaba próxima a Salamanca.
- **Why was Juzbado chosen?:** a) To buy the land ENUSA only had to deal with a few landlords; b) Juzbado is close to Salamanca (25 km)

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## LOS INICIOS (The beginning): 1976-1980



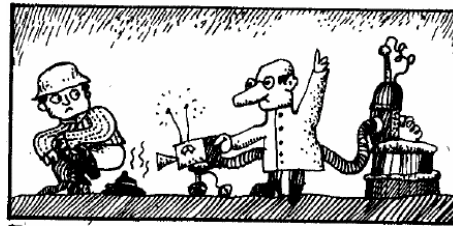
- El tipo de instalación a construir era desconocida por los agentes sociales (¿Central nuclear?, ¿Fabrica de enriquecimiento?,...).
- The kind of facility was unknown by the stake holders (Power station?, enrichment Plant?, etc)
- Se realizan algunas manifestaciones antinucleares contra la instalación, impulsado por un reducido número de profesores de Universidad y por algunas autoridades locales (El ayuntamiento de Salamanca se declara antinuclear). La actitud de esta oposición siempre fue civilizada.
- Some anti-nuclear demonstrations against the plant building were organized by a small number of University academics and politicians. The attitude was always peaceful.

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## LOS INICIOS (The beginning): 1976-1980

- Algunos alcaldes del entorno pensaban que podría suponer problemas para los productos agrícolas. Se les invita a visitar otras instalaciones nucleares en el extranjero donde comprueban que el entorno de las instalaciones es perfectamente compatible con la agricultura y ganadería. Tras la visita los alcaldes muestran una aptitud favorable a la construcción de la planta.
- Some mayors of the surroundings villages thought that Juzbado Plant could suppose problems for agricultural products. All mayors were invited to visit another nuclear facilities abroad. They verified that the surroundings of the facilities were perfectly compatible with agriculture and cattle ranch. After this visit the mayors showed a favorable attitude to the construction of the plant.



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## La construcción (The building): 1981-1985

- Se construye la fábrica. La construcción es bien recibida en el entorno. Cuando empiezan las obras la oposición desaparece.
- The plant was built. The factory was well-received. The opposition against the facility was very low.
- Se da prioridad en las contrataciones a trabajadores del entorno.
- The workers from villages around the factory had priority for jobs.
- El gobernador de Salamanca, es contrario a la construcción, pero da la autorización dimitiendo a continuación.
- The governor of Salamanca, that was again the facility, finally gave the authorization and resigned.
- Los técnicos formados en el extranjero en una instalación similar (que ya trabajaban en ENUSA Madrid) se trasladan a Salamanca.
- High qualify experts from ENUSA-Madrid moved to the Juzbado facility
- Durante 1983-1984 se realizan las pruebas nucleares.
- From 1983-1984 the nuclear tests are made.

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## 1985-1987: La puesta en marcha (COMMISSIONING)

- El 21 de Enero de 1985, se autoriza que la Fabrica inicie sus actividades.
- On January 21<sup>st</sup>, 1985 the authorization is given and the plant started its operations.
- El 5 de enero de 1987 el grupo antinuclear de Salamanca visita las instalaciones. Tras la visita prácticamente desaparece su reticencias contra la instalación (piden que se mejore la carretera Salamanca-Juzbado)
- On January 5<sup>th</sup>, 1987 the anti-nuclear organization of Salamanca visited Juzbado Plant. It was very useful as many of their objections against the facility were disappearing.

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## El presente (The present)

- ENUSA mantiene muy buena relación con los pueblos proximos especialmente con Ledesma y Juzbado.
- ENUSA has a very special relationship with the seven villages which are situated in the vicinity. This relation has taken place for over twenty five years, and it is specially close with the biggest village in the area (Ledesma) and with the closest (Juzbado).
- ENUSA mantiene un profundo compromiso ambiental, que se demuestra en un informe distribuido anualmente.
- ENUSA, has always shown a profound commitment to the environment by keeping a strict eye on any impact its activities may have on people and the environment they live in, following the criteria laid down in the company's Environmental Policy. This policy is also distributed every year in the local area.

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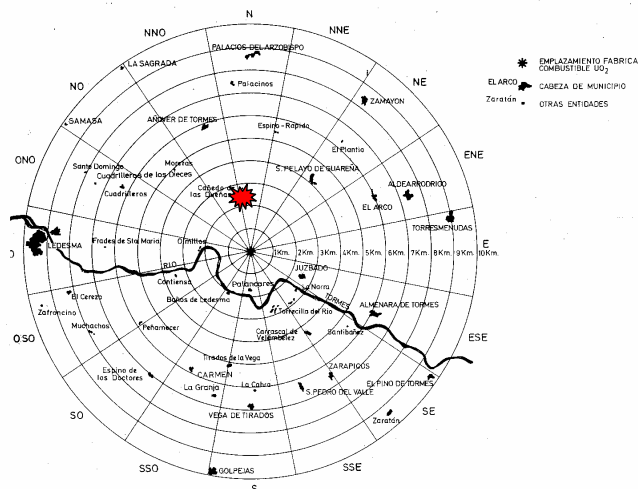
# Impacto radiológico

- El impacto radiológico ambiental, después de 20 años de operación, es indistinguible del fondo radiológico natural.
- After 20 years of operation it has been shown that the environmental impact of the plant is negligible (it can not be distinguished from the natural radioactive background).
- El riesgo para el entorno es muy bajo. Incluso en el peor accidente contemplado las consecuencias fuera del área de la instalación serían muy pequeñas (no se requiere Plan de emergencia exterior)
- Even in the worst accident studied, the impact outside Juzbado Plant would be very low. So it does not need an emergency plan for the inhabitants living around this area.



