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**CHARACTERIZATION AND MANAGEMENT OF LINDANE-CONTAINING WASTE AT AN
ABANDONED LINDANE PRODUCTION FACILITY IN HUESCA PROVINCE (SPAIN). A
SITE-SPECIFIC PROTOCOL DESIGN FOR WASTE CONDITIONING AND HANDLING FOR EX
SITU FINAL TREATMENT**

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PROUD PARTNER FOR MORE THAN A DECADE

WASTE MANAGEMENT SOLUTIONS FOR INQUINOSA'S CONTAMINATED SITE

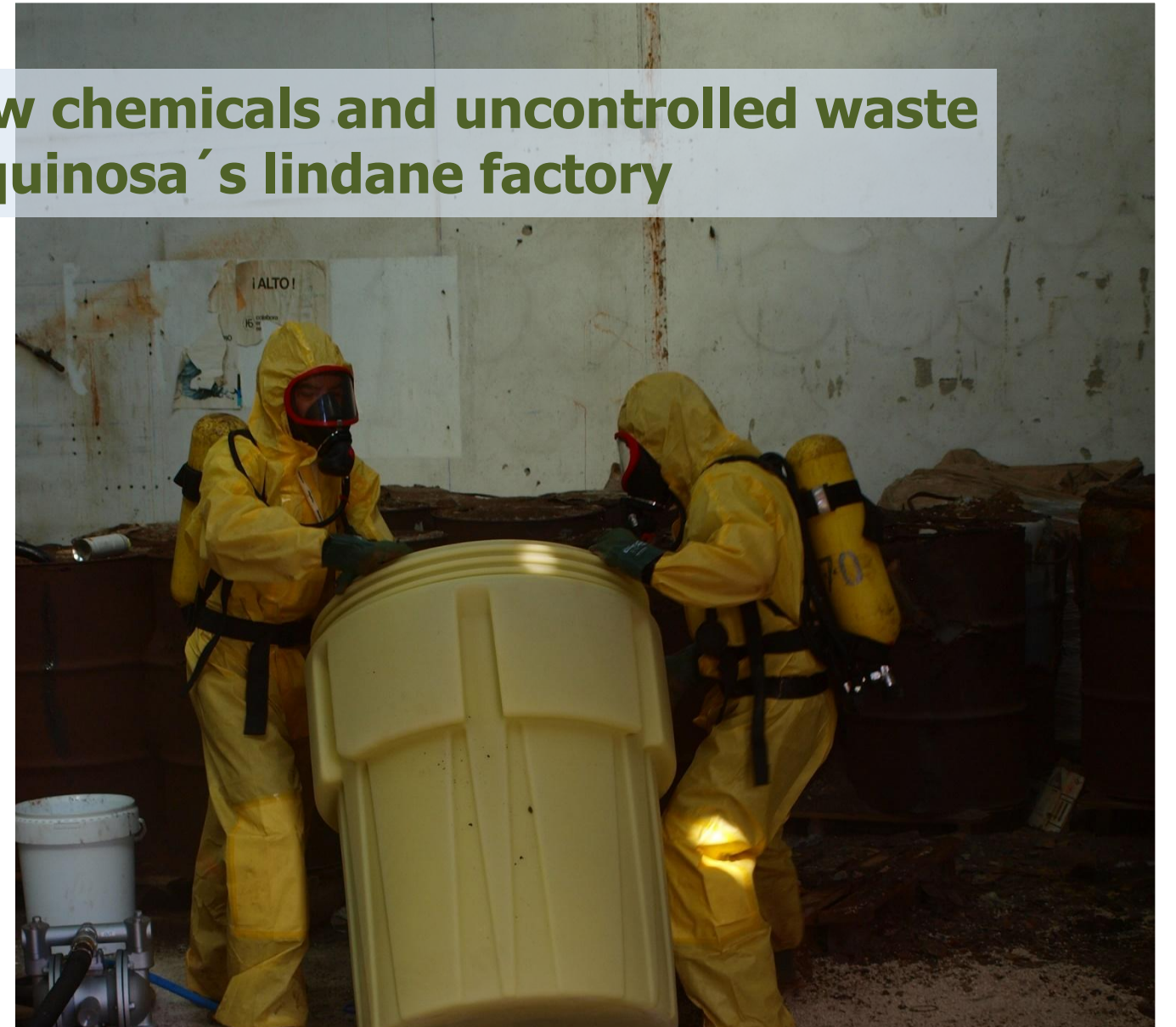


- ☐ Inquinosa's waste inventory
- ☐ Laboratory reagent waste conditioning
- ☐ Organophosphate waste conditioning
- ☐ Dismantling works of former Bailín's HCH landfill
- ☐ HCH waste management produced in the remediation activities of Bailín and Sardas sites



Project key features

The existence of remaining raw chemicals and uncontrolled waste after closure of Inquinosa's lindane factory



2010 ☐ Waste inventory

2017 ☐ First conditioning works. Deteriorated big bags containing lindane powder and sweepings are conditioned inside airtight plastic containers (1400 litres capacity)

2021 ☐ Final conditioning works to meet transportation and acceptance criteria at destination for incineration



