


**WEHRWISSENSCHAFTLICHE DIENSTSTELLE
DER BUNDESWEHR FÜR ABC-SCHUTZ**

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Zur Kenntnis an

For information to/
copie(s) pour information à

Bemerkungen/Remarks/Observations

Subject: Essential features of the Munster CW agent incineration plant

Dear Prof. Meselson,

Please receive a table summarizing the most essential features of the CW agent incineration plant in Munster.

At present a second incineration facility is being planned to dispose of chemically contaminated soil.

Sincerely yours

Diese Übermittlung besteht aus/This message consists of/Ce message comporte

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Seiten (incl. Deckblatt)/sheets (incl. cover sheet)/pages (y compris page de garde)

Im Auftrag/By Order/P.O.

GERMANY

AGENT Mustard; viscous mustard, containing arsenicals

AMOUNT Approx. 70 metric tons/year total agent, ongoing

FORM Old munitions and containers

SEPARATION Clean with water jet, EOD evaluation, transport, X-ray, cut or drill and drain with steam injection (solid agents), separation from fuzes and explosives; intermediate storage

INCINERATION Batch-type incineration chambers. Vaporize volatile agents at 300 °C for 10 - 12 hours in inert gas atmosphere; combustion of agent vapors at 1000 - 1200 °C within 2 seconds (main incineration chamber). Another chamber at 1000 °C to burn out empty shells within about 12 or more hours. Scrub flue gas with NaOH solution; aerosol separation.

EFFLUENTS CO₂, H₂O vapor, traces of HCl and SO₂.
Post-treatment of scrubbing brine to precipitate arsenic salts; waste water still contains NaCl and Na₂SO₄.

MONITORING Monitored continuously:
HCl, SO₂, residual hydrocarbons (FID), NO_x,
Monitored discontinuously:
Dust (arsenic oxide), dioxins in flue gas. Arsenic, chloride, sulfate and pH in waste water.

DISPOSAL Arsenic sludge filtration and disposal in underground waste dump (old salt mine); filtration brine discharged in municipal waste water system

RATE About 70 tons/year. Up to 350 kg/day; Began 1980

COST/TON DM 25.000

COMMENTS Operation is highly automated except at charging/discharging the furnace wagons

SOURCES Martens 1991