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# Environmental program



**LEDESMA** (aire, aguas superficiales, vegetales, carne y leche, sedimentos)

**FRADES EL VIEJO** (aguas superficiales, carne y sedimentos)

**JUZBADO** (aire, vegetales, carne y leche)

**GOLPEJAS** (aire, agua de lluvia, vegetales, carne y leche, suelos)

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## ACTIVITIES

The different activities that we are developing in order to get a good relationship with all the communities are:

### Information

- ENUSA distributes in these villages the publication called “ENUSA informa”. It is published every two month. It tries to give a general vision of the activities developed by the plant.
- Twice a year we socialize with the mayors of the villages nearby. In these meetings ENUSA informs the mayors about the latest news of the plant, and listens carefully to the interests of the community. These meetings are held in summer and at Christmas.

•We receive many visitors : students (from schools and from university), elderly people, soldiers, house wives` associations, etc. A presentation is made describing the process of the fabrication. Later, they are given a guided tour around the mechanical area (the uranium is sealed in the rods) where are the fuel elements assembled. Some printed material is distributed.

(\*) Cultural visitors are not allowed to go into the ceramic area (where the uranium is not sealed) to avoid risk of contamination.

Year	Cultural visitors
2002	676
2003	524
2004	532

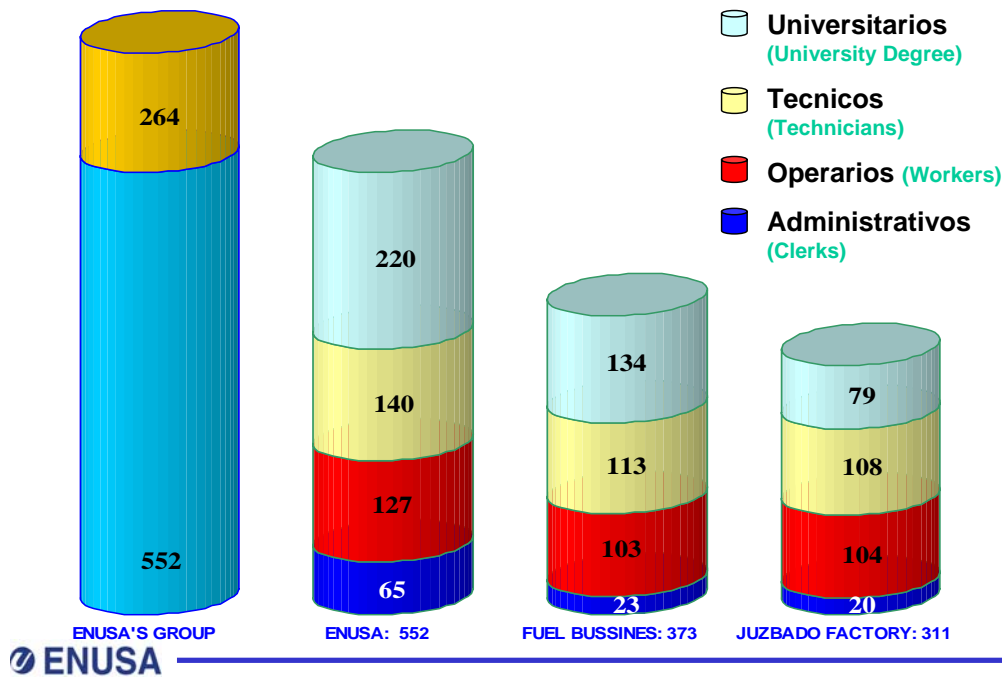


## Organization of cultural and sports events

- ENUSA participates actively in the local celebrations that take place every year in the different villages and in Salamanca. ENUSA sponsors cultural events and sports competitions in the local communities (once a year a golf championship –sponsored by ENUSA- is held, which is open to the local players).
- On the 15<sup>th</sup> anniversary of the plant, ENUSA organized an OPEN DAY with the local community and with the workers` relatives, trying to show everyone the characteristics of the facility and to dispel the fears that some people have about this type of installation.
- ENUSA sponsored cultural events in Salamanca such as an orchestra concert to celebrate Salamanca European Cultural City, in 2002.



## Empleados (HUMANS RESOURCES)



## Presente y futuro (Present and Future)

- A pesar de que la Fábrica es muy bien aceptada en el entorno (pueblos próximos) en la capital sigue siendo poco conocida. **Tal vez lo mejor que pueda ocurrirle a una instalación nuclear es que se hable poco de ella** ("No news, good news").
- The Factory is very well accepted in villages surrounding the site. In the capital it still little known. **It is often say that the best thing that can happen to a nuclear facility is: "No news, good news"**.
- La aportación económica y de empleo es muy importante para Salamanca.
- The economic and employment contribution is very important for Salamanca.
- Los políticos provinciales más relevantes tratan de evitar cualquier relación que pudiera asociarlo a "lo nuclear".
- The more relevant provincial politicians usually try to avoid any association with "the nuclear thing".
- En el futuro esperamos seguir haciéndolo al menos tan bien como hasta ahora.
- In the future we hope to continue with our work at least as well as we have been doing in the past.

- **MERÇI** beaucoup pour votre attention. J'espère que vous ayez un bon séjour a Salamanca.
- **THANKS** for your attention. Enjoy your stay in Salamanca.
- **GRACIAS** por su atención. Feliz estancia en Salamanca.