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Workplace preparation

Indoor works to prevent particle dispersion

**Former boiler room was selected as the operational building
(ease of access and state of conservation)**

**Conditioning works were needed to ensure a proper
containment zone**

**Softwall plastic bubble
(negative pressure
containment enclosure)**



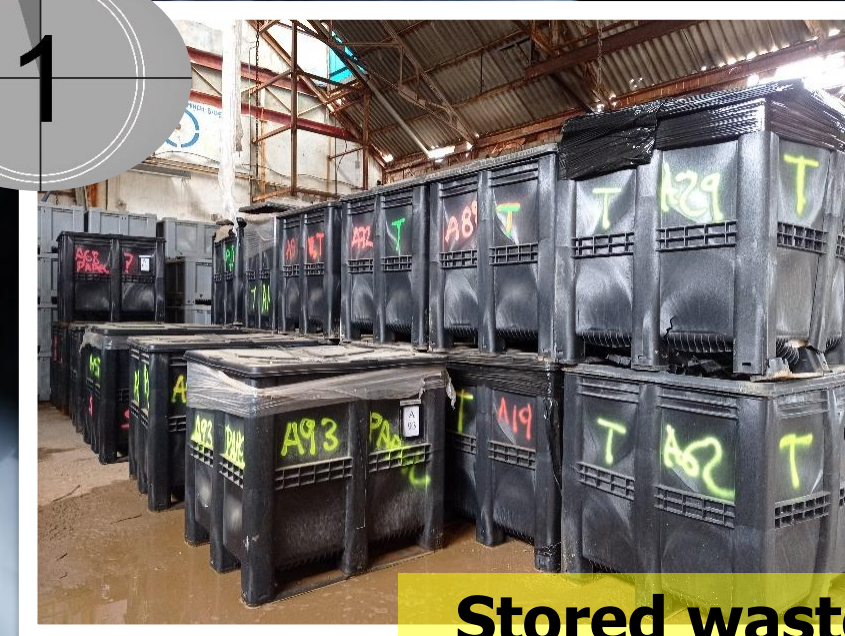
**2-door transfer
and isolation zone**



**Leachate drainage
system and
repavement**



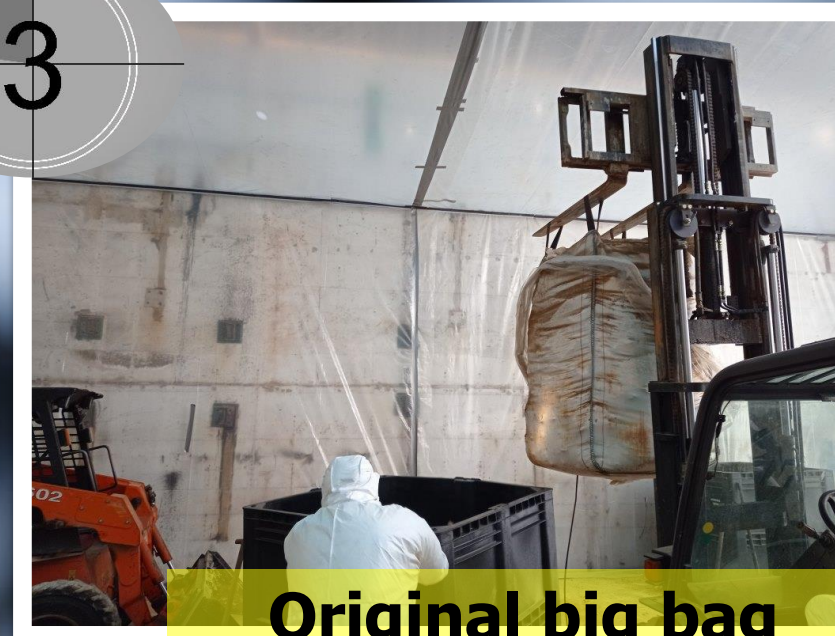
Waste conditioning



**Stored waste
prior
conditioning**



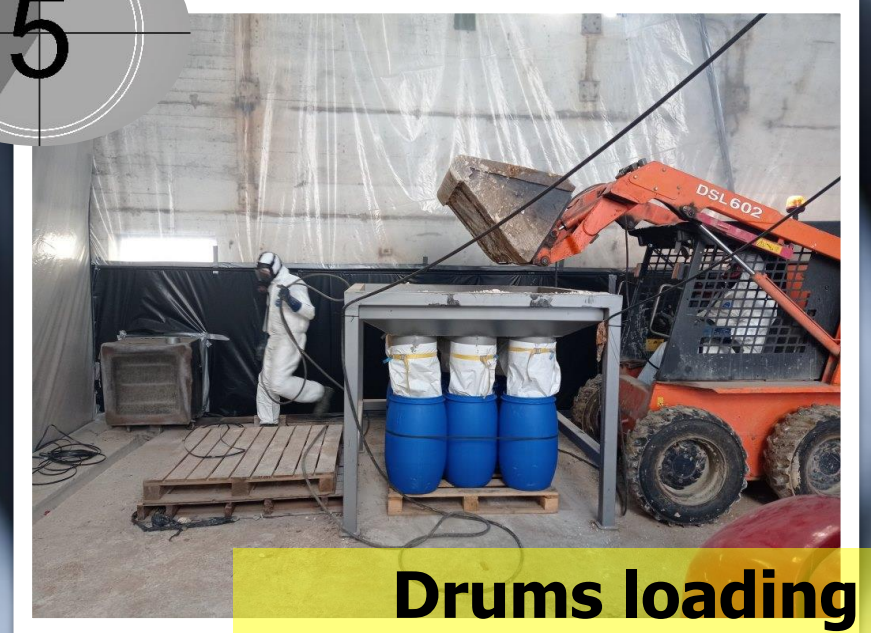
**pH
control**



**Original big bag
extraction for
ground unloading**



**Site-specific hopper for
loading a previously
strapped 9-drums pallet**



**Drums loading
according to weight
specifications**

Storage

≈1900 60L drums
208 pallets



**Outdoor storage
area for new
drums**



**Indoor storage. Pallets
ready for transportation
Waste labeling pending**



**Filling process according
to weight specifications
and pH status**



**Pallet sealing and
marking**

H&S

- ☐ Safe work protocol
- ☐ Specifically trained personnel

- ☐ Exposure duration Max 6h/day
- ☐ Disposable PPE
(Tyvek suits and gloves)
- ☐ Respiratory protection



High pressure
breathing air system



Air extractor and activated C
filter connected to the softwall
plastic bubble



Portable decontamination unit
and clean change room



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Thanks for your attention

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