

July 16, 1996

received
AUG 14 1996

William Brockway
107 Bradley Street
Liverpool, NY 13088

SARE Northeast Region Coordinator
Hills Building
University of Vermont
Burlington, Vermont 05405
Attn: Dr. Frederick Magdoff

Dear Dr. Magdoff,

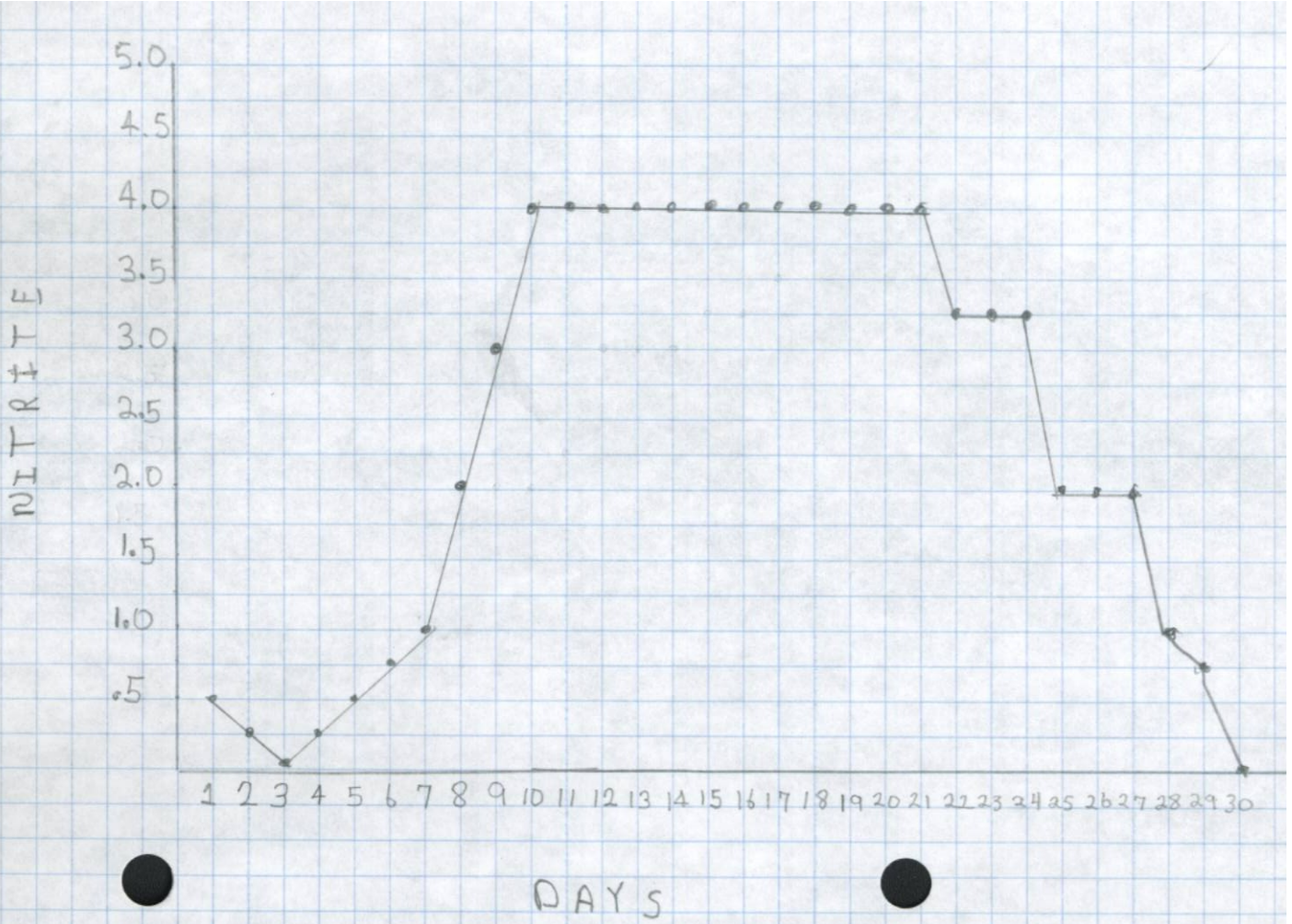
On April 10, 1996 I started up the main tank by flushing 500 gallons of water through it three times over a period of two weeks. At this time the spare pump and UV light was all pretested along with all the plumbing. On May 6, 1996 I started to build up the Bio filter, which consisted of two cells in a 100 gallon container. The east cell consisted of 161.5 sq ft of surgance area. At this point I have a total area of 323 sq ft of surface area. The media in which I am using is the Coralife Bio Balls. The spraying type system I am using in my Bio filter is a nozzle made by Aquanetics of San Diego, Ca at SPSI. I am pushing 5.5 gallons of water per minute per each nozzle. So my Bio filter at this point and time is running 11 gallons a minute over my media. My max feed ratio at this point would be 1.664 lbs of feed a day with the sq ft of surface area used if the filter was near its maximum capacity. The tank that holds my media can hold up to 1200 sq ft if I desired to push that kind of area. You would also need to push close to 60 gallons a minute with a spraying action. The antisipated amount of feed handled per day would be a little over 6lbs.

