

National Environmental Research Center

Corvallis, Oregon

QUARTERLY STATUS REPORT

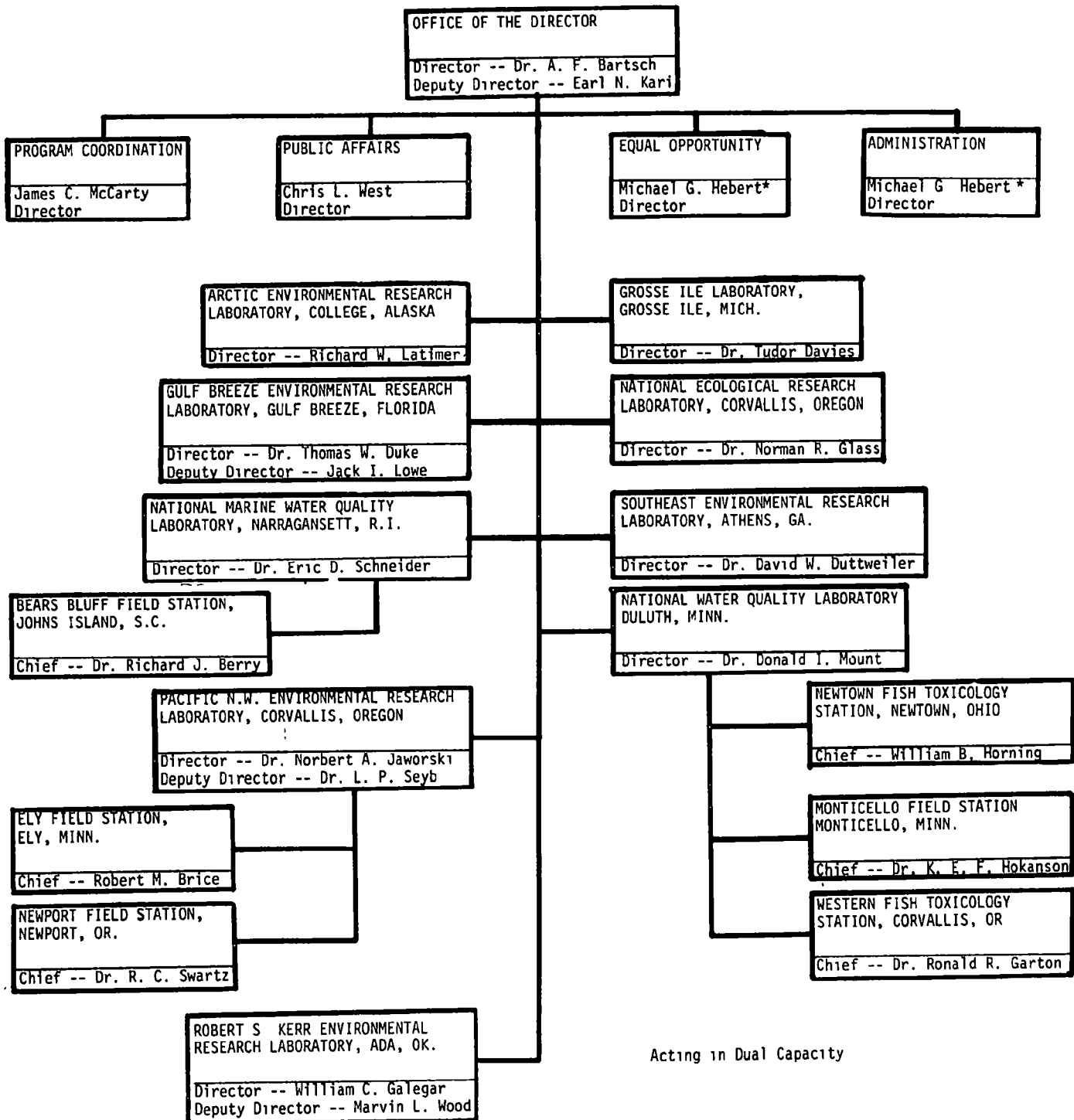


OCTOBER-DECEMBER 1973

OFFICE OF RESEARCH & DEVELOPMENT



NATIONAL ENVIRONMENTAL RESEARCH CENTER
200 S.W. 35th Street
Corvallis, Oregon 97330
Phone 503-752-4211



QUARTERLY STATUS REPORT, 2nd QUARTER FY 74

NATIONAL ENVIRONMENTAL RESEARCH CENTER
CORVALLIS, OREGON

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF RESEARCH AND DEVELOPMENT
NATIONAL ENVIRONMENTAL RESEARCH CENTER
CORVALLIS, OREGON

January, 1974

11/20/74
11/20/74
2003
CORVALLIS, OREGON
National Environmental Research Center

PREFACE

NATIONAL ENVIRONMENTAL RESEARCH CENTER

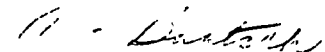
Corvallis, Oregon

This report is designed primarily to serve the needs of management by providing an overall picture of the status of progress toward the accomplishment of planned research. It is not a report of accomplishment, but rather an "exception" report which identifies problems and reasons for delay.

This Quarterly Report summarizes the present status of progress toward achieving the milestones in each of the approved Research Objective Accomplishment Plans (ROAPs) assigned to NERC-Corvallis and its associated laboratories for the 2nd Quarter FY 74. The report is divided into 4 parts. Part I summarizes the status of delays, the reasons for delays and the technical assistance provided to EPA, the Regions and other federal, state, and private organizations. Part II is the Laboratory Director's assessment of the problems, impact of delays and accomplishments. Part III is a detailed report by ROAP on the status of tasks toward meeting task milestones and Part IV is a listing of the technical reports and papers published during the quarter.

Out of a total of 90 ROAPs and 785 active tasks, approximately 76% are proceeding on schedule as of the end of the second quarter. The major delays encountered during the second quarter are in large measure attributable to the freeze in extramural funding which has caused disruption of ongoing grants and contracts and has delayed startup of new extramural projects. Lifting of the freeze during the second quarter should alleviate this problem. However, at the end of the quarter only 28% of extramural funds were obligated. Every effort will be made to process outstanding extramural projects during the third quarter.

Your comments and suggestions on the contents of this report will be appreciated. Please direct all inquiries to the Director, Program Coordination Staff, NERC-Corvallis or call on FTS-503-752-4362.



A. F. Bartsch
Director, NERC-Corvallis

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PART I

SUMMARY OF ROAP/TASK PROGRESS

NATIONAL ENVIRONMENTAL RESEARCH CENTER - CORVALLIS
SUMMARY OF TECHNICAL ASSISTANCE
2nd Quarter - FY1974
(Manhours)

<u>Laboratory</u>	<u>Current Quarter</u>				% of Total Qtrly Res Manhours	<u>Year-To-Date</u>			
	<u>Regions</u>	<u>Other EPA</u>	<u>Non-EPA</u>	<u>Total</u>		<u>Regions</u>	<u>Other EPA</u>	<u>Non-EPA</u>	<u>Total</u>
PNERL	808	967	412	2187	4.67	1564	3459	704	5727
NMWQL	816	5448	24	6288	24.67	916	5648	104	6668
NWQL	64	992	370	1426	3.75	144	4985	575	5704
AERL	184	-	-	184	2.70	184	-	-	184
GIL	128	248	116	492	11.80	149	1152	220	1521
RSKERL	16	278	198	492	2.36	46	1499	334	1879
GBERL	40	1288	301	1629	12.50	431	1835	949	3215
SERL	12	142	43	197	.70	200	835	411	1446
NERL	56	80	40	176	1.78	96	150	147	393
	<u>2124</u>	<u>9443</u>	<u>1504</u>	<u>13,071</u>		<u>3730</u>	<u>19,563</u>	<u>3444</u>	<u>26,737</u>

NATIONAL ENVIRONMENTAL RESEARCH CENTER - CORVALLIS
MANPOWER RESOURCE SUMMARY
2nd QUARTER - FY 1974

<u>LABORATORY</u>	<u>Auth</u>	<u>Permanent Full Time</u>			<u>OPFT</u>	
		<u>Over 1/ Allocated</u>	<u>Target</u>	<u>ONB</u>	<u>Auth</u>	<u>ONB</u>
HQS NERC	22	-	22	22	8	5
AERL	17	-	17	21	0	11
GIL	8	-	8	8	2	3
GBERL	36	-	36	35	4	6
NERL	22	-	22	22	5	8
NMWQL	64	2	66	65	2	15
NWQL	90	2	92	91	7	7
PNERL	74	24	98 ^{2/}	95	7	12
RSKERL	59	1	60	60	5	1
SERL	<u>72</u>	<u>2</u>	<u>74</u>	<u>71</u>	<u>2</u>	<u>5</u>
TOTAL NERC-C	464	31	495	490	42	73

