ORD 2424-64
2 November 1964

MEMORANDUM FOR: Chief, Maritime Branch/Special Operations Division

SUBJECT : Project OXYGAS

1. Attached is a progress report on Project OXYGAS which will, no doubt, be of interest to you. As you recall, ORD undertook this project with you for the purpose of demonstrating the technical feasibility of using dolphins for a variety of operational purposes. From the technical point of view, we were interested in determining the dolphin's reliability in placing an appropriate object on a [redacted] We also recognized that there would be a serious question of the range of the dolphin but felt that an initial achievement of [redacted] range with a payload would be most encouraging. The first technical objective has been achieved more rapidly than anticipated. The second technical objective is now under investigation, and we are hoping that we will be able to achieve a reasonable range, although not necessarily a useful operational range, by the completion of the contract period in January 1965.

2. Quite frankly this project has progressed more rapidly than we anticipated, although unbridled enthusiasm is not justified at this time. I wish to emphasize that there are many difficult technical problems which face us which include the operational range of the animal, communication problems between the animal and its handlers, design of an appropriate payload shape, improved handler training techniques, and others. Nevertheless, there is the very real possibility that technical feasibility will be demonstrated by January. Dr. Galler of ONR, who takes a more optimistic point of view, feels that technical feasibility has been established already. The possibility of success requires that we begin to explore where we go from here. My tentative thoughts on this are outlined below.

3. ORD could continue to support OXYGAS at its present location for another few months with profit, although we are rapidly approaching the stage where security dictates that we move the operation to a more suitable location. You are aware of the possibility of joining the Navy in using an operational testing site for this project. The decision to demonstrate operational feasibility will require greater participation, both administratively and operationally, by SOD. As the project becomes more operational, it is my view that ORD should gradually withdraw its participation

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except to the extent that technical problems arise. It might be advisable for your activity to survey other DD/P units to see whether they have requirements which dolphins might perform. We should consider a similar survey in the DD/S&T as well.

4. I think we can assume that the cost of maintaining an operational dolphin capability would be considerably higher on an annual basis than the current contract of approximately $100,000. The exact cost would depend, to some extent, on the availability of Navy facilities, the number of dolphin, the operational requirements, and the like. I suspect that considerable support could be obtained from Navy on a "no cost" basis because of their intense interest in this project. The extent of collaboration with the Navy would, of course, depend upon your own security and operational requirements.

5. In summary, the OXYGAS project appears to be running ahead of schedule. I think the chances are quite good that we will demonstrate a reasonable technical feasibility this year. I am suggesting that we begin planning for follow-on phases, although I think it is premature to make final decisions on follow-on until technical feasibility has been demonstrated. It may not be premature to alert appropriate senior officials in the DD/P of the project. We would be most happy to provide suitable technical information and/or briefings at the appropriate time.

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