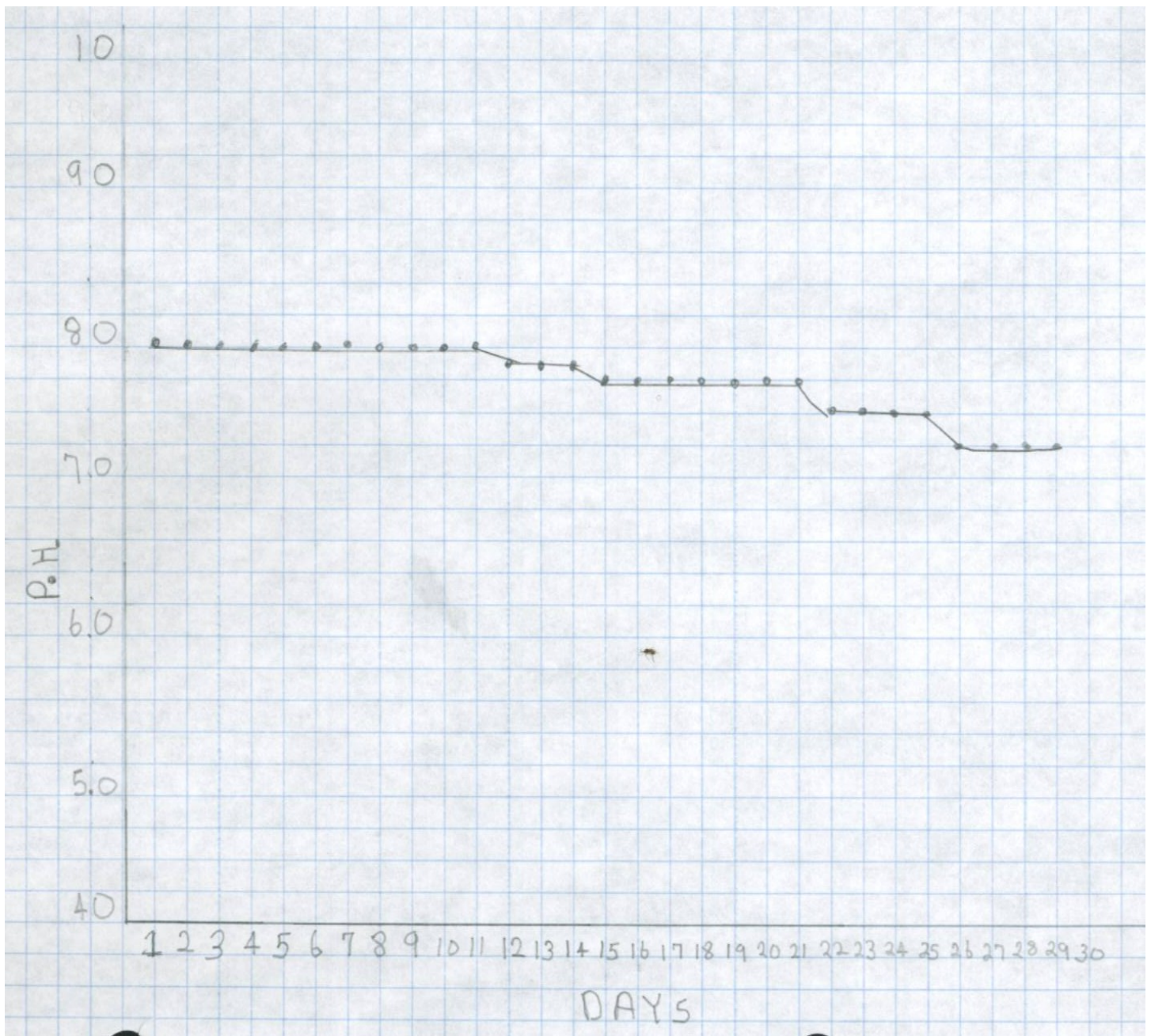
It took a total of 26 days to bring in the Biological filter. On day one I used a commercial starter called Bactor-Pur pre starter #1 at 1/2 lb to 500 gallons of water. Also I added Bactor-Pur N 2000 + at 150 ML to 500 gallons of water which consist of Nutrifcation Bacteria. The water chemistry first consisted of a PH of 8.0 a Alk of 128 ppm, nitrate at 2.0 ppm and a chloride level of 8.00 ppm. The water temperature was 53 degrees fahriehite. After three days the Nitrite level dropped to 0 ppm along with the water temperature rising a degree per day. On the fourth day I added prestarter #2 1/2 lb to 500 gallons of water along with another 150 ml of Bactor per 2000+. I added 75 ml of Bactor-Pur 2000+ Nutrifying Bacteria per day for the next 26 days. The Amnonia reading ran around 4 ppm to the very end in which it came down about .5 ppm per day. The nitrite did the same but took about three days longer than the Amonia. As a result you could not detect much change on the test performed everyday. I dropped my PH reading to around 7.2 by adding phosphoric acid in very small quantities. My water