1/ Over allocated at PAG II per Dr. Greenfield

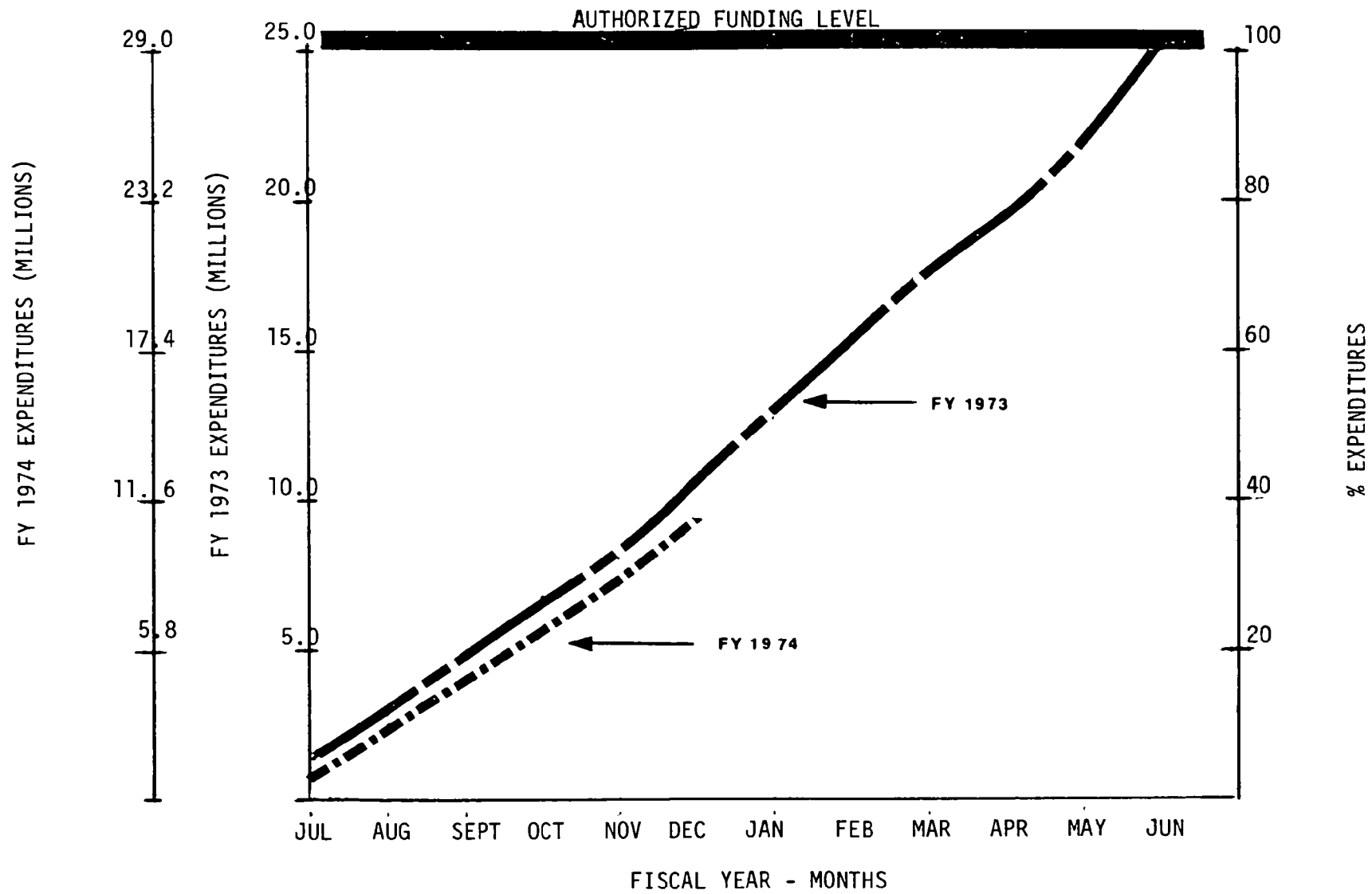
2/ 22 positions for Lake Survey

NATIONAL ENVIRONMENTAL RESEARCH CENTER - CORVALLIS
SUMMARY OF EXTRAMURAL OBLIGATIONS
2ND QUARTER FY 1974

<u>LABORATORY</u>	<u>AUTHORIZED FUNDS</u> ^{1/}	<u>OBLIGATED</u>	<u>% OBLIGATED</u>
PNERL	3,226,000	841,972	26.1
NMWQL	1,254,000	453,575	36.2
NWQL	645,000	131,336	20.4
AERL	547,000	120,000	21.9
GIL	1,917,000	201,920	10.5
RSKERL	3,373,000	1,460,061	43.3
GBERL	527,000	195,945	37.2
SERL	2,065,000	542,477	26.3
NERL	1,054,000	74,832	7.1
TOTAL	<u>14,608,000</u>	<u>4,022,118</u>	<u>27.5</u>

^{1/} Funds authorized at PAG II less
program cut \$1,192,000 (11-14-73)

NERC-CORVALLIS
COMPARISON TOTAL EXPENDITURES
FY 1973 vs FY 1974



NERC-CORVALLIS
COMPARISON EXTRAMURAL EXPENDITURES
FY 1973 vs FY 1974

FY 1974 EXTRAMURAL EXPENDITURES (MILLIONS)

14.6
11.6
8.7
5.8
2.9

FY 1973 EXTRAMURAL EXPENDITURES (MILLIONS)

11.0
8.8
6.6
4.4
2.2

AUTHORIZED FUNDING LEVEL

FY 1973

FY 1974

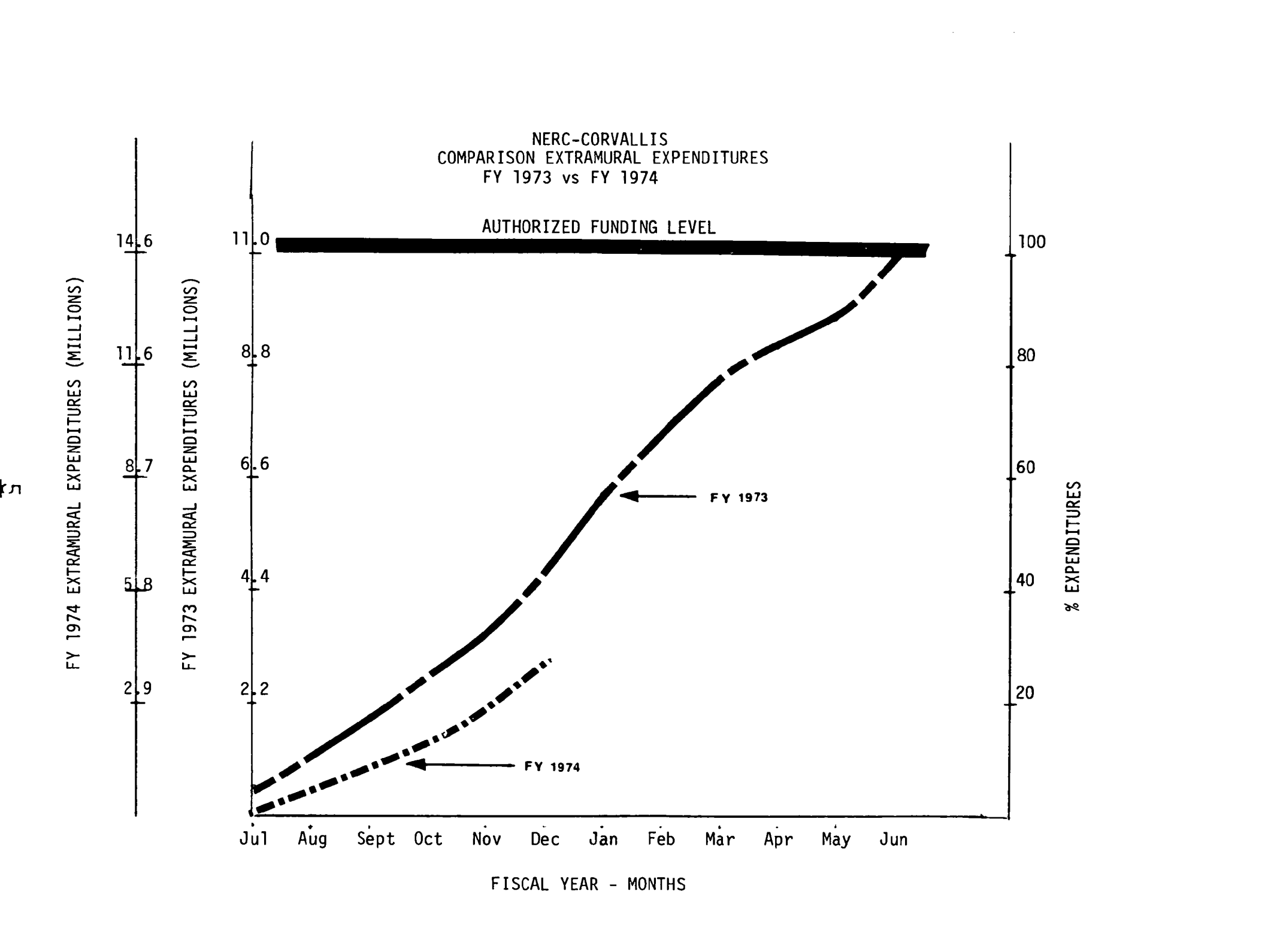
% EXPENDITURES

100
80
60
40
20

Jul Aug Sept Oct Nov Dec Jan Feb Mar Apr May Jun

FISCAL YEAR - MONTHS

5



NATIONAL ENVIRONMENTAL RESEARCH CENTER
CORVALLIS, OREGON
SUMMARY OF MONTHS DELAYED BY ORGANIZATION
JANUARY 1974

LABORATORY	ACTIVE TASKS	% TASKS DELAYED	NO TASKS DELAYED	- - - 1-3	- - - 4-6	- 7-9	DELAY IN MONTHS 10-12	- - - - - OVER 12
PNERL	244	26.64	65	6	17	30	5	7
NMWQL	62	33.87	21	6	8	7	0	0
NWQL	106	6.60	7	5	0	1	0	1
AERL	8	37.50	3	0	2	0	0	1
GIL	71	18.31	13	5	4	2	1	1
RSKERL	95	17.89	17	2	7	5	0	3
GBERL	43	6.98	3	0	1	2	0	0
SERL	104	41.35	43	9	13	14	4	3
NERL	52	26.92	14	2	4	8	0	0
TOTALS	785	23.69	186	35	56	69	10	16

