

ILLINOIS POLLUTION CONTROL BOARD
August 7, 1985

DEPARTMENT OF THE ARMY)
 (Savanna Army Depot Activity),)
))
 Petitioner,))
))
 v.)) PCB 85-113
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ILLINOIS ENVIRONMENTAL))
 PROTECTION AGENCY,))
))
 Respondent.))

OPINION AND ORDER OF THE BOARD (by W.J. Nega):

This provisional variance request comes before the Board upon an August 7, 1985 Recommendation of the Illinois Environmental Protection Agency (Agency). The Agency recommends that the Board grant the Department of the Army, Savanna Army Depot Activity (SVADA) a provisional variance from the open burning prohibitions of 35 Ill. Adm. Code 237.102 to allow the destruction by burning of specified unstable explosive bulk propellants. (Rec 1).

The actual time needed for the open burning operations is estimated by the Petitioner to be approximately fifteen to twenty working days. (Rec. 1). The Agency has recommended that the provisional variance be granted retroactively to August 3, 1985 and extend for a period thereafter not to exceed 45 days because of the "serious safety problem present in this matter" which "necessitated starting the burning and the time necessary to complete the burning". (Rec. 5). The Agency notes that, during the calendar year, the Petitioner has not been granted any provisional variances. (Rec 1).

The Petitioner has requested a provisional Variance to allow the emergency destruction of the following propellants by open burning:

<u>Quantity</u>	<u>Description</u>	<u>Composition</u>
209,463 lbs.	M6 propellant	87% Nitrocellulose 10% Dinitrotoluene 3% Dibutylphthalate
97,773 lbs.	M15 propellant	20% Nitrocellulose 19% Nitroglycerin 54.7% Nitroguanidine 6% Ethyl centralite

SVADA intends to burn these propellants on its inactive burn pads which are located in remote part of the army depot 3 1/2 miles away from the nearest city. The closest city is Bellevue, Iowa which has a population of 1182. Blanding, Illinois, which has a population of 150 individuals, is located about 3.8 miles from the burn area. The nearest homes are also about 3.8 miles from the Petitioner's burn area. (Rec 2). Moreover, in the vicinity of these burn pads, the population density is very sparse. Carbon monoxide, oxides of nitrogen, and particulates are the pollutants which are expected to be emitted during the Petitioner's open burning activities.

The Petitioner has noted that its explosives are inherently unstable and have been known to deteriorate in storage when there is a low stabilizer content or hazardous stabilizer loss. The Petitioner's propellant stability tests on the lots of unstable explosive propellants in question have indicated that an extremely dangerous situation now exists because the stabilizer content of the propellants is below 0.20 percent (with some batches as low as 0.10 percent). SVADA has included the test report on the aforementioned explosives as part of its provisional variance request. Attached to the Petitioner's request is a Department of the Army Supply Bulletin #SB 742-1300-94-2 which indicated that if the stabilizer content of the bulk propellant falls below 0.20%, the propellant is unsafe for continued storage and must be destroyed within 60 days.

The Agency's investigation of this situation has revealed that the Petitioner "has an adequate firefighting detail at the facility as well as mutual aid agreements with nearby fire departments". (Rec. 2). The Petitioner has agreed to conduct its open burning activities only during periods when there is less than 50% cloud cover and only between the hours of 9:00 A.M. and 4:00 P.M. (Rec. 2). Mr. Joseph Mall, the Agency's District Engineer, visited the Petitioner's site on August 3, 1985 "to review the proposed conditions with SVADA staff and observe the procedures taken with the first burn". (Rec. 2). According to Mr. Mall, each burn (which takes place on a "burn pad") is of 10,000 pounds of propellant which is "lit with a fuse of sawdust soaked in diesel fuel allowing personnel to retreat to safe areas". (Rec. 2). Each burn lasts less than one minute and produces an orange flash of approximately 100 feet in diameter. (Rec. 2).

At the present time, the Petitioner has no other means available to destroy and dispose of the dangerous, unstable propellant. Although a new explosive waste incinerator is currently under construction at the site, the completion of construction has been delayed because of equipment availability problems and the necessity for technical review of the trial test burn plan. Therefore, the new explosive waste incinerator is not expected to be operational until sometime in the spring of 1986. (Rec. 3).

The Petitioner emphasizes that "because of the low stabilizer content, there is an inherent danger that the propellant could ignite at any time. SVADA personnel are trained in handling explosives and every safety precaution will be taken to ensure the safety of the personnel during burning operations". (See: letter dated July 25, 1985 to the Agency). Transportation of the propellant to another military installation also is not feasible, since the risk in shipping the unstable propellant would be even greater than continued storage. (Rec. 3).

