



ORION CHEMICAL COMPANY

FINE REAGENT CHEMICALS

September 24, 1982

Richard C. Deyoung
Director
Office of Inspection and Enforcement
Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Deyoung:

This letter is in response to the order to show cause and temporarily suspend the general license of Orion Chemical Company. We answer the following four allegations as follows:

Allegation #1 10 CFR 40.22(a) ...the authority of firms to use and transfer not more than 15 pounds of source material at one time.

- a. We don't deny the allegation of having more than 15 lbs. at one time, but we think we were in an extenuating circumstance.
- b. We were asked to quote on a larger defense department contract for this year, than for previous years. At this time we realized that we would need a specific license for more than 150 lbs./year. We applied for the license by filing our NRC-2 form on 5/11/82. The NRC received the form and \$140 filing fee on this date.
- c. Many calls by John Larsen were made to Washington D.C. Licensing people over one month's time to expedite the license, including offers to fly there directly so as to save mailing time, for questions and answers back and forth. Nevertheless it was one month before anyone met and considered our NRC-2 application form. We received back a letter with 10 questions on it, all of which would take time to research and answer.
- d. The contract was issued to us verbally in July for a large shipment (60 lbs) in August and September (90 lbs.). John Larsen called the NRC, asking them to come out and see our operation while we were operating and make any recommendations necessary for the specific license. Again there was delay by

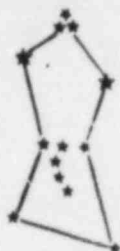
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the NRC and production had to start. (NOTE: The end product, a land mine for defense, is made up of 12 components, the catalyst U.A.A. that Orion Co. makes is vitally necessary for the hardening plastic reaction to take place. 300+ workers would be effected without the catalyst, and we feel a great responsibility for providing this necessary part in the fabrication.)

- e. Our operation has been closed because our records were not available when an NRC agent visited, and he also discovered our area to not be as clean as expected. We have since cleaned up the area, hired a consultant who is Bob Decker of Chemrad Corporation. His recommendations are being fully carried out, which include a more sensitive instrument, (an alpha scintillation counter), sealing the concrete areas (where contamination was found and cleaned up) and painting them so as to show any clean up problem quickly and clearly. We can then clean the problem immediately. Also there will be restricted areas where containers and tools are stored and will be clearly marked off-limits. We also are surrounding each step of the process with catch-all tubs that will prevent any spills which occur (accidentally in pourings) to be contained. We will be shortly writing a Procedures Manual for Employees, which will educate them as to any hazards, step by step, and the appropriate dress and actions to take in production. John Larsen will personally supervise and be the Safety Radiation Officer, with a more sensitive instrument in hand, and monitor the area regularly. Gloves, footwear, jump suites, masks, etc. will be worn, and taken off and put on at the premises. They will be washed regularly. Swipe monitoring will take place regularly after each days' clean up, and waste materials taken care of according to the schematic enclosed with this letter. Radiation signs will be posted for restricted areas. Sandbags, etc. will surround waste awaiting delivery to Beaty, Nevada. All records of transfer, both in and out of our company, will be kept neat and orderly in a Records of Transfer book, to show control of Product, Raw Materials, Waste disposal, etc. and will be the responsibility of the Safety Control Officer. A record will also be kept of swipe monitoring, as well as fixed radiation monitoring, in this book. We will be in compliance by September 30, 1982.



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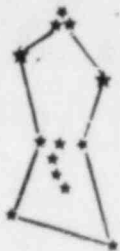
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Allegation #2 10 CFR 40.62(b) ...make available records of transfer of licensed material.

This was a surprise inspection and I didn't have all my records together at one place. The records needed to be updated. The records of transfer are as follows:

<u>1980</u>		Lbs. Shipped	
Lbs. Ordered			
8/10/80	60 lbs	9/9/80	33.4 lbs
		9/29/80	23.2 lbs
		10/10/80	17.7 lbs
9/10/80	60 lbs	10/23/80	28.3 lbs
		11/10/80	26.6 lbs
10/14/80	60 lbs	11/20/80	27.7 lbs
		12/3/80	19.1 lbs
		12/16/80	17.5 lbs
11/17/80	60 lbs	1/29/81	27.6 lbs
11/13/80		1/5/81	36.2 lbs
		1/20/81	34.9 lbs
<u>1981</u>			
1/5/81	60 lbs	2/24/81	37.99 lbs
		4/1/81	25.4 lbs
1/26/81		Cancelled	5/12/81
8/19/81	30 lbs	9/21/81	30.4 lbs
12/1/80		1/11/82	29.8 lbs
12/21/81	30 lbs	2/10/82	29.9 lbs
<u>1982</u>			
2/4/82	30 lbs	3/10/82	30.3 lbs
2/4/82	30 lbs	4/2/82	32.4 lbs
3/8/82	30 lbs	4/23/82	27.9 lbs
Applied for license 5/11/82			
5/11/82	30 lbs	5/24/82	26.8 lbs

All shipments went to Hysol Co. 211 Franklin St. New York 14760 For the defense contract.



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5/27/82	60 lbs	7/23/82	26.1 lbs
		8/8/82	31.0 lbs
5/27/82	30 lbs	7/4/82	31.5 lbs

Contract Awarded - Decision necessary

Allegation #3 10 CFR 40.22 ...contamination outside of the business premises that apparently resulted from unauthorized disposal of compounds containing depleted uranium.