NATIONAL ENVIRONMENTAL RESEARCH CENTER
CORVALLIS, OREGON
SUMMARY OF REASONS FOR DELAY BY ORGANIZATION
JANUARY 1974

LABORATORY	TOTAL TASKS DELAYED	REASON FOR DELAYS											
		FI	FF	FD	FL	AP	AF	AD	AG	AO	DA	DO	O
PNERL	65	0	7	1	1	1	2	7	26	5	6	1	8
NMWQL	21	1	7	2	0	0	0	6	3	0	2	0	0
NWQL	7	0	0	0	0	0	0	0	1	1	1	1	3
AERL	3	0	0	0	0	0	0	0	0	0	0	2	1
GIL	13	0	5	0	0	0	0	0	2	4	0	0	2
7 RSKERL	17	1	0	2	1	0	0	0	6	1	0	4	2
GBERL	3	0	0	0	0	0	1	0	0	1	1	0	0
SERL	43	7	1	2	2	0	3	6	10	3	1	4	4
NERL	14	0	1	0	2	0	0	4	4	0	0	0	3
TOTALS	186	9	21	7	6	1	6	23	52	15	11	12	23

FUNDING -- F

FF - Funds Frozen
FI - Funding Insufficient
FD - Funds Diverted (specify)
FL - Funds Late (Example delay in
advice of allowance)

ADMINISTRATIVE - A

AD - Equipment Delays
AF - Equipment Failure
AG - Grant/Contract Delay (specify)
AO - Other Administrative (specify)
AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

DA - Diversion of Staff for Technical
Assistance
DO - Diversion of Staff for Other Than
Technical Assistance (specify)
O - Other (specify)

NATIONAL ENVIRONMENTAL RESEARCH CENTER
CORVALLIS, OREGON
SUMMARY OF TASK PROGRESS BY ORGANIZATION
JANUARY 1974

LABORATORY	TOTAL TASKS	NO TASKS COMPLETE	NO ACTIVE TASKS	NO TASKS ON SCHED	NO TASKS DELAYED	NO TASKS COMPLETED	CFY
PNERL	604	129	244	170	65	129	
NMWQL	134	8	62	40	21	8	
NWQL	159	27	106	97	7	27	
AERL	17	6	8	5	3	6	
GIL	89	11	71	59	13	11	
RSKERL	269	40	95	78	17	40	
GBERL	51	8	43	40	3	8	
SERL	255	37	104	59	43	37	
NERL	99	14	52	39	14	14	
TOTALS	1677	280	785	587	186	280	

PART II

LABORATORY DIRECTORS REPORT

ALASKA ENVIRONMENTAL RESEARCH LABORATORY

Quarterly Status Report, 1st Quarter FY 74

I. IMPACT OF DELAYS:

1BA022 -21ARY

The five month delays is not critical and will not delay related tasks in the ROAP.

1BA021 - 21ASA

The delay is not significant and will not delay the completion of the ROAP.

1BB044 - 21ASG

The delay in Task 04 and 05 is not critical and will not affect the completion of the ROAP. ROAP 21ASF, Task 05, the delay caused by the fire at Wainwright has created a serious delay in the accomplishment of that task and the completion of the ROAP. The nature of the impact and recommendations for future action have been the subject of separate communications.

II. Issues:

The major issue dealing with the research program is the question of the future direction of the AVDP program. In light of the disastrous fire at Wainwright, major decisions involving a "replacement" facility and the "third project" must be made at higher program levels.

III. Accomplishments:

The laboratory staff is continuing to generate a large number of reports. Three more were completed this quarter and a number of additional reports are nearing final form. The most significant findings deal with the toxicity of Prudhoe Bay crude oil on young coho and sockeye salmon. This report should be available for release this month.

IV. Administrative/Management Problems:

The laboratory continues to operate with a personnel ceiling that is inadequate to cover the onboard staff. This situation has now persisted for two years. The end result is an impossible personnel management situation that significantly reflects on the quality and

quantity of research at the laboratory. The recent loss of permanent employees has been covered by temporary appointments. This measure was expedient and only delays facing up to the real problem.

GULF BREEZE ENVIRONMENTAL RESEARCH LABORATORY

Quarterly Status Report, 2nd Quarter

I. Impact of Delays:

1BA077

Nothing to report.

II. Issues:

Communication between GBERL and Office of Pesticide Programs should be greatly improved after meeting this quarter in Raleigh. Representatives from various research laboratories and OPP discussed current research activities and needs.

III. Accomplishments:

Staff members completed research requested by Office of General Council (OGC) for the dieldrin hearings and testified for EPA during the hearings.

The chemistry laboratory completed analysis of sea herring for the Office of Economic and Cultural Development (OECD). This is part of an international program to establish current levels of specific pollutants which occur in the environment. Additional analyses will be conducted later in the year.

IV. Administrative/Management Problems:

The amount of diesel fuel allotted our laboratory for 1974 is not sufficient to power our boat and maintain a safe level for our emergency generator. Unless we receive an additional allocation we will be forced to cancel ship-time for some ROAP and technical services tasks.

Our scheduled allotment of overtime will not cover emergency overtime for repairing pumps, etc. already expended this fiscal year.

There is no
allotment! Todd
Tom this last week.
Unk
2-4-74

GROSSE ILE LABORATORY

Quarterly Status Report, 2nd Quarter FY 74

I. Impact of Delays:

1BA026

There is a total of 6 ROAP's and 62 tasks in the Large Lakes Branch; 50 tasks are on schedule, 2 completed, and 10 delayed. ROAP 21BBI, Comprehension of the Michigan-Huron-Superior Lake System, will have to be eliminated because the funds have been diverted. Parts of the field studies for the Upper Lakes Reference Study for the IJC in response to the U.S. - Canadian Agreement will not be conducted.

1BB036

There have been some delays in receiving grant applications from prospective grantees which will result in a slippage of proposed ROAP target dates.

1BB042

ROAP 21AGI has been delayed by the lack of proposals from prospective contractors.

II. Issues:

1BA026

It is difficult to provide an input to International cooperative research when funds are diverted.

1BB036

Due to large amounts of Technical Assistance rendered to the Office of Air and Water Programs and Hqs - Technology Task Force - ROAP management has suffered.

III. Accomplishments:

1BA026

A report containing the results of the first years activities for IFYGL has been assembled. The report is being duplicated and will be issued shortly. Study plans have been prepared for the Upper Lakes Reference Study.

IV. Administrative/Management Problems:

There are no administrative/management problems to report at this time.

NATIONAL ECOLOGICAL RESEARCH LABORATORY

Quarterly Status Report, 2nd Quarter, FY '74

I. Impact of Delays:

1AA006

In general the specific program delays are covered in the quarterly ROAP status reports, which are attached, but there are certain basic delays which (should be especially mentioned) must be addressed if NERL is to realize its full potential. First of all, the largest problem we face in the intermediate future concerns the availability of a facility to conduct controlled environmental research. ROAP 21 ALR is the ROAP most affected by this delay. As the time for vacating the ARS Ornamental facility draws nearer, it becomes less and less worthwhile to build or otherwise begin to develop programs in that facility. However, without a clear idea of where the greenhouse/lab work will reside after December 1975, it is almost impossible to make programmatic plans. Under ROAP 21 ALU the largest problem concerns the delay in funding of those extramural tasks which were held on the carryover funding list since the beginning of the fiscal year. This has resulted in difficulty in timing or phasing of other parts of the program (interagency agreements with other agencies, inhouse research) and may result in a delay of several months in bringing the program back into a coordinated perspective. ROAP 21 BRK is experiencing delays which are of potentially minimal impact. Task 04, the greenhouse salt air studies, have been delayed because we are unable to fund a contract or grant with the Boyce Thompson Institute to use their aerosol exposure chambers. Completion of this task awaits our installation of salt aerosol exposure chambers in the Laboratory. This will result in a delay in the greenhouse salt effects study by several months. The second delay concerns the awarding of a grant or contract to look at the usefulness of ecosystem measurement for predicting environmental stress. This delay will have minimal impact since it simply means that the time by which we can complete ROAP 21 BBK will be delayed by two to three months. Additional impacts are anticipated, but cannot be clearly specified at this time. In general, delays in acquiring facilities and new resources for achieving a broad mission will delay somewhat the realization of a comprehensive inhouse capability for ecological research.

II. Issues:

There still remains two major issues which require action of higher authority within ORD. The first issue concerns NERL's mission and scope, the second concerns the availability of a permanent facility. Although some progress has been achieved for acceptance of a broader mission with the formalization and acceptance of our organizational plan for the entire NERC, a final resolution of this issue can only be realized with continued awareness and support at the NERC level and also at the Headquarters level. With respect to space, some of our problems have been resolved through provision of laboratory space in the main NERC building and the acquisition of modular office space.

III. Accomplishments:

The major accomplishments of the preceding quarter are eight publications in print and achievement of a fully functional program once again. Oregon State University farm site has been fully operative and the ARS Ornamental Facility space is being utilized effectively pending the installation of portable exposure chambers.

IV. Administrative management problems:

While there have been few management difficulties in the past quarter, there are invariably some routine problems which involve NERL, PNERL, and NERC. However, these difficulties are being resolved and we anticipate no serious problems in the future.

During the past quarter we have experienced some management difficulty with the cooperative research program administered by the Agricultural Research Service administered at North Carolina State University. However, at this time, our management difficulties appear to be minimal and with continued assistance from Headquarters personnel, the problems should resolve itself in the near future.

NATIONAL MARINE WATER QUALITY LABORATORY

Quarterly Status Report, 2nd Quarter, FY '74

I. Impact of Delays:

The six ROAPs at NMWQL contain a total of 54 approved tasks. During the quarter, one task has been completed and three more made inactive by withdrawal of funds by headquarters. Of the remaining 50 tasks 20 are delayed. Although the excessive technical assistance drain should abate early in the next quarter, delays associated with wet lab completion are likely to continue to increase. Release of extramural funds has stabilized delays due to the freeze.

1BA022

16AAR

This ROAP is being phased out of the Program Element this year.

16AAS

Loss of funding for the one active task makes this an inactive ROAP. It will be transferred to another PE for next FY.

16AAT

While delays in this ROAP appear minimal, it is because available effort is being devoted to field aspects of planned tasks. ROAP activities will soon become very dependent on wet lab facilities.