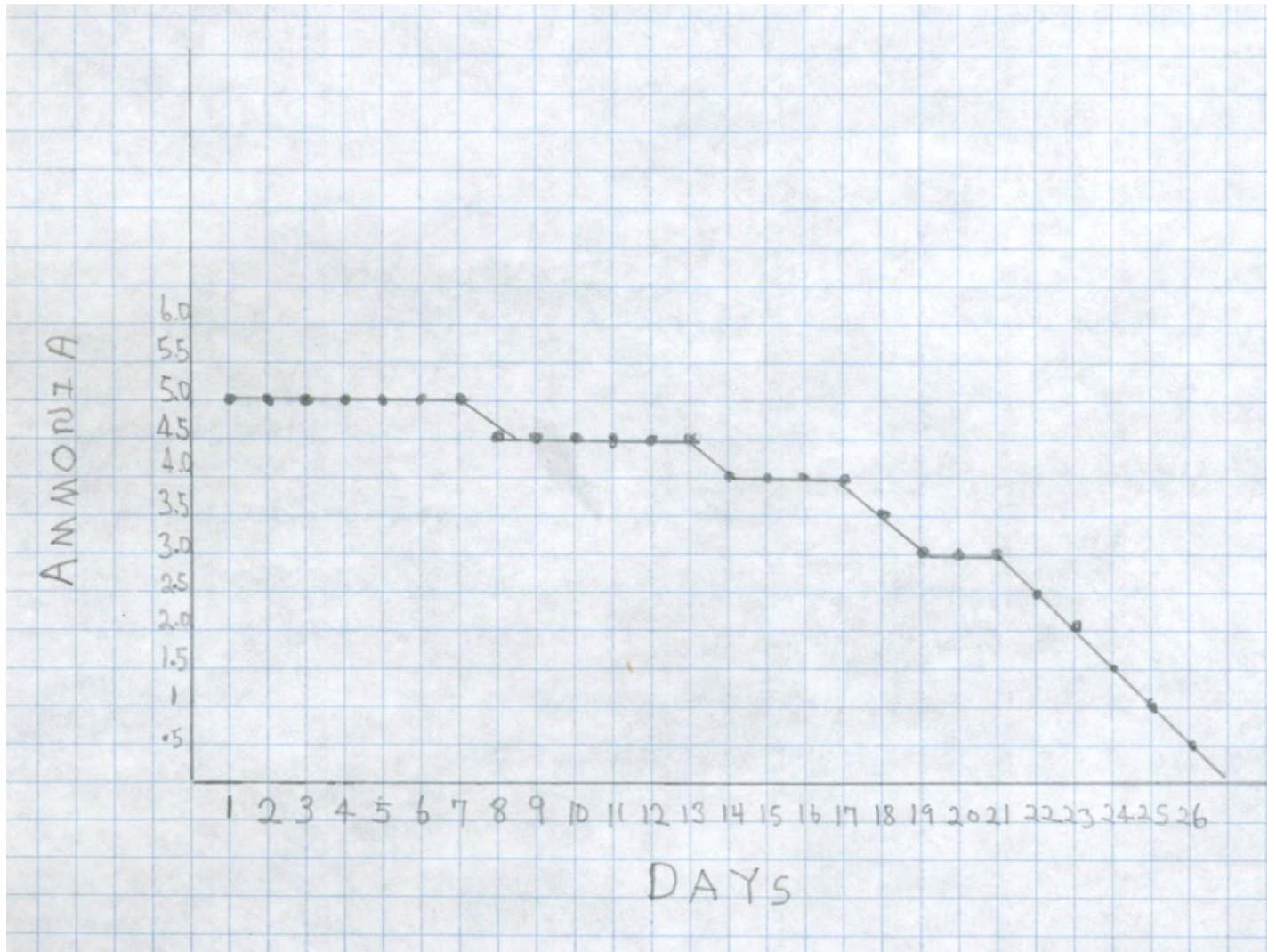
temperature remained at 70 degrees fahrenheit at this point. The oxygen ranged from 8mg per liter to 9mg per liter of water. My alkalinity was 80ppm and nitrates were 25mg per liter of water just before I started to add my fish. On June 2, 1996 I added 63 channel catfish and one brook trout to the system water. Not being really satisfied with the health of the fish when I picked them up, I ran them through Sodium Chloride 5000 mg/l for three hours before I put them in the main tank. I was told the fish had been on Terramycin feed for one week and that the catfish were from the south. I noticed on some fish that the fins were weak and deteriorated along with other health problems. For the next week the fish looked good and were eating fine. On week two I started to notice health problems coming back even when using the UV sterilizer on the water. I noticed the fish trying to scratch bottom so I used Formulin 25mg/L every other day till it seemed to get better. At day 20 the catfish started to show signs of C.C.V.(channel catfish virus) which at the end of the week I know they would all die.