- a. We answer this allegation in denying any disposal of waste outside the business premises. We, in fact, have kept all of our waste sludge in 55 gallon barrels awaiting disposal at Beaty, Nevada. Our sludge and liquid wastes had to be in solid forms before they could be disposed of, so we have saved them, not knowing what to do with them. We have been given approval now for evaporation by the suns rays of the waste solutions down to solid sludge material, and we are now doing this in compliance with the E.P.A. Waste Disposal procedures.
- b. What the inspector saw in the yellow stains on the concrete outside our shop was the result of a spill we accidentally had in pouring from bucket to bucket while doing our production outside. We must do work outside for health and ventilation reasons (due to flammable, harmful vapors that would accumulate indoors) and to please the fire departments regulations. We should have cleaned up the stains faster than we did, and now they are cleaned up.
- c. In the future, we will have tubs for catch-alls under every step (see schematic) and will not have stains to clean up. The tubs will catch any spills and will be cleaned up and placed in restricted areas for safe keeping until used again.
- d. Six months ago we developed a method to recycle our sludges and extract any depleted uranium and return it to the system, and this has resulted in a reduction of waste materials and a higher yield of U.A.A. For instance, old solvent is evaporated and as the concentrations saturate, hard crystals of U.A.A. plate out on the walls of the evaporating container. The hard crystals are dried out and added to the batch.
- e. We are now in compliance with this regulation, and have cleaned up with shovels as well as scrubbed down any stains. We will seal our floors with a concrete sealant and paint them green, to facilitate removal of any contamination in the future.

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Allegation #4 ...each person who receives source material shall keep records showing the receipt of such material.

- a. We have received our material this year from Nuclear Metals Co. in Concord, Massachusetts. We also have been recycling sludge previously unuseable and filling orders that way. We have also used NL Industries in Albany, New York in the past, but they have discontinued the Nuclear division at this time. Also we have lost records of transfer in our moving twice since 1979, to try to accomodate various people, neighbors, fire department, etc. that have complained about having flammable liquids or any radioactivity around them. Our facility now is ideal since we are next to two assayst chemical compainies who understand chemicals better, and have more tolerance for our industry. The following is what I could get together for information on purchasing of Depleted Uranium.

- b. Nuclear Metals Corp. - 1982

NL Industries - 1981
Nuclear Metals - 1980

Inv. #2670	15 lbs	Inv. #2736	15 lbs	
Inv. #2715	11 lbs	Inv. #2737	15 lbs	Please note all shipments
Inv. #2719	15 lbs	Inv. #27448	15 lbs	300 lbs or less/contract
Inv. #2720	15 lbs	Inv. #2746	15 lbs	year 1980, 1981, 1982.
Inv. #2731	15 lbs	Inv. #2747	15 lbs	U metal in product U.A.A.
				is 45% apx. so that 150
				lbs U 238 metal makes
				300# U.A.A. catalyst.

- c. All future purchases will be maintained by a Records of Transfer book which will be internally audited by Mr. Bob Decker of Chemrad Corporation, and will be the responsibility of Mr. John P. Larsen, owner of Orion Chemical Company. We will have neat and orderly records which will be up to date for inspection by the NRC.

In summary, we deny unauthorized disposals of source materials, which we are using in our recycling process, as best as possible, and have saved the liquid sludge which we are drying out and readying for waste transfer to Beaty, Nevada. We have not buried any material after the 1979 inspection. We cleaned up the small mess in 1979, and we will be sure that with the tighter controls and supervision, a recurrence of spills will not happen. We now will be monitoring as per instructions from Blaine Howard of the Utah Radiation Control, and will have consultation services of

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Chemrad Corp. We also deny the "Willful Nature" accusation as not true. In view of the extenuating circumstances of the large defense order, and the slow processing of our license for use. We feel we did the socially responsible thing in keeping 300+ people at work in the production of this defense weapon. If our request for the specific license could have been handled any faster, or the demonstration of our process of manufacture reviewed by someone in authority more quickly, and any discrepancies handled quickly, we would have been more than willing to speedily do our part in any adjustments suggested by the Licensing Board. All we ask now for is to handle this proceeding by the NRC just as quickly as possible, so we will not hold up any workers at HYSOL and HONEYWELL who need our catalyst. We waive our right to appeal these accusations, our request for a hearing, in the interests of time so as to speed up corrections in our process, clean up any spills, and satisfy the NRC that we are a good company with a safe process and a responsible attitude about health and disposal of nuclear waste.

Sincerely,

John P. Larsen
Orion Chemical Company

NOTES:

1. ALL WORK DONE OUTSIDE FOR FAX, VENTILLATION
2. EMPLOYEES ARE TRAINED CHEMISTS
3. ALL WEAR GLOVES, MASKS, BADGES, ETC. ANY POURING IS DONE OVER CATCHALL SHEET METAL STRUCTURES WITH ABSORBANT MATERIALS WITHIN.

- NOTES:
1. DONE OUTSIDE
 2. ALL EMPLOYEES CHEMISTS
 3. WEAR GLOVES, MASKS, LAB COATS (WHEN NECESSARY), ETC.

4. AREA SO LARGE AND AMOUNTS UTILIZED SO SMALL THAT WORKING OUTSIDE DOES NOT CONTAMINATE ANY AREA AROUND US - (THIS WAS CHECKED BY HEALTH DEPT.)