16AAV

With completion of the waste oil work, available effort and facilities can be devoted to ballast water problem. This delay is not significant since it reflects two tasks being run sequentially rather than in parallel.

21AKF

A firm basis for salinity, p^h , and turbidity standards will not be available as scheduled. Temperature criteria being developed as planned under this ROAP and with massive support in the name of technical assistance will rely heavily on the literature. Verification of criteria so derived is dependent on progress on wet lab construction.

21BBC

Delays estimated at this point in in-house effort may be made up. A close coordination between that effort and extramural support is becoming more difficult as a consequence of funding delays. Some redirection of effort may be required as a result of closer coordination with NOAA efforts.

II. Accomplishments:

Intensive work by staff members from all teams has provided the best possible basis for evaluating the applicability of various approaches to establishing marine thermal criteria.

Long-term exposure of oysters to 10 ppb cadmium has revealed that gonadal development and spawning are delayed while no other evidence of adverse effect can be found. Larvae generated from exposed oysters failed to reach the straight-hinged stage. Copper and cadmium do not appear to compete for binding sites in tissues.

A new method was developed for sampling water approximately 10 cm from the bottom for analyses of oxygen, salinity, pH, and trace metals.

Optimal feeding and holding conditions for Menidia menidia have been established. This is the most abundant and ubiquitous forage fish on the East Coast.

III. Issues:

None to be raised at this time.

IV. Administrative/Management Problems:

The delay in wet lab construction is partially due to the fact that allowances for the first quarter were insufficient to permit all possible progress. Increased allowances in succeeding quarters will be unable to compensate program delays.

The demands of technical assistance have recently begun to have serious impact on accomplishment of ROAP objectives. During the past quarter some 55% of our effort has been spent in such activities.

On July 22, 1973 Mr. William Egan, Laborer, was assigned to NMWQL. This assignment was directed by EPA Personnel Office because Mr. Egan had been "RIFED" from the Northeast Water Supply Research Laboratory. As yet we have not been allotted a permanent position to cover Mr. Egan's employment. //

ROAP status reports do not reflect real progress made by the laboratory staff. Of the 20 tasks reported delayed, 10 are delayed by reason of the freeze on extramural funds.

NATIONAL WATER QUALITY LABORATORY

Quarterly Status Report, 1st Quarter FY 74

I. Impact of Delays:

18A021

All delays are of a minor nature and will not materially affect overall objectives.

II. Issues:

The Complex Effluent ROAP - 16AA) is essentially obsolete as it is now written. Due to the philosophy adopted in the effluent guidelines by EPA and more indepth thinking by our staff, we have decided to change the entire approach to the problem. A reprogramming action is in preparation.

III. Accomplishments:

A filter for removing asbestos from water for home use was tested and found efficient under our Technical Assistance ROAP.

IV. Administrative/Management Problems:

None appropriate to mention here.

PACIFIC NORTHWEST ENVIRONMENTAL RESEARCH LABORATORY

Quarterly Status Report, 2nd Quarter, FY 74

I. Impact of Delays:

1BA025

Delays will not appreciably affect milestones.

1BA031

Milestone event 02 on ROAP 21AJE will not be attained because funds were withdrawn by Headquarters.

Inability to hire permanent or temporary personnel continue to impede assigned research in Tasks 08 and 17 in ROAP 21AJF.

1BA029

Planning and preliminary activities necessary to initiate sampling in states west of the Mississippi River are now five months behind schedule.

1BA032 and 1BB392

In PE 1BA032 there will be a technical delay of two months in completion of the "Workbook on Thermal Plume Prediction." The field testing of cooling tower plume models will be delayed four months because funds in ROAP 21AJH were frozen.

In PE 1BB392, due to frozen ROAPs, the target dates for completion of four tasks will be postponed no more than six months, possibly impacting the legislative mandates.

1BB037

Delays in the program will prevent the development of technology necessary to meet the legislated deadline of zero discharge of pollutants by 1985.

Laboratory Services Branch

Priorities have been assigned to tributary samples originating from the states that were started in 1972 (Eutrophication Survey Branch), to the Workbook on Surface Discharges (Thermal Pollution Branch), and to the data reduction of pulse height analyzer output (Coastal Pollution Branch). As a result of these priorities, delays are inevitable in other program areas.

II. Issues:

1BA025

None

1BA031

Lack of funds to carry out full-scale lake restoration demonstration projects continues to be a problem.

1BA029

Indecision as to the future course of the Survey has impacted ROAP's 25AJX, 25AKM and 25ALP although the impact is not yet evident on the ROAP Status Reports. For the past seven months the question of whether or not the Survey would expand into the 21 states west of the Mississippi River has been debated but still has not been resolved within EPA; however, the Office of Water Programs has endorsed the westward expansion. Assuming the EPA Administrator also endorses the westward expansion, the question of funding by OMB still remains.

1BA032 and 1BB392

None

1BB037

Considerable staff time and resources were spent in technical assistance to the Effluent Guidelines Division, limiting supervision of ongoing grant projects.

Laboratory Services Branch

None

III. Accomplishments:

1BA025

The required input for the Ocean Dumping Analytical Methods Manual was forwarded to headquarters in accordance with an assigned December 1 deadline.

The fifth benthic survey of the New York Bight experimental dumping site was completed in December. All specimens from the August cruise have been identified and enumerated.

1BA025 (Continued)

Task 38, 21AIS - A scientific publication, "Methylmercury in estuarine sediments," by W. Anders and Robert W. Harris was published in Nature 245: 256.

Dr. Feldman published an Ecological Research Series publication EPA 660/3-73-013, "Petroleum Weathering: Some Pathways, Fate, and Disposition on Marine Waters," in connection with ROAP 21AIV.

The Southern California Coastal Water Research Project has analyzed species diversity patterns in the demersal fish and benthic invertebrate communities of the Los Angeles Bight in relation to water quality characteristics.

1BA031

Completed laboratory tests to determine relative efficiencies of candidate nutrient inactivants. Algal assays were used to document the effect of inactivants on algal growth medium. Toxicity tests on fish and Daphnia were conducted for zirconium, aluminum, zirconium refinery wastes and lanthanum rare earth chloride. The draft of the final report on the nutrient inactivation project has been completed.

The nitrogen and phosphorus requirements for Selenastrum capricornutum have been defined. The interaction of zinc (as $ZnCl_2$) upon the growth of S. capricornutum is being studied.

The effort to design and evaluate a marine version of the Algal Assay Procedure: Bottle Test has resulted in the establishment of the suitability of Dunaliella tertiolecta as a highly versatile and consistent bioassay organism for nutrient assessment in marine, estuarine, and some freshwater situations.

A Biostimulation Workshop for EPA research personnel was held October 15-17 in Corvallis. Papers were presented by Paul Smith (Shagawa Lake Project), Tamotsu Shiroyama, William E. Miller, David Specht, and Joseph Greene of the Eutrophication and Lake Restoration Branch.

Preliminary in situ sediment oxygen demand/nutrient generation experiments were completed at Shagawa Lake to learn more about the role of sediments, during anoxic conditions, in supplying nutrients to the water column.

1BA029

A total of 22 preliminary reports for individual lakes have been prepared for the following states: Wisconsin (4), Georgia (1), Michigan (1), New York (1), Vermont (7), Rhode Island (2), New Hampshire (3), and Minnesota (3). Reports for nine Maine lakes are near completion.

The one year tributary sampling program was completed in the first ten New England and Mid Western states in which the program was initiated in 1972.

Updated provisional stream, municipal sewage treatment plant and lake data were provided to the pollution control agencies of each of the 27 states now participating in the survey.

A professional statistician was hired on a part-time basis to evaluate the methods used to estimate stream nutrient loadings and to suggest improved methods which would enhance the reliability of the estimates. The statistician submitted a report, the recommendations in which are currently being implemented.

Land use identification and computations of areal coverage were completed for all of the CY 1972 study areas. Climate, slope and animal density data were also collected for these areas while soil type identification is still in progress. For the CY 1973 lakes, 230 drainage and subdrainage areas were delineated and measured and identification of land use types from areal photography was started.

1BA032

Assisted Water Planning Division in development of guidelines for mixing zones and thermal criteria. Provided data on energy requirements of closed-cycle cooling systems to Effluent Guidelines Division.

Completed rough draft (exclusive of computer generated plots) of Workbook of Thermal Plume Prediction--Volume II--Surface Discharges.

Tested radiosonde-kite system for acquiring temperature and humidity data in cooling tower plumes. Several test "flights" were made in the plumes of the paper machines at the Mill of American Can Company in Halsey, Oregon.

1BB392

Funded Aerospace contract to characterize SO₂ scrubber effluents. Grantees Hydronautics and Eugene Water and Electric Board completed work on their projects and the final reports are being reviewed.

1BB037

Six reports were submitted for publishing during the quarter on completed grant projects, but have not been published yet.

Laboratory Services Branch

In this quarter 45,000 analyses were reported to the various project leaders.

All the samples for the Eutrophication Survey Program collected by the states with start-ups in 1972 have been completed.

Studies on the preservation of freshwater samples have been completed. The data are now being evaluated.

AQC studies on calendar 1973 data are being evaluated.

IV. Administrative/Management Problems:

1BA025

None

1BA031

None

1BA029

The present system of allocating funds to agencies and eventually to programs within agencies creates an administrative/management problem. Manpower and money cannot be used efficiently when uncertainties regarding funding levels exist for the first six months of the fiscal year.

1BA032 and 1BB392

None

1BB037

Much time was lost during the quarter in planning for and discussing a proposed transfer of program direction to NERC-Cincinnati which was later rescinded. Since both NERC's now have some areas of responsibility for industrial waste research, a mechanism for coordination should be developed. A regular meeting of key personnel involved in the program should be instituted.

