

Site (Structure) : AGE

Country: ARGENTINA

Reporting Year: 2011

Full Name: AREA DE GESTION DE RESIDUOS RADIATIVOS EZEIZA.

Description: Approx. 25 km to west from Buenos Aires within the Ezeiza radioactive waste management area (AGE), covering approx. 8 ha exclusively used for treatment, conditioning and final disposal of low-level solid and liquid wastes.

Apart from disposal, the area is also used for temporary storage of wastes that, for their characteristics, type of radionuclides and activity concentration, cannot be disposed of on site and are waiting for the construction of an appropriate repository. In this area disused sealed sources as well as spent fuel from the RA 3 Research and Production Reactor are also stored.

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Comment # 26981: Disposal units

Two trenches for conditioned waste in drums and two silos for disposal of structural radioactive wastes and sealed sources.

Comment # 26984: Institutional Framework

The ARN (Autoridad Regulatoria Nuclear) is an independent public sector agency under the jurisdiction of the Office of the President, which is responsible, in accordance with section 7 of the Law, for the regulation and supervision of nuclear activities in all matters related to nuclear and radiological safety, physical protection and control of the use of nuclear materials, licensing and surveillance of nuclear facilities and international safeguards, including management of radioactive wastes.

Waste management facilities that are located at this site:

Facility:	COMPACTOR															
Description:	Esta instalación se utiliza para compactar residuos sólidos compactables en tambores de 200 litros. Una prensa hidráulica de 16 ton. es la que se usa para realizar el trabajo de compactación.															
Processing part of facility	COMPACTOR															
The following shows processing status for waste classes and SRS.																
<table border="1"> <thead> <tr> <th>Waste Class</th> <th>Actual</th> <th>Planned</th> </tr> </thead> <tbody> <tr> <td>VLLW</td> <td>No</td> <td>No</td> </tr> <tr> <td>LLW</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>ILW</td> <td>No</td> <td>No</td> </tr> <tr> <td>HLW</td> <td>No</td> <td>No</td> </tr> </tbody> </table>	Waste Class	Actual	Planned	VLLW	No	No	LLW	Yes	Yes	ILW	No	No	HLW	No	No	
Waste Class	Actual	Planned														
VLLW	No	No														
LLW	Yes	Yes														
ILW	No	No														
HLW	No	No														
Type:	Treatment, Conditioning															
Year opened:	1973															

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Facility:	CP
Description:	Pozo de concreto. Esta instalación esta considerada como una alternativa para la gestión de residuos sólidos de gran tamaño que por su geometría no pueden ser dispuestos en las trincheras existentes. Allí pueden encontrarse residuos históricos

Disposal part of facility CP

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
VLLW	No	No
LLW	Yes	No
ILW	Yes	No
HLW	No	No

List SRS?	No
List UMMT?	No

Type:	borehole		
Facility is modular?	Yes		
Capacity existing (m3):	240	Capacity planned (m3):	240

Depth (m):	10	Host medium:	sedimentary (other)
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Phase Name	Start Year	End Year	Estimate
design	1968	1970	True
construction	1968	1971	True
commissioning	1968	1972	True
operation	1969	2001	False

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Facility:	DS					
Description:	Los tambores de 200 litros conteniendo residuos provenientes de las centrales nucleares que no pudieron ser dispuestos en el sistema LLSWT han sido almacenados en contenedores maritimos.					
Storage part of facility		DS				
The following shows storage status for waste classes and SRS.						
Waste Class	Actual	Planned				
VLLW	No	No				
LLW	Yes	No				
ILW	No	No				
HLW	No	No				
List SRS?	No					
List UMMT?	No					
Capacity:						
Types of Storage Units						
Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
DS	container (marine)	1998	No	No	No	No

Site (Structure) : AGE

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Facility:	ID															
Description:	La instalación de Descontaminación se construyó dentro de otra ya existente usando mampostería y estructuras de concreto reforzado. Se emplea para descontaminar piezas pequeñas.															
<p>Processing part of facility ID</p> <p>The following shows processing status for waste classes and SRS.</p> <table border="1"> <thead> <tr> <th>Waste Class</th> <th>Actual</th> <th>Planned</th> </tr> </thead> <tbody> <tr> <td>VLLW</td> <td>No</td> <td>No</td> </tr> <tr> <td>LLW</td> <td>Yes</td> <td>No</td> </tr> <tr> <td>ILW</td> <td>No</td> <td>No</td> </tr> <tr> <td>HLW</td> <td>No</td> <td>No</td> </tr> </tbody> </table>		Waste Class	Actual	Planned	VLLW	No	No	LLW	Yes	No	ILW	No	No	HLW	No	No
Waste Class	Actual	Planned														
VLLW	No	No														
LLW	Yes	No														
ILW	No	No														
HLW	No	No														
Type:	Treatment															
Year opened:	2000															