During all of this the Bio filter performed fine even with the small loads of 1 to 3 ounces of feed per day added to the system. Before I decided to get any more catfish or trout I decided to try some bait fish to see how bad my tank had been contaminated. They lasted around three weeks with some treatment. After talking with some local trout farmers they suggested destroying the system because of the contamination. I agreed to this because knowing of the poor health of the fish I brought in to begin with. I learned the quarantine tank is a must for any set up and will be adding it to my system shortly.

Along with this report you will find some production charts.







Date	Feed	Cumulative Feed	Mortalities	Cumulative Mortalities	Temp	D. O.	Ammonia	Nitrite	Hardness	Alkalinity	Chloride	Comments
1	2oz	2oz	0	0	70°	8mg/L	0	0	150	7.2	800ppm	63cat 1 Trout
2	1oz	3oz	0	0	70°	8mg/L	0	.5	150	7.2	1000	added salt
3	2oz	5oz	0	0	71°F	8mg/L	0	.5	150	7.2	1000	10gal water change
4	2oz	7oz	0	0	72°F	8mg/L	0	.5	150	7.2	800	10gal " "
5	2oz	9oz	0	0	72°F	"	0	.5	150	7.2	800	
6	2oz	11oz	0	0	72°	"	0	.25	150	7.2	800	added 3% S.R. with Feed
7	2oz	13oz	0	0	73°	"	0	0	150	7.2	800	
8	2oz	15oz	0	0	73°	"	0	0	150	7.2	800	
9	2oz	17oz	0	0	74°	"	0	0	150	7.2	800	
10	2oz	19oz	0	0	74°	"	0	0	150	7.2	800	Fish go OFF Feed
11	2oz	21oz	1	1	74°	"	0	0	150	7.2	600	Showing more
12	1oz	22oz	1	2	74°	"	0	0	150	7.2	600	Health Problems
13	1oz	23oz	2	4	74°	"	0	0	150	7.2	600	Formalin
14	1oz	24oz	3	7	74°	"	0	0	150	7.2	600	200gal water chg
15	1oz	25 "	8	15	74°	"	0	0	150	7.2	600	
16	1oz	26 "	15	30	74°	"	0	0	150	7.2	600	
17	1oz	27 "	12	42	74°	"	0	0	150	7.2	600	water change 100g
18	1oz	28 "	8	50	74°	"	0	0	150	7.2	500	
19	1oz	29 "	7	57	74°	"	0	0	150	7.2	500	
20	1oz	30oz	6	63	74°	"	0	0	150	4.2	500	Fish Acc All gave Finn Fish Patch
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Bout Fish Test in TANK SAME Result