Laboratory Services Branch

The backlog continues to climb. The cause of the climbing backlog is the lack of experienced people in the automated section. An illustrative example of our problems is the training and loss of Diane Nedberge. In the month of December, Diane finally achieved a complete mastery of the "automated system" and at the end of December Diane was terminated because her temporary appointment expired. It takes approximately six months of on-the-job training to master the day-to-day problems encountered in the automated section. Since Wiley's departure, we've operated with stop-gap emergency measures. With the employment of Raymond Titus, a full-time permanent employee, some of the operational problems should be resolved by June.

The shortage of people in the computer section is placing more pressure on the professional staff. The responses to pressures have been dealt with on a case-by-case basis. The approach that has been used is: "Look, can you wait until a response has been made to this other project's needs!" The reassignment of Lyle Wilson from the Lake Survey has helped considerably in giving better service.

ROBERT S. KERR ENVIRONMENTAL RESEARCH LABORATORY

Quarterly Status Report, 2nd Quarter FY 74

I. Impact of Delays:

1BB024 1BB036 1BB045
1BB039 1BB040

The delay of Task 1, ROAP 16AJB is significant in terms of its being a companion study to that being initiated by Air and Water Programs concerning institutional constraints of ground-water basin management.

The delay of Task 9, ROAP 21AIO is significant because it supplies valuable input to the GE TEMPO contract with the Office of Monitoring.

II. Issues:

Water and Air Program, Guideline Program has identified to us the staff members they want available for the new industrial grouping. No estimate of time and money is available for determining impacts. Past experience indicates Washington's estimates of needs are off by factors of several magnitude.

III. Accomplishments:

No report.

IV. Administrative/Management Problems:

No report.

SOUTHEAST ENVIRONMENTAL RESEARCH LABORATORY

Quarterly Status Report, 2nd Quarter, FY 74

I. Impact of Delays:

1BA023

Delay in 21 AIL-07 will continue to cause proportionate delay in testing and verifying pollutant fate models. Delays in 21 AIM will continue to cause proportionate delays in developing mercury and malathion models, and in supplying information on soil pesticide degradation to OPP. Impact of continued delay in 22 AEC is still unknown.

1BA027

Delay in 16 ACG will have no adverse impact on other researchers expecting to use the data. The delay in 16 ADN relative to organic analyses will not prevent attainment of ROAP milestones on schedule, but the delays in tasks 22, 32, 67, and 71 relative to multi-element analysis will holdup EPA analytical chemists ready to use these techniques now. Delays in 07 ABL have no apparent impact on other programs.

1BB036

Delays in 21 AZT will continue to delay development of control technology for dyeing operations in textile industry. Delays in 21 AZR will continue to delay development of control technology for some segments of the agricultural chemical industry. Delays in 21 AZR-14 and -15 (SRO's) will postpone for a full year the development of comprehensive integrated environmental pollution control technology for fertilizer manufacturing.

1BB039

Delay in 21 AYP-11 will restrict FY 75 program planning for completing the development of pesticide runoff models. Delay in 21 AYP-12 will delay the testing, application and initial version of the lumped-parameter pesticide runoff model.

II. Issues:

Issues reported in first quarter were resolved: Agricultural runoff research will now include nutrient studies, decisions were

made on three SRO's (no funds for two, work started on one at NWQL), and additional funds were designated by PAM to support AECoS experiments in FY 74.

A continuing issue is the timely authorization of resources for SERL's programs. The delay in release of some extramural funds for commitment to approved projects and the delay in receipt of FY 74 allowances have adversely affected SERL's entire research program, both in-house and extramural. Two quarters' operation without an allowance have created doubt, confusion, and distractions that decrease creativity and productivity. The start of some extramural projects has been delayed, affecting progress in some in-house tasks and distracting Project Officers and slowing their in-house research. Resource planning and management at decision levels above SERL should recognize the critical importance of timeliness of resource allocations to the success of bench-level activities.

The slowly growing number of periodic reports, planning documents, and non-technical work assigned researchers is further reducing research productivity and adversely affecting morale.

III. Accomplishments:

1BB036-21 AZR 11: A demonstration unit (1500 pounds per hour) was constructed for the production of a slow-release granular fertilizer using ammonium sulfate waste from coking plants as feed material. Test runs were successfully completed for various commercial mixed fertilizer grades. The fertilizers produced are now ready to be tested for their agronomic properties and their ability to be coated with sulfur, thus enhancing their slow-release properties. This investigation demonstrates the use of polluting wastes in the manufacture of a useful agricultural product whose production process also minimizes pollutant discharge.

1BA027-07 ABL 14: SERL's Analytical Chemistry Branch assisted Dr. I. N. Rogers of Environment Canada by analyzing five extracts of paper mill wastewaters that were toxic to salmon. Most of the major organic contaminants detected by gas chromatography were tentatively identified by GC/MS. Contaminants found were some fatty acids, resin acids, and sesquiterpene and diterpene derivatives. Two chlorinated compounds (3,4,5-trichloroveratrol and tetrachloroveratrol) were also found and tentatively identified.

1BA027-16 ADN 26: Analysis by GC and Fourier-transform infra-red spectroscopy (FTIR) of two paper mill waste extracts confirmed four compound identifications by GC/MS and invalidated

three others, demonstrating the potential value of GC/FTIR as a confirmatory technique for organic pollutant analysis. A computer technique for removing the absorptions of a known compound from a mixed spectrum was partially successful in identifying other compounds in a GC peak ascribed chiefly to borneol. The spectra of high boiling, thermally stable compounds such as phenylcyclohexane were obtained by connecting the GC column directly to the heated IR cell.

1BA023-21 AIM 07: In both bacterial (mixed populations) and fungal (*Aspergillus oryzae*) degradation studies, malathion was found to be degraded primarily to the beta-mono-acid of malathion. Malathion dicarboxylic acid and dimethyldithiophosphate comprised only a few percent of the metabolic products in both cases. The second-order rate constant for fungal degradation was $3.66 (\pm 0.58) \times 10^{-4}$ liters $\text{mg}^{-1} \text{hr}^{-1}$. For bacterial degradation, the second order rate constant was 1.2 to 3.5×10^{-12} liters organism $^{-1} \text{hr}^{-1}$.

18B039-21 AYP 12: The first version of a lumped-parameter Pesticide Runoff Model was completed by the contractor, Hydrocomp, Inc. The model permits a continuous simulation of runoff, sediment, pesticide in runoff, and pesticide in sediment emanating from a watershed into receiving waters. In its final form, the Runoff Model will be useful in developing strategies for the prevention and control of pesticide movement into receiving waters.

1BA023-21 AIL 06: Another mathematical model of a freshwater biological community was constructed based upon the model completed during the previous quarter. Results from computer runs indicate that higher trophic levels are important in setting temporal patterns of phytoplankton populations and of nutrient cycling among various forms. Therefore, they should not be ignored in field and laboratory studies. A paper was prepared incorporating a discussion of computations for system couplings such that mass is conserved for biological and chemical reactions that preserve a set of stoichiometric relationships.

18B036-21 AZT 06: The use of hyperfiltration (reverse osmosis) for treatment of dyeing wastes has been investigated at LaFrance Industries in LaFrance, South Carolina. The reuse of the product water has been found to present no problems to the dyer. The concentrate is technically also reuseable in most cases; however, concentrate degradation will also be investigated.

18B039-21 BBV: During the quarter a closer working relationship has developed between SERL and USDA. Both groups are taking seriously the spirit of cooperation mandated in PL 92-500, resulting in an acceleration of progress in SERL's agricultural research.

IV. Administrative/Management Problems:

Release of frozen funds resulted in the simultaneous processing of many pending grant applications, causing inordinate delays in final administrative actions and funding. This peak in administrative effort has created an additional burden for Project Officers and administrative personnel; it will be experienced again in future fiscal years as many of these extramural projects are continued.

PART III

ROAP STATUS REPORTS

ROAPS ON SCHEDULE

The list below indicates the ROAPS on schedule; the following pages of "ROAP Status Reports" contain only ROAPS having one or more delayed tasks.

<u>ROAP</u>	<u>NO. OF ACTIVE TASKS</u>	<u>PROGRAM ELEMENT</u>	<u>LABORATORY</u>
21ALS	5	1AA006	NERL
16AAI	6	1BA021	NWQL
21AKG	8	1BA021	NWQL
25AIC	3	1BA021	NWQL
16AAD	10	1BA021	NWQL
21ARX	6	1BA021	AERL
16AAR	3	1BA022	NMWQL
16AAT	6	1BA022	NMWQL
21ARZ	3	1BA022	AERL
21AIS	14	1BA025	PNERL
25ADS	5	1BA026	GIL
25ALP	3	1BA029	PNERL
25AKM	3	1BA029	PNERL
21AJA	11	1BA031	PNERL
58AAH	3	1BB036	SERL
21AZP	6	1BB036	RSKERL
21AZV	3	1BB036	RSKERL
58AAG	3	1BB037	PNERL
21AYN	8	1BB039	RSKERL
A21AYR	3	1BB039	RSKERL
21AYS	4	1BB039	RSKERL
21AYU	3	1BB039	SERL
21BBV	2	1BB039	SERL
21AGD	0	1BB040	RSKERL
21AJN	10	1EA077	GBERL
21AMN	1	1EA077	GBERL
58AAK	<u>2</u>	1BB392	PNERL

QUARTERLY ROAP STATUS REPORT

1. Program Element 1A1003	2. Roap No. 56AAK	3. Roap Title Development of a Protocol for a Biological Effects Monitoring System	4. Date	5. Page No --1-- of --1--
6. Total Tasks in Roaps 2	7. No Tasks Completed 0	8. No. Active Tasks 1	9. No. on Schedule	10. No. Completed CFY
13. Program Chief L. C. Raniere		14. Roap Manager L. W. Tuttle		15.
11. No. Delayed 2				
12.				