The Petitioner has stated that deterioration which resulted in an explosion of propellant in a storage location occurred on June 6, 1985 at the Lexington-Blue Grass Army Depot due to "auto ignition of propellant with low stabilizer content". On July 31, 1985, there was a similar explosion at a military facility in Dugway, Utah. (Rec. 3). On August 2, 1985, Mr. James Ryan of SVADA reported that "Army personnel from New Jersey investigated the problem at Savanna and determined that the danger of explosion was imminent". (Rec. 3).

The Agency believes that, with the danger of explosion "imminent", it would obviously be an arbitrary and unreasonable hardship for SVADA to wait for the normal period of time to process an ordinary variance petition. (Rec. 3). Transport of the propellants to another facility is not a practical alternative, and the Petitioner's new explosive waste incinerator will not become available until next year. Because of the serious threat of explosion, the Agency has indicated "it is probably unreasonable in this case to wait even for the provisional variance process to begin the burning". (Rec. 3). Accordingly, "because of the recent explosion in Utah and the August 2, 1985 evaluation of the hazard at the Savanna facility, the Agency represented to Petitioner the Agency would not pursue any enforcement activity against SVADA for starting burning at 9:00 A.M. on August 3, 1985". (Rec. 3-4). The Petitioner has agreed to follow the conditions delineated by the Agency to help assure safe burning conditions during this emergency. (Rec. 4). (See: Opinion and Order of the Board of March 2, 1984 in PCB 84-25, Dana Corporation v. IEPA, and note Concurring Opinion in PCB 84-25 by Messrs. Dumelle and Meyer.

The Agency believes that the actual environmental impact of the burning will be minimal because the burn site is near the middle of a large military facility and the area outside the SVADA facility is very sparsely populated. (Rec. 4). The Agency has calculated that there will be 28.7 pounds of particulates emitted during each burn and that "even a much larger amount of particulates would be insignificant in such a sparsely populated area". (Rec. 4). The amount of CO and NO_x released is "unquantifiable with available information" but is thought to be relatively minor. (Rec. 4).

Accordingly, the Agency has concluded that compliance on a

short-term basis with the open burning provisions of 35 Ill. Adm. Code 237.102 would impose an arbitrary or unreasonable hardship upon the Petitioner in light of the serious safety problem in the instant case; the minimal environmental impact; the lack of feasible alternatives; the actual explosions under comparable conditions at similar facilities; and the fact that time is of the essence. Therefore, the Agency recommends that the Board grant the provisional variance retroactively to August 3, 1985 to "allow coverage for the period of time before the grant of the variance for which emergency conditions necessitated starting the burning and the time necessary to complete the burning". (Rec. 5).

Pursuant to Section 35(b) of the Illinois Environmental Protection Act, the Board hereby grants the provisional variance as recommended.

This Opinion constitutes the Board's findings of fact and conclusions of law in this matter.

ORDER

The Petitioner, the Department of the Army (Savanna Army Depot Activity), is hereby granted a provisional variance retroactively to August 3, 1985 and continuing to September 16, 1985 from 35 Ill. Adm. Code 237.102 to allow the destruction by burning of the propellants identified in the provisional variance request, subject to the following conditions:

1. The open burning shall only be conducted between the hours of 9:00 A.M. and 4:00 P.M.
2. The open burning shall only commence when the cloud cover over the burn site is no more than 50 percent.
3. The Petitioner shall notify officials of municipalities within a 5 mile radius of the burn site of the open burning.
4. The Petitioner shall cease the open burning if citizen complaints are received and only continue when weather conditions have changed sufficiently to avoid the causes of those complaints. This condition is to apply only to the extent possible while completing the destruction of the propellant by September 16, 1985.
5. The Petitioner shall conduct the open burning in full compliance with Section 725.482 of the Board's RCRA Rules. (35 Ill. Adm. Code 725.482)
6. The Petitioner shall notify the Agency when the burning is completed. Notice shall be made to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Field Operations Section
5415 N. University
Peoria, Illinois 61614
Telephone: (309)691-2200

- 7. Within 7 days of the date of the Board's Order, the Petitioner shall execute a Certificate of Acceptance and Agreement which shall be sent to Mr. William D. Ingersoll at the following address:

Mr. William D. Ingersoll
Illinois Environmental Protection Agency
Enforcement Services
2200 Churchill Road
Springfield, Illinois 62706

This certification shall have the following form:

I, (We) _____, having read the Order of the Illinois Pollution Control Board in PCB 85-113 dated August 7, 1985, understand and accept said Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

Department of the Army
Savanna Army Depot Activity

By: Authorized Agent

Title

Date

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 7th day of August, 1985 by a vote of 5-0.

Dorothy M. Gunn

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board