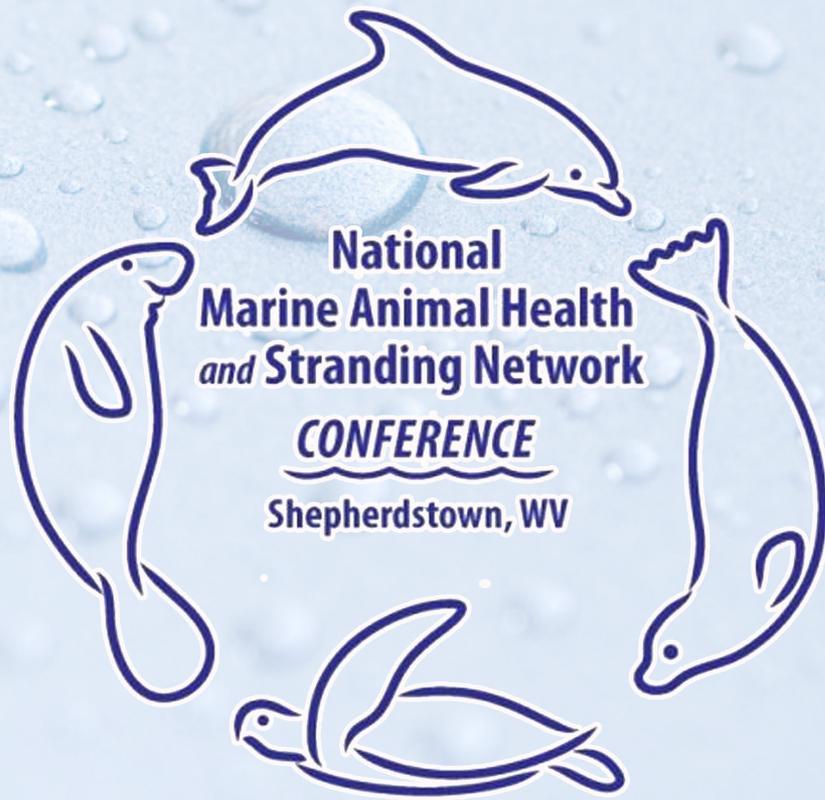


BioLiquidator



Sea Animal Process

March 2010

US Fish and Wildlife Service

National Conservation Training Center





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Please Be Advised:

This slide show contains graphic images of animal carcasses that may not be suitable for everyone.

A note about the deceased animals in this presentation:

The deceased animals pictured in this presentation were part of a veterinary techniques workshop for a diverse group of professionals (marine biologists, veterinarians, necropsy technicians, zookeepers, etc.). The animals used for the educational workshop were already deceased 'necropsy' animals.

What is a necropsy?

A necropsy is an examination of the dead body of an animal to determine the cause of death. It is essentially an autopsy performed on an animal.

Example: The necropsy performed on the whale indicated that it had died of natural causes.

Why are necropsies important?

Necropsies can help us learn more about causes of death, endemic or emerging diseases, the biology of an animal, how it is affected by disease, or how human interactions may impact animals.

Additional information from the CDC website:

The One Health concept recognizes that the health of humans is connected to the health of animals and the environment.

CDC uses a One Health approach by working with physicians, ecologists, and veterinarians to monitor and control public health threats. We do this by learning about how diseases spread among people, animals, and the environment. Link: <http://www.cdc.gov/onehealth/>



Great presentations and many organizations represented at this conference



The mortality management panel
(these are NOT the graphic images that required the disclaimer on Slide 2!)



A big THANK YOU to Dr. Allen Ingling for bringing the system all the way from Maryland!

DEPARTMENT OF THE INTERIOR
U.S. Fish and Wildlife Service



**NATIONAL
CONSERVATION
TRAINING
CENTER**



NCTC in Shepherdstown, WV



Update 7/2019: This is an older style carbon steel M-2500 system. New systems feature stainless steel construction and additional design changes. Please see www.bioliqidator.com for current model information.



Set up for the digestion at the loading dock



Carcasses from the necropsy lab





The veterinary team loads the system.







Update 7/2019:
Newer lid design fully
opens out of the way for
loading. Please see
www.bioliqidator.com
for current model
information.



Potassium hydroxide was added (based on the weight of the tissue) by an operator wearing proper PPE.





The system is unhooked from the truck and will be left here to run overnight



Off we go until tomorrow! Thanks Dr. Cindy Driscoll from MD DNR for all of your help!



12 hours into the process: Lots of soap in this cycle due to the high blubber content!

Update 7/2019: Newer models feature color touch screen.



Almost 17 hours already – we will process the full 18 hours



All finished! A thorough digestion!



The agitators are still at work. This effluent seems to be a lighter milk-chocolate color for this particular cycle because the soap produced (from the fat) is mixed in.



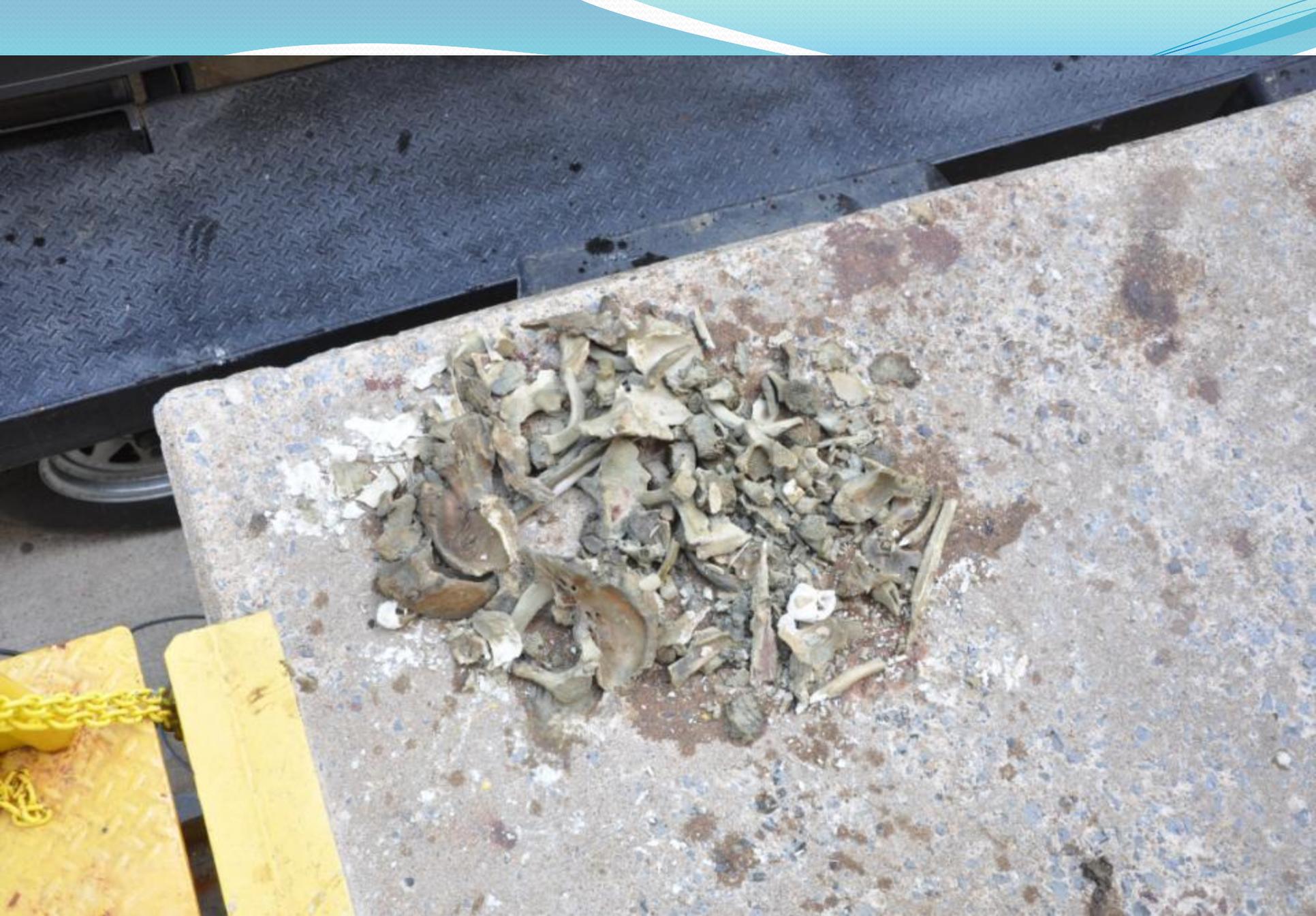
A sample of the effluent shows the separation of liquid and soap. Guinness anyone?



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SAFETY FIRST

The bones!

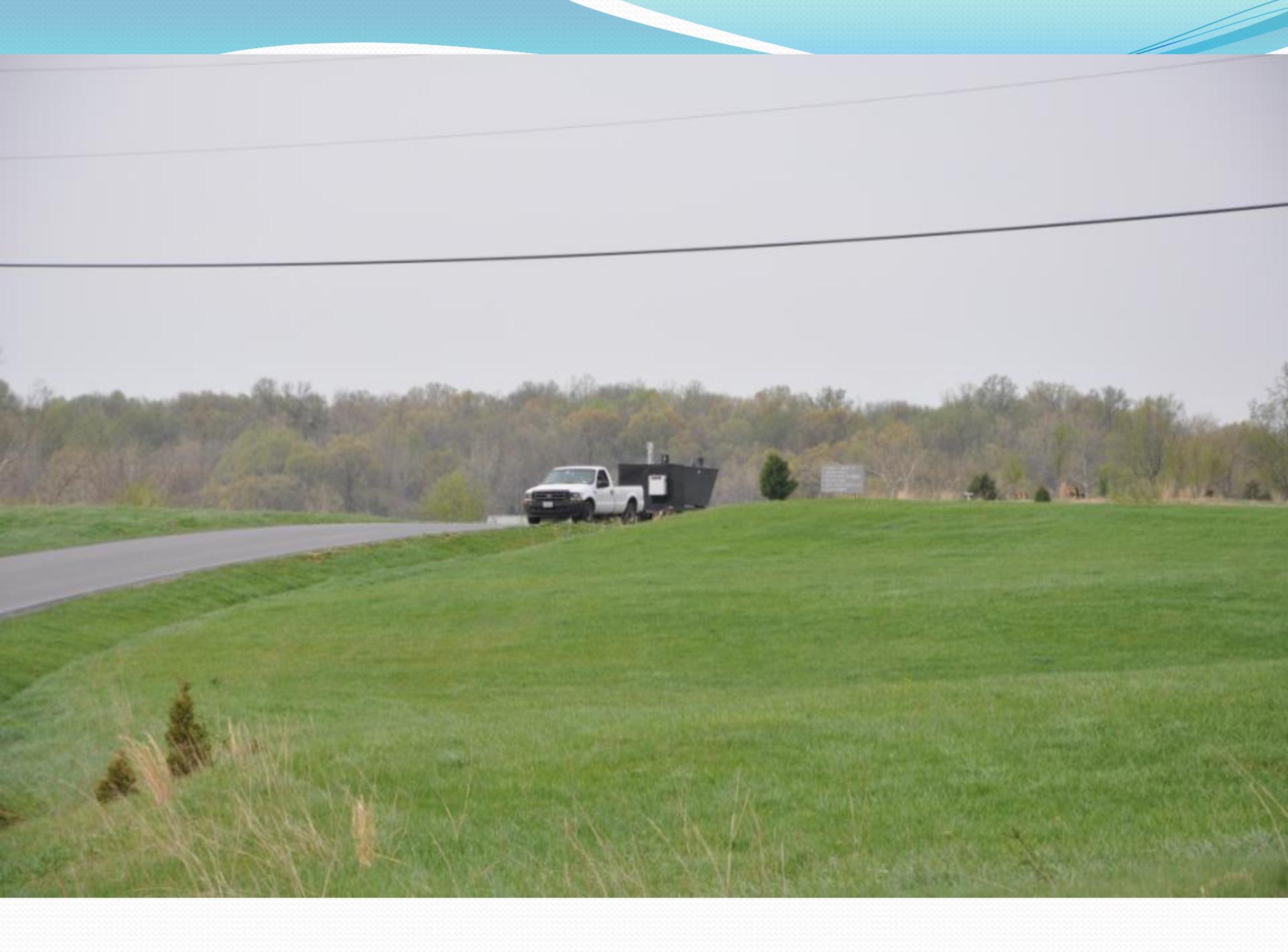




The pH has been lowered, and the liquid is in the process of cooling so we can land-apply it on a field as fertilizer.



Transporting the fertilizer to the field. This is okay to do since it is a short distance (HEAVY!)





Gorgeous area!







Keith Matassa (University of New England), Joe Wilson (Bio-Response Solutions), Mark King (Maine DEP/Maine Compost School), and Allen Ingling (Maryland Dept of Ag) pushing buttons...





Dr. Allen Ingling getting some exercise while the rest of us watch!



See? I think Allen drew the short straw... Joe, Mark, and Keith are having too much fun!





Ideally, a spray bar system would be set up along the end of the trailer.



The End!

NCTC reported that the grasses were visibly thriving in the areas that received the fertilizer!

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Thank you to everyone who worked so hard to set up this conference, and to the attendees for taking the time to learn about alkaline hydrolysis. The team at the US Fish and Wildlife Services NCTC were very generous to provide reports on the performance of the fertilizer in the weeks following the workshop.

A special thanks those who extended the invitation to us and worked out all of the details (Keith Matassa and Mark King), and to Dr. Ingling for bringing his machine and getting his shoes wet! Dr. Ingling actually had to leave unexpectedly, and drive through the night to help euthanize a stranded whale on the east coast.

Questions or comments?

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