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
01	Development of an Environmental Effects Monitoring System	6	6/30/73	12/73	FL		Branch Chief
02	Implement and operate Biological Effects Monitoring System	6	12/73	6/74	AG	Proceed as planned.	

17 REMARKS Grant was funded 12/11/73 which represents six month delay from original target date which, in turn, caused delay in Task 02.

REASON FOR DELAY CODE

FUNDING -- F

FF - Funds Frozen
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ADMINISTRATIVE - A

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STAFFING - OTHER -- D/O

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1AA006	2 Roap No 21 ALR	3. Roap Title Strengthening Scientific Basis for Secondary Air Qual. Stand. & Cont. of Other Pollutants			4 Date 1/8/74	5 Page No ---L--- of ---L---
6 Total Tasks in Roaps 27	7. No Tasks Completed 9	8 No. Active Tasks 15	9 No. on Schedule 9	10 No Completed CFY 0	11 No Delayed 6	12
13. Program Chief L.C. Ranieri		14. Roap Manager L.C. Ranieri			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
06	Acute and chronic studies in greenhouse	8	7/1/73	2/1/74	AD	Proceeding with related studies not requiring gas exposure chambers	Br. Chief
08	Pollutant mixture studies in greenhouse	8	7/1/73	2/1/74	AD	" " "	" "
09	Environmental stress studies (inhouse).	2	7/1/73	7/1/75	O-Functional Transfer	Construction and/or acquisition of sophisticated env. control facility	Headquarter
10	Mechanisms of action studies.	8	7/1/73	2/1/74	AD	Proceeding with related studies not requiring gas exposure chambers.	Br. Ch.
22	Uptake and transport of trace elements and heavy metals.	8	7/1/73	2/1/74	AD	Develop cooperative work at OSU	Br. Ch.
24	Transfer funds to USDA, ARS, North Carolina State University	4	9/1/73	3/1/74	AG-- Negot.	Expedite	Headquarter

17 REMARKS

Need firm commitment and target date for new ecological research facility.

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1AA006	2 Roap No. 21 ALU	3 Roap Title Predictive Modeling of the Impact of Air Pollution on Ecosystems	4 Date 10/5/73	5 Page No --- of ---
6 Total Tasks in Roaps 39	7 No. Tasks Completed 2	8 No Active Tasks 19	9 No. on Schedule 12	10 No Completed CFY 3
11 No. Delayed 3		12		
13 Program Chief A.S. Lefohn		14 Roap Manager A.S. Lefohn		

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
26	Biological Scavenging of Air Pollutants	5	6/1/73	1/73	FF	Has recently been awarded	
28	IAG with ARS, Ft. Collins for purposes of assessing effects of coal-fired power plants (CFPP) on ecosystems.	4	9/1/73	3/74	0	Delay until CFPP protocol developed.	
31	Grant to apply population dynamics models in ecosystem study.	1	1/1/74	3/74	0	Delay until CFPP protocol developed.	

17 REMARKS. The delay in funding Task 26 has resulted in a phasing problem between the inhouse and extramural soil research program. Immediate action has been taken to remedy the situation. It is expected that the earliest both components of the program will get back on schedule together will be March 1974. Tasks 28 and 31 will not result in a delay in initiating NERL's Coal-Fired Power Plant (CFPP) program. It is anticipated that this delay will allow for more efficient application of program resources.

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1AA006	2 Roap No 21 BBK	3 Roap Title Meas. of Ecosystems Response & Ecological Effects of Salt Water Drift	4 Date 1/8/74	5 Page No 1 of 1
6 Total Tasks in Roaps 11	7 No Tasks Completed 0	8 No Active Tasks 6	9 No. on Schedule 4	10 No Completed CFY 0
11 No. Delayed 2		12.		
13 Program Chief L.C. Ranieri		14 Roap Manager L.C. Ranieri		

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
04	Greenhouse salt aerosol studies.	8	9/1/73	5/1/74	AD,AG	Contract for aerosol chamber construction now out for bids	
06	Determine ecosystems response to change	7	8/31/73	3/31/74	AG	Scope of work being developed. Contract to be let.	

17 REMARKS. Task 04 --The need to go contract route for construction of aerosol exposure chambers accounts for added three-month delay in initiating greenhouse studies.

Task 06 --Delays in getting input from other EPA principals account for additional four-month delay in letting contract.

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1B1021	2. Roap No 05ADD	3 Roap Title Tolerance Levels of Ammonia for Aquatic Life	4 Date 12/21/73	5. Page No 1 of 1
6 Total Tasks in Roaps 1	7 No. Tasks Completed 0	8. No Active Tasks 1	9 No. On Schedule 0	10. No Completed CFY 0
11. No Delayed 1		12		
13. Program Chief Donald I. Mount, Ph.D.		14. Roap Manager Kenneth E. F. Hokanson, Ph.D.		

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
01	Tolerance levels of ammonia.	12	12/73	12/74	AG FL	One year grant extension.	Director, NWQL

17 REMARKS

Grant delayed by construction delays of bioassay laboratory. Current progress good!

REASON FOR DELAY CODE

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1B1021	2 Roap No 16AAE	3 Roap Title Bioassay Technical Support for Freshwater Life			4 Date 12/14/73	5 Page No 1 of 1
6 Total Tasks in Roaps 11	7 No Tasks Completed 0	8 No Active Tasks 9	9 No on Schedule 8	10 No Completed CFY 0	11 No Delayed 1	12
13 Program Chief Donald I. Mount, Ph.D.		14 Roap Manager John W. Arthur			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
13	Determine acute and chronic toxicity of a disinfected secondary sewage effluent.	2	12/73	2/74	DA Final report not yet completed.		

17. REMARKS.

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1B1021	2 Roap No. 16AAJ	3. Roap Title Short-Cut Methods to Determine Toxicant Criteria			4. Date 1/2/74	5 Page No 1 of 1
6. Total Tasks in Roaps 13	7 No. Tasks Completed 2	8 No. Active Tasks 6	9. No. on Schedule 6	10. No Completed CFY 0	11 No Delayed 1	12.
13. Program Chief Donald I. Mount, Ph.D.		14 Roap Manager James M. McKim, Ph.D.			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
13	Physiological effects of chronic exposure to sublethal Cd and zinc levels upon salmonids.	Never started		12/74	AO Grant not accepted by grantee at time of funding.	Remove Task from ROAP.	

17 REMARKS

REASON FOR DELAY CODE

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1B1021	2 Roap No 16AAK	3. Roap Title Effects of Selected Hazardous Synthetic Organics in the Freshwater Environment			4 Date 1/4/74	5. Page No -- 1 -- of -- 1 --
6 Total Tasks in Roaps 36	7 No. Tasks Completed 2	8 No Active Tasks 34	9 No on Schedule 35	10 No Completed CFY 1	11 No. Delayed 1	12 12
13 Program Chief Donald I. Mount, Ph.D.		14 Roap Manager John G. Eaton			15.	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
03	Contracts to determine the chronic toxicity to 3 fish and 3 invertebrates of lindane, parathion, and atrazine.	7 months	10/73	5/74	0 Under-estimated the time for one fish species to reach reproductive maturity.	Have already been reprogrammed and funds allocated for completion.	

17 REMARKS

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1B1021	2 Roap No 16AAO	3. Roap Title Complex Effluent Criteria			4 Date 1/1/74	5 Page No 1 of 1
6. Total Tasks in Roaps 22	7 No. Tasks Completed 4	8. No Active Tasks 7	9. No. on Schedule 4	10 No. Completed CFY 0	11 No. Delayed 3	12.
13. Program Chief Donald I. Mount, Ph.D.		14. Roap Manager William B. Horning, II.			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
06	Laboratory studies relating avoidance by fish to a toxicant.	2	12/73	2/74	DO		Lab Director
10	Select sites for prototype studies.		10/73		O		
11	Plan and write-up prototype systems.		12/73		O		

17 REMARKS:

Task 06 - Personnel diverted to other ROAP Task to maintain scheduling for acute studies report.

Task 10 Recent decisions regarding effluent guidelines dictate that an alternative approach to the and - establishment of complex effluent criteria be used. Reprogramming actions will follow.

Task 11

REASON FOR DELAY CODE

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1B1021	2 Roap No 16ABI	3. Roap Title Temperature and Dissolved Oxygen Requirements for Freshwater Organisms	4 Date 12/17/73	5 Page No --1-- of --2--
6. Total Tasks in Roaps 35	7. No Tasks Completed 13	8 No Active Tasks 18	9 No on Schedule 18	10 No Completed CFY 3
13 Program Chief Donald I. Mount, Ph.D.		14 Roap Manager Bernard R. Jones		
		15 7		

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
09B	Upper and lower lethal temperatures of two species of fish.	Indef.	1/74 & 6/74	None	DO	Reprogram.	Lab Director
10	Temperature limits for fish food organisms - in-house.	--Not	funded	F.Y. 74--		Fund in subsequent years.	Headquarters
15	Temperature limits for fish food organisms - extramural.	--Not	funded	F.Y. 74--		Fund in subsequent years.	Headquarters
20	D.O. limits for fish food organisms - in-house.	--Not	funded	F.Y. 74--		Fund in subsequent years.	Headquarters
21	D.O. limits for fish food organisms - extramural.	--Not	funded	F.Y. 74--		Fund in subsequent years.	Headquarters
22	Effects of condenser passage on fish and fish food organisms.	--Not	funded	F.Y. 74--		Fund in subsequent years.	Headquarters

17 REMARKS:

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QUARTERLY ROAP STATUS REPORT

1. Program Element 1B1021	2. Roap No 16ABI	3. Roap Title Temperature and Dissolved Oxygen Requirements for Freshwater Organisms	4. Date 12/17/73	5. Page No -- 2 ---- of -- 2 ----
6. Total Tasks in Roaps 35	7. No. Tasks Completed 13	8. No. Active Tasks 18	9. No. on Schedule 18	10. No. Completed CFY 3
11. No. Delayed 7		12.		
13. Program Chief Donald I. Mount, Ph.D.		14. Roap Manager Bernard R. Jones		

16 TASKS DELAYED

Task No.	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
25	Nutrient chemistry of a subarctic lake.	--Not	funded	F.Y. 74--		Fund in subsequent years.	Headquarter

17 REMARKS

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QUARTERLY ROAP STATUS REPORT

1. Program Element 1BA021		2. Roap No. 21ASA		3. Roap Title Effects of Oil on Arctic Freshwater			4. Date 01/08/74		5. Page No ---1--- of ---1---		
6. Total Tasks in Roaps 4		7. No Tasks Completed 0		8. No Active Tasks 3		9. No. on Schedule 2		10. No Completed CFY 0		11. No Delayed 1	
13. Program Chief Richard W. Latimer				14. Roap Manager Ernst W. Mueller				15.			

