

UNITED STATES GOVERNMENT

*Memorandum*

TO : Lyell Johnson, Assistant Director for  
Facilities and Materials Licensing  
Division of Licensing and Regulation

FROM : Lester R. Rogers, Assistant Director for  
Nuclear Materials Safety, *LR*  
Division of Licensing and Regulation

SUBJECT: THE CARBORUNDUM CO., DOCKET NO. 40-5001

DATE:

1960

Conclusion: The information submitted by the subject company in their letter of August 3, 1960 while containing an excellent description of the planned routine survey program is not complete from a radiation safety standpoint.

In order to complete the review for a full term license which covers routine and continuing operations the information requested in our memo of August 5, 1960 is necessary. In addition they should describe the equipment to be used to remove the solid radioactive material prior to discharge of the liquid effluent from the plant area.

It is suggested that a short term license be granted until the applicant can supply the data requested.

Lyall Johnson, Assistant Director for  
 Facilities and Materials Licensing  
 Division of Licensing and Regulation  
 Lester R. Rogers, Assistant Director for  
 Nuclear Materials Safety  
 Division of Licensing and Regulation  
 THE CARBORUNDUM CO., DOCKET NO. 48-5801

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DATE ▶	11/1/60	11/2/60			

DRAFT  
CMP:det  
8/17/60

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AUG 18 1960

To: Lyall Jokason

From: L. R. Rogers

Subject: The Carborundum Co., Parkersburg, West Virginia, Docket No. 40-5001

Conclusion: The information submitted by the subject company in their letter of August 3, 1960 while containing an excellent description of the planned routine survey program, is not complete from a radiation safety standpoint.

In order to complete the review for a full-term license, *which would cover routine and continuing operation* the following information ~~is~~ requested *in my memo of Aug 5/1960 is necessary.*

- (See Above)
1. A drawing or map of the plant area indicating the sampling stations for air and liquid effluents.
  2. A detailed description of the organization, including authority and responsibility of each level of management and/or supervision in regard to development, approval and adherence to radiation safety operating procedures.

If Dr. Whipple or other consultants are to be retained to carry out certain parts of the radiation safety program and advise on radiation safety problems, information should also be submitted concerning the arrangement made between the consultant and the licensee, the consultants responsibility and the authority given to the consultant by the licensee to prescribe procedural, operational and equipment modifications.

3. The qualifications, training and experience of the personnel in the licensee's organization assigned the responsibility for developing, con-

ducting and administering the radiation safety program for the plant.

4. A description of the method for restricting the plant from unauthorized entry.

5. A description of the equipment used to remove solid radioactive material prior to discharge of the liquid effluent from the plant area.

6. A flow diagram of the plant production operation and a diagram indicating areas and points where dust or fumes are generated.

7. A description of ventilation and dust collection equipment which will be utilized when the plant is running routinely.

8. In describing the air analysis program, the following information is requested:

a. Description of the sampling location in respect to operating personnel.

b. A description of the sampling location in respect to the process operation.

Note: These two items may be indicated on the flow diagram requested in No. 6.

9. If respirators are to be used as a temporary protective measure, a description of your program for using respiratory protective equipment including type, methods for assuring adequate mask to face seal, procedures for maintenance and cleaning the areas of use and management enforcement of the program.

10. A description of all plant discharge stacks including stack heights and types of effluent being discharged and methods for controlling the release of radioactive material to the environs.

The July 25, 1960 report from Whipple to the Carborundum Co. gives a summary of the air samples which were taken after the installation of additional equipment in the carbide building. They appear to have done an excellent job in lowering the dust concentrations. A comparison of Table I of this latest memo with Table III of the March 10, 1960 memo indicates that the dust concentrations in all cases but one have been reduced to below MPC. The off-site continuous air samples indicate air concentrations several orders of magnitude below MPC.

The report indicates that the effluent contains a large amount of solids. The surveys of the limited number of samples taken gives an estimated concentration in excess of MPC for thorium.

Whipple recommends an intensive sewer effluent and river radiological survey to determine the magnitude of the effluent problem.

The report contains information on urinalysis/ <sup>and</sup> gamma measurements which indicate no health problems. A revised counting procedure for air and liquid samples is included.

Whipple's conclusions and recommendations for the carbiding and chlorination processes are included. The report covers general items such as washing before eating, designated lunch room area, etc.

Whipple has listed a routine radiological survey program including frequency of samples which appears satisfactory for the processes involved. It should be noted that the licensee is <sup>taking</sup> making continuous air samples <sup>at</sup> of off-site locations.