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Permit for second burn of Herbicide Orange to be issued by EPA

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MEDILL NEWS SERVICE

WASHINGTON — A permit for a second Pacific Ocean burn of the controversial defoliant Herbicide Orange is expected to be issued within the next two days by the Environmental Protection Agency (EPA) following a hearing here at which an initial incineration was called successful and environmentally safe.

The incineration of more than 800,000 gallons of the herbicide which had been stored in Gulfport, Miss., for seven years was completed July 24 by the Dutch-owned ship Vulcanus. It was conducted in an area some 950 miles west of Hawaii, and, with a second permit, the Air Force will be able to dispose of its remaining 1.5 million gallons still on Johnston Island, 800 miles west of Hawaii.

Earlier this week on Johnston Island, the Vulcanus — a converted tanker — completed the loading of the herbicide after preliminary tests showed that the destruction and emission rate of the first burn was more than 99.9 per cent effective and that the incinerator emissions contained no more than .01 per cent of dioxin, the defoliant ingredient linked to birth defects.

Since the results of the first burn met the requirements of the permit, Kenneth Biglane and Russel Wyer, director and deputy director respectively the EPA's Oil and Special Materials Control Division, said they would recommend the new permit.

Wyer added that the permit would allow the Air Force to incinerate various contaminated waste materials and contaminated water in addition to Herbicide Orange.

Unlike the first burn, the second burn would have to be conducted in two stages because of the large amount of herbicide at Johnston Island. Each burn takes about 10 days, and if everything goes according to plan, Project Director Col. Stanley Morrow said the project will be finished by Sept. 1.

During the first burn there were several minor problems, but according to the EPA they didn't significantly affect the project.

Dr. Ray Maddalone, a chemist for the TRW Corp., and a member of the ship's crew during the first burn, said that several instruments monitoring carbon monoxide and hydrocarbon emissions became inoperative at different times. But he added that the failure wasn't serious because the instruments were working during the critical stages of the monitoring process. If there were any major changes in the emissions, he added, it would have been indicated by other instruments.

Another problem during the first burn was that the incinerator burners went out three times. According to the EPA's Dr. Ronald Venezia the burnouts lasted a total of no more than 90 seconds.

Venezia said the burnouts were caused by an unknown substance floating on top of the herbicide that entered and extinguished the burners.

He said the disruptions should not occur during the second burn because the incineration process will be adjusted to burn the herbicide and the top residue by different burners.

The most important part of the emission analysis was the determination of the dioxin level, but according to Michael Taylor of Wright State University in Dayton, Ohio, "We didn't find any dioxin. I'm convinced there is some there, but to date we haven't found any."

Col. Morrow summarized the emission results by noting, "The dioxin was below detectable levels. Therefore the destruction efficiency was determined to be greater than 99.9 per cent." Other members of the scientific group estimated the destruction efficiency at different times to be as high as 99.99 and 99.99 99.98 cent.

The project was carried out with no major or minor spills of the dangerous herbicide. And the severe precautions were also applied on the ship to protect the crew from contamination.

The combustion and pump rooms were the most actively monitored areas, according to Venezia, but also checked was the crew's living quarters, mess hall, the passage ways door jams and floors.

The crew wore disposable clothing when working in the areas prone to contamination, and areas found to be contaminated were immediately washed down with water and acetone, Venezia added. The crew also will undergo physical examinations.

Also monitored was the smoke from the ship's stacks. To keep track of it, ammonia was added to the stacks to give the effluent a whitish tint. Normally it had no color, said Venezia. But using this technique, he added, the scientists were able to determine the correct ship speed and direction to prevent the effluent from descending on the ship or its crew.

Herbicide Orange was used to defoliate jungles in the Vietnam war but was banned in 1970 after its link to birth defects was uncovered.