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
02	The Effects of Oil Spilled on the High Latitude Lake Ecosystem	3	12/31/73	03/31/74	F.L.	Stimulate grant proposal	Program Chief

17 REMARKS

REASON FOR DELAY CODE

FUNDING -- F

FF - Funds Frozen
 FI - Funding Insufficient
 FD - Funds Diverted (specify)
 FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

AD - Equipment Delays
 AF - Equipment Failure
 AG - Grant/Contract Delay (specify)
 AO - Other Administrative (specify)
 AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

DA - Diversion of Staff for Technical Assistance
 DO - Diversion of Staff for Other Than Technical Assistance (specify)
 O - Other (specify)

QUARTERLY ROAP STATUS REPORT

1 Program Element 1BA022	2 Roap No. 16AAS	3. Roap Title Effect of Free Chlorine & Chlorinated Compounds on Selected Marine Organisms			4. Date 1/17/74	5 Page No ----1-- of ----1---
6 Total Tasks in Roaps 11	7 No. Tasks Completed 0	8. No. Active Tasks 1	9. No on Schedule 0	10. No Completed CFY 0	11 No Delayed 1	12.
13. Program Chief Dr. Eric D. Schneider		14 Roap Manager Dr. D. K. Phelps			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
09	Effects of chlorinated waste treatment effluents		1/1/73		FD	See Remarks	Lab Director

17 REMARKS Transfer of this ROAP to PE 1EA077 is being effected

REASON FOR DELAY CODE

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 FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

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STAFFING - OTHER -- D/O

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BA022	2 Roap No 16AAV	3 Roap Title Effects of Petroleum, Oils, Oil Dispersants & Petrochemical Wastes on Marine Life	4 Date 1/17/74	5 Page No --1-- of --1--
6 Total Tasks in Roaps 20	7 No Tasks Completed 3	8 No Active Tasks 6	9 No on Schedule 3	10 No Completed CFY 1
11 No Delayed 3		12		
13 Program Chief		14 Roap Manager		15

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
08	Analyze effluent	5	12/1/74	5/15/74	FF, AG	None	Lab Director
12	Short term bioassays of effluent	6	6/30/74	1/1/75	DO, AD	Complete wet lab	
18	Oiling of experimental field systems		7/1/73		FI	Negotiate or reprogram	

17 REMARKS. Task 08, no adequate proposals received yet. Task 18, proposals exceed available programmed funds.

REASON FOR DELAY CODE

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BA022	2 Roap No 21AKF	3. Roap Title Ecological Requirements Essential for the Protection of Estuarine & Marine Life			4. Date 1/17/74	5 Page No --- of ---
6 Total Tasks in Roaps 46	7. No Tasks Completed 0	8 No. Active Tasks 27	9. No on Schedule 20	10. No Completed CFY 0	11 No. Delayed 7	12
13 Program Chief Dr. E. Schneider		14. Roap Manager Dr. D. K. Phelps			15 	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
04	West Coast Polychate Culture	5	11/19/73	4/15/74	FF,AG	Complete negotiation	L/Dir
29	Sublethal effects, corals	2	10/11/73	12/29/74	FF	Corrected	
28	Criteria for dissolved oxygen	2	6/30/74	8/30/74	DA		
30	Temperature standards	4	6/30/74	10/30/74	AD	Complete wet lab	L/Dir
32	Salinity standards	3	6/30/74	9/30/74	AD,DA	Complete wet lab	L/Dir
34	Criteria for light, turbidity,ph,CO ₂	3	6/30/74	9/30/74	DA	Complete wet lab	L/Dir
40	Vital microscope development	-	11/19/73	-	FF,FD		

17 REMARKS:

Technical assistance demands in support of temperature criteria for the water quality document have resulted in essentially no activity in tasks 28, 32, and 34. Task 40, funds diverted by HQ to meet budget cuts.

REASON FOR DELAY CODE

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BA022	2 Roap No 21ARK	3. Roap Title Biological Techniques for Water Quality Criteria Development			4. Date 1/7/74	5. Page No 1 of 1
6. Total Tasks in Roaps 18	7. No Tasks Completed 0	8. No Active Tasks 6	9. No on Schedule 3	10. No. Completed CFY 0	11. No. Delayed 3	12
13 Program Chief Dr. Eric D. Schneider		14 Roap Manager Dr. D. K. Phelps			15 	

16. TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
08	Select parameters, evaluate techniques	6	7/1/79	7/1/79	AD	Corrected	Lab Director
14	Bioassay system, larval arthropods	3	9/1/73	12/1/73	AG	Corrected	
17	Toxicity data file		7/1/73		FD	Consider reprogramming to fund	

17 REMARKS:

Task 08 - Delay can be made up in out years upon completion of wet Lab

Task 14 - Award made

Task 17 - Funds diverted by HQ to meet budget cut

REASON FOR DELAY CODE

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BA022	2 Roap No 21ARY	3. Roap Title Effects of Man on Arctic Estuarine			4 Date 01/08/74	5. Page No. -- of --
6 Total Tasks in Roaps 5	7. No. Tasks Completed 0	8 No. Active Tasks 3	9 No. on Schedule 2	10. No. Completed CFY 0	11 No. Delayed 1	12.
13. Program Chief Richard W. Latimer		14. Roap Manager Ernst W. Mueller			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
02	Baseline Study of Arctic Estuarine Environment	5	10/1/73	02/28/74	A.G.	Contract Grantee to expedite report	Project Officer

17. REMARKS.

REASON FOR DELAY CODE

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 FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

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 AF - Equipment Failure
 AG - Grant/Contract Delay (specify)
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STAFFING - OTHER -- D/O

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BA022	2 Roap No 21BBG	3. Roap Title Ecological Assessment of Ocean Dumping			4 Date 1/17/74	5 Page No ---1--- of ---1---
6 Total Tasks in Roaps 6	7. No Tasks Completed 0	8 No. Active Tasks 6	9 No on Schedule 0	10 No Completed CFY 0	11 No Delayed 6	12
13 Program Chief Dr. Eric D. Schneider		14 Roap Manager Dr. D. K. Phelps			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
01	Merits of deep ocean and shelf disposal	5	9/1/73	2/15/73	FF	Corrected	
02	Leaching from spoils and sludge	8	9/1/73	5/15/73	FF	Corrected	
03	Ecological Effects of spoils and sludge	8	9/1/73	5/15/73	FF	Corrected	
04	Bioassay and bioaccumulation	7	9/15/73	4/15/73	AD, DO, FI	Complete wet lab	Lab Directo
05	Site monitoring methods	6	9/15/73	3/15/73	AD, DO, FI	Complete wet lab	Lab Directo
06	Biological availability at dump sites	8	9/1/73	5/15/73	FF	Corrected	

17 REMARKS General: Extramural support has been released. Delays projected include processing proposals in hand. Report based on ROAP dated 7/19/73 since ROAP revisions not yet certified. Specific: Tasks 04 & 05 delayed because funds for the first two quarters were insufficient to speed wet lab completion. Technical assistance on ocean disposal and development of thermal criteria also contributed heavily to delays

REASON FOR DELAY CODE

FUNDING -- F	ADMINISTRATIVE - A	STAFFING - OTHER -- D/O
FF - Funds Frozen	AD - Equipment Delays	DA - Diversion of Staff for Technical Assistance
FI - Funding Insufficient	AF - Equipment Failure	DO - Diversion of Staff for Other Than Technical Assistance (specify)
FD - Funds Diverted (specify)	AG - Grant/Contract Delay (specify)	O - Other (specify)
FL - Funds Late (Example delay in advice of allowance)	AO - Other Administrative (specify)	
	AP - Personnel Problems (specify)	

QUARTERLY ROAP STATUS REPORT

1 Program Element 1BA023	2 Roap No. 22 AEC	3 Roap Title Non-point Water Pollution Source Simulation Models			4 Date 1-8-74	5 Page No --1-- of 1
6 Total Tasks in Roaps 2	7 No. Tasks Completed 0	8 No Active Tasks 2	9 No on Schedule 1	10 No Completed CFY 0	11 No Delayed 1	12
13 Program Chief Dr. W. M. Sanders III		14 Roap Manager Dr. W. M. Sanders III			15	

16. TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
02	Contract to develop loading model for non-point source pollution for selected priority category and river basin.	9	9/1/73	5/1/74	FF* AO	Decide what work should be done	PAM

17 REMARKS

* No decision on selection of watersheds to be researched.