Site (Structure) : AGE

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Facility:	IRWS					
Description:	Infected Radioactive Waste Storage. Es una nueva instalación licenciada en 2004 para almacenar contenedores de 50 litros conteniendo residuos infecto radiactivos.					
Storage part of facility		IRWS				
The following shows storage status for waste classes and SRS.						
Waste Class	Actual	Planned				
VLLW	No	No				
LLW	Yes	No				
ILW	No	No				
HLW	No	No				
List SRS?	No					
List UMMT?	No					
Capacity:	Posee una capacidad aproximada de 200 m3.					
Types of Storage Units						
Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
IRWS	building	2004	No	No	No	No

Site (Structure) : AGE

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Reporting Year: 2011

Facility:	LLLWT
Description:	Existen tres trincheras de semi-contención para residuos líquidos de bajo nivel. Esta instalación se diseñó para residuos líquidos de muy bajo nivel de actividad que no eran susceptibles de ser descargados como efluentes. There are three semi-contain
Detailed Facility Description:	There are three semi-containment trenches for low-level liquid waste. This facility was designed for runoff from very low level of activity that were not likely to be discharged as effluent. Trench barriers consist of walls lined with bricks, bottom covered with compacted soil, cap with layers of impermeable foil (PE sheet), earth and grass, silos provided with 30 cm thick reinforced concrete side walls and bottom.
Facility Operation:	Drums with radioactive waste are placed into trenches and voids filled with dry and classified sand. First trench was commissioned in 1974, in 1980 coverage was applied to the first part and closure completed in 1988. The second trench was commissioned in 1989. By 2001, only one third of its capacity was covered.. Then, drums are covered in hill shaped mounds of selected highly compacted calcareous-silty soil. The compacted soil is sprayed with hot bituminous material at a 2 kg/m ² rate. A layer of fine dry sand applied on top is covered with a thoroughly welded 200 µm thick polyethylene sheet to prevent rainwater seepage. Finally, a 0.15 m thick calcareous-silty soil layer is applied and covered with 0.10 m thick wet soil suitable for grass seeding to fix the soil and restore the original landscape.
Financing:	Radioactive waste management is funded predominantly by fees collected from NPP operators.

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Reporting Year: 2011

Disposal part of facility LLLWT

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
VLLW	No	No
LLW	Yes	No
ILW	No	No
HLW	No	No

List SRS?	No
List UMMT?	No

Type:	engineered surface, trench(es)		
Facility is modular?	Yes		
Capacity existing (m3):	1200	Capacity planned (m3):	1200

Depth (m):	3	Host medium:	sedimentary (other)
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Phase Name	Start Year	End Year	Estimate
design	1968	1970	True
construction	1968	1971	True
commissioning	1971	1971	True
operation	1971	2001	False

Comment **# 7251: LLLWT**

(ESP) El sistema comprende tres lechos de intercambio iónico formados por mezclas de suelos seleccionados con mayor proporción calcárea y de arenisca con agregado de arena para mejorar la eficiencia del proceso. Estos suelos permiten que los radionucleidos de período de semidesintegración muy cortos decaigan a niveles de actividad no significativos durante su permanencia en la masa del lecho. La capacidad operativa de cada uno de estos sistemas es de aproximadamente 2 m³. Una red interconectada de freáticos permite llevar a cabo un control periódico del agua subterránea. El sistema entró en operación en 1971. Dos unidades finalizaron sus operaciones en 1986, mientras que la tercera funcionó hasta 2001 cuando comenzó una re-evaluación de seguridad de todo el AGE. Considerando que el licenciamiento de este sistema data de 1995, todos los residuos líquidos dispuestos hasta esa fecha son considerados históricos.

Comment **# 26983: LLLWT**

(EN) The system includes three ion exchange beds consist selected soil mixtures with a higher proportion of sandstone, limestone and sand aggregate to improve process efficiency. These soils allow radionuclides of very short half-life decay to insignificant levels of activity while in the mass of the bed. The operating capacity of each of these systems is about 2 m³. An interconnected network of water meters can carry out regular monitoring of groundwater. The system became operational in 1971. Two drives ended operations in 1986, while the third worked until 2001 when he began a re-evaluation of safety of all AGE. Whereas the licensing of this system dates from 1995, all liquid wastes are willing to date considered historic.

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Facility:	LLSWT
Description:	(ESP) La Trinchera N°1 fue cerrada en 1988 con residuos históricos en su interior. La Trinchera N°2 ha operado desde 1988. Se la ha licenciado para disponer residuos acondicionados en tambores de 200 litros.
Detailed Facility Description:	(EN) The Trench No. 1 was closed in 1988 with historical waste inside. The No.2 Trench has operated since 1988. It has been licensed to provide conditioned waste in 200 litre drums.
Facility Operation:	Drums with radioactive waste are placed into trenches and voids filled with dry and classified sand. First trench was commissioned in 1974, in 1980 coverage was applied to the first part and closure completed in 1988. The second trench was commissioned in 1989. By 2001, only one third of its capacity was covered.. Then, drums are covered in hill shaped mounds of selected highly compacted calcareous-silty soil. The compacted soil is sprayed with hot bituminous material at a 2 kg/m ² rate. A layer of fine dry sand applied on top is covered with a thoroughly welded 200 µm thick polyethylene sheet to prevent rainwater seepage. Finally, a 0.15 m thick calcareous-silty soil layer is applied and covered with 0.10 m thick wet soil suitable for grass seeding to fix the soil and restore the original landscape.
Financing:	Radioactive waste management is funded predominantly by fees collected from NPP operators.

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Reporting Year: 2011

Disposal part of facility LLSWT

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
VLLW	No	No
LLW	No	Yes
ILW	No	No
HLW	No	No

List SRS?	No
List UMMT?	No

Type:	trench(es)		
Facility is modular?	Yes		
Capacity existing (m3):	1820	Capacity planned (m3):	1820

Depth (m):	1.2	Host medium:	sedimentary (other)
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Phase Name	Start Year	End Year	Estimate
design	1974	1988	False
construction	1974	1988	False
operation	1975	0	False
EVENT: operation suspended	2001	0	False

Comment **# 7183: LLSWT**

La primera trinchera fue construida en suelo natural sin ninguna mejora de ingeniería. La segunda trinchera se puso operativa en 1989 y sólo un tercio de su capacidad total está cubierta, se licenció en 1995, y por esta razón todos los desechos dispuestos hasta ese año son considerados históricos. La segunda trinchera fue construida en un suelo seleccionado de carácter calcáreo y de arenisca compactado al 98% de su valor máximo teórico, sosteniendo un lecho de cascote nivelado con pendiente hacia ambos lados y paredes perimetrales de 30 cm de espesor a modo de contención. El sistema de desagüe pluvial previene de la acumulación de agua de lluvia alrededor de la base de los tambores. La cobertura de la última sección de la primera trinchera así como también el del primer tercio de la segunda fue realizada usando el mismo concepto ingenieril. Las operaciones en la Trinchera N°2 han sido formalmente suspendidas desde 2001, luego de tres años de no haber colocado tambores en ella. Actualmente, se está llevando a cabo una re-evaluación de seguridad de la instalación.

Comment **# 24807: Traslado de tambores desde LLSWT a DS**

Por resolución judicial 1789 tambores ubicados en LLSWT fueron reenvasados y trasladados a contenedores marinos ubicados en el almacenamiento DS

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Facility:	M1
Description:	Esta instalación se utiliza para almacenar residuos radiactivos sólidos de nivel medio y bajo acondicionados en tambores de 200 litros, así como fuentes de radiación decaídas (SRS).

Storage part of facility M1

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
VLLW	No	No
LLW	Yes	Yes
ILW	Yes	Yes
HLW	No	No

List SRS?	Yes
List UMMT?	No

Capacity:	Esta instalación se licenció en 1999. Tiene 60m de longitud, 20m de ancho y 10m de altura. El edificio cuenta con una grúa móvil con un gancho primario de 3 ton., uno secundario de 2 ton. y un sistema de ventilación controlada.
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Types of Storage Units

Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
M1	building	2000	No	No	No	Yes

Site (Structure) : AGE

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Reporting Year: 2011

Facility:	TN
Description:	La playa de recepción y maniobras fue concebida para la recepción de diferentes tipos de desechos. La playa comprende una plataforma de concreto reforzado de alrededor de 800 m2 cubierto por un tinglado parabólico, cercado por ladrillo o paredes metálica
Waste Packages:	Esta instalación se utiliza para almacenar residuos radiactivos líquidos (orgánicos acuosos, aceites) y sólidos húmedos (resinas, barros) generados en el Centro Atómico Ezeiza en contenedores adecuados.

Storage part of facility **TN**

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
VLLW	No	No
LLW	Yes	Yes
ILW	Yes	Yes
HLW	No	No

List SRS?	No
List UMMT?	No

Capacity:	La playa fue licenciada en 1994. Hoy en día, se utiliza también como un almacenamiento temporario.
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Types of Storage Units

Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
TN	concrete pad	1989	No	No	No	No
TN	building	2008	No	No	No	No