REASON FOR DELAY CODE

FUNDING -- F

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 FD - Funds Diverted (specify)
 FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

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 AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

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 O - Other (specify)

QUARTERLY ROAP STATUS REPORT

1. Program Element 1BA023	2. Roap No. 21 AIL	3. Roap Title Dynamics of Natural Freshwater Ecosystems			4. Date 1-8-74	5. Page No. --1-- of --1--
6. Total Tasks in Roaps 13	7. No. Tasks Completed 3	8. No. Active Tasks 4	9. No. on Schedule 3	10. No. Completed CFY 0	11. No. Delayed 1	12
13. Program Chief Dr. W. M. Sanders III		14. Roap Manager Dr. W. M. Sanders III			15 	

16. TASKS DELAYED

Task No.	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
07	Experimental determination of physical, chemical, and microbial rate constants and their dependency on biotic and abiotic factors.	9	6/30/74	3/31/75	O* FI	Approve over-target resources	AARD

17 REMARKS-

* Loss of critical personnel

REASON FOR DELAY CODE

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BA023	2 Roap No. 21 AIM	3. Roap Title Fate & Impact of Selected Pollutants in Freshwater Ecosystems			4. Date 1-8-74	5 Page No 1 of 1
6 Total Tasks in Roaps 29	7. No Tasks Completed 1	8 No Active Tasks 12	9. No. on Schedule 9	10. No. Completed CFV 0	11. No. Delayed 3	12 12
13. Program Chief Dr. W. M. Sanders III		14. Roap Manager Dr. W. M. Sanders III			15	

16. TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
13*	Develop submodel routines for combined chemical, photochemical, & microbial degradation, degradation rates & product formation.	6	9/30/74	12/30/75	O** FI	Approve over-target resources	AARD
30	Study combined chemical, physical, & photochemical & microbial degradation	6	9/1/74	3/1/75	O** FI	Same as Task 13	
32	Grant to conduct research workshop on chemical and photochemical degradation of pollutant pesticides in soils	6	1/1/74	7/1/74	O** FI	Same as Task 13	

17 REMARKS:

* Task 13 - output should be mercury model, not malathion model.

** Loss of critical personnel.

REASON FOR DELAY CODE

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QUARTERLY ROAP STATUS REPORT

1. Program Element 1BA024		2. Roap No. 21 AIO		3. Roap Title Nationwide Assessment of Ground Water Pollution Problems		4. Date 1/3/74		5. Page No. --1-- of --1--	
6. Total Tasks in Roaps 10		7. No. Tasks Completed 2		8. No. Active Tasks 4		9. No. on Schedule 3		10. No. Completed CFY 0	
11. No. Delayed 1		12.		13. Program Chief Jack W. Keeley		14. Roap Manager Jack W. Keeley		15.	

16. TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
09	Assess ground-water problems in southeastern states.	12	9/73	9/74	FD*	Delay until FY 75 when funds are available.	Program Chief
					*To achieve a 1.4 million-dollar reduction in the Ecological Processes and Effects Division.		

17. REMARKS

REASON FOR DELAY CODE

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STAFFING - OTHER -- D/O

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BA024	2 Roap No. 16 AJB	3. Roap Title Criteria and Parameters for Ground-Water Basin Management			4. Date 1/3/74	5 Page No 1 of 1
6 Total Tasks in Roaps 3	7. No. Tasks Completed 0	8. No Active Tasks 1	9. No on Schedule 0	10. No. Completed CFY 0	11. No. Delayed 1	12.
13 Program Chief Jack W. Keeley		14 Roap Manager Jack W. Keeley			15.	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
01	Evaluate existing ground-water quantity and quality models by placing them in competition, one against the other, using data new to all systems. Select best model or point out areas of needed additional work.	12	1/74	1/75	FD* *To achieve a 1.4 million-dollar reduction in the Ecological Processes and Effects Division.	Delay until FY 75 when funds are available.	Program Chief

17 REMARKS

REASON FOR DELAY CODE

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 AO - Other Administrative (specify)
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STAFFING - OTHER -- D/O

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QUARTERLY ROAP STATUS REPORT

1. Program Element 1BA024	2. Roap No 21 AKQ	3. Roap Title Predictive Models for Pollutants in the Ground-Water Environment	4. Date 1/3/74	5. Page No --1-- of --1--
6. Total Tasks in Roaps 24	7. No. Tasks Completed 8	8. No. Active Tasks 9	9. No. on Schedule 7	10. No. Completed CFY 0
11. No. Delayed 2		12. 12		
13. Program Chief Jack W. Keeley		14. Roap Manager Jack W. Keeley		

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
13	Augment state of knowledge of the transport of pollutants in ground water from sanitary landfills. This work will deal with the heretofore neglected area of organic pollution particularly with PCB.	5	9/73	2/74	AG*		
14	Based on a review of the literature and discussions with authorities, prepare a state of knowledge document concerning nitrogeneous compounds in ground water.	2	11/73	1/74	AG*		

17 REMARKS.

REASON FOR DELAY CODE

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STAFFING - OTHER -- D/O

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BA025	2 Roap No. 21AIS-A	3 Roap Title Scientific Criteria for Ocean Disposal	4 Date 1/4/74	5 Page No ---1--- of ---1---
6 Total Tasks in Roaps 15	7 No Tasks Completed 1	8 No Active Tasks 7	9 No on Schedule 2	10 No Completed CFV 1
13 Program Chief D. J. Baumgartner		14 Roap Manager W. F. Rittall		15 15

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
04	Improvement of analytical methods	5*	7/75	7/75	0	None	
05	Development of specific analytical methods	4*	7/75	7/75	0	None	
07	Field verification: Near-field dispersion model. New York Bight and oceanographic vessel support	3*	12/74	6/74	A0	Issuance of RFP subject to permit for research site.	ROAP Manager
11	Development of methodology for the assessment of bioaccumulatory nature of specific industrial waste compounds.	5*	7/76	7/76	O/FF	Issuance of RFP	ROAP Manager
*Delay is only in start-up--no delay expected in completion.							

17 REMARKS 0 - Study defined in terms of needs identified from completion of Ocean Dumping Analytical Methods Manual (ODAMM) - Task 03, ROAP 21AIS-A. This task was completed 12/1/73.

A0 - Experimental sludge dumping subject to obtaining EPA Research Dumping Permit--application scheduled for submission 1/74. Vessel support funds reprogrammed for immediate use to maintain continuity in background studies.

O/FF - Specific objectives were defined in terms of identified needs, Task 03, ROAP 21AIS-A, which was completed 12/1/73. Funds were also frozen during this period but were released for use on 11/28/73. RFP is now in final planning stages.

REASON FOR DELAY CODE

FUNDING -- F	ADMINISTRATIVE -- A	STAFFING - OTHER -- D/O
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FI - Funding Insufficient	AF - Equipment Failure	DO - Diversion of Staff for Other Than Technical Assistance (specify)
FD - Funds Diverted (specify)	AG - Grant/Contract Delay (specify)	O - Other (specify)
FL - Funds Late (Example delay in advice of allowance)	AO - Other Administrative (specify)	
	AP - Personnel Problems (specify)	

QUARTERLY ROAP STATUS REPORT

1 Program Element 1BA025	2 Roap No 21AIT	3 Roap Title Predictive Models for Pollutants in the Ocean Environment	4 Date 1/4/74	5 Page No --1-- of --1--
6 Total Tasks in Roaps 23	7 No Tasks Completed 9	8 No Active Tasks 7	9 No on Schedule 5	10 No Completed CFY 1
11 No Delayed 2	12	13 Program Chief D.J. Baumgartner	14 Roap Manager R. J. Callaway	15

16. TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
21	Kinetics in hydrodynamic model	4	8/73	1/74	AG	None needed	ROAP Manager
42	Fjord dynamics	6	10/73	4/74	FL	6-months extension granted	ROAP Manager

17 REMARKS

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QUARTERLY ROAP STATUS REPORT

1. Program Element 1BA026	2. Roap No. 21BAZ	3. Roap Title Support of the U.S.-Canadian Upper Lakes Reference Study		4. Date 1/9/74	5. Page No ---1--- of ---1---
6. Total Tasks in Roaps 9	7. No Tasks Completed 0	8. No Active Tasks 7	9. No on Schedule 8	10. No Completed CFY 0	11. No Delayed 1
13. Program Chief Nelson Thomas		14. Roap Manager Nelson Thomas			15.

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
04	Sediment Oxygen Demand Saginaw Bay	3	10/73	6/1/74	o	Reschedule	Thomas

17 REMARKS.

REASON FOR DELAY CODE

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BA026	2 Roap No. 21BBI	3. Roap Title Comprehension of the Michigan-Huron-Superior Lake System			4. Date 1/9/74	5 Page No 1 of 1
6. Total Tasks in Roaps 8	7. No Tasks Completed 0	8. No. Active Tasks 8	9 No on Schedule 3	10. No Completed CFY 0	11 No. Delayed 5	12
13. Program Chief Nelson Thomas		14 Roap Manager Nelson Thomas			15.	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
02	Ship leasing	4	8/73		FF	Release Funds	Greenfield
03	Southern Lake Huron Phyto-plankton	1	11/73	?	FF	Release Funds	Greenfield
04	Southern Lake Huron Zoo-plankton	1	11/73	?	FF	Release Funds	Greenfield
05	Southern Lake Huron Chemistry	1	11/73	?	FF	Release Funds	Greenfield
07	Data input	5	7/73	?	FF	Release Funds	Greenfield

17 REMARKS

REASON FOR DELAY CODE

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 FD - Funds Diverted (specify)
 FL - Funds Late (Example, delay in advice of allowance)

ADMINISTRATIVE - A

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 AF - Equipment Failure
 AG - Grant/Contract Delay (specify)
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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BA026	2 Roap No. 25ADR	3. Roap Title Guidelines for Controlling Nutrients - LARGE LAKES			4. Date 1/16/74	5 Page No --1-- of --1--
6. Total Tasks in Roaps 11	7. No Tasks Completed 0	8. No Active Tasks 10	9. No on Schedule 10	10. No Completed CFY 0	11. No. Delayed 1	12
13. Program Chief Tudor Davies		14. Roap Manager Tudor Davies			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
05	Nutrient Budgets of Major Large Lakes	8 mns	4/1/73	1/1/75	0	A program of implementation has been planned for FY 75	HQS

17 REMARKS Certain nutrient inputs could not be estimated at this time. Programs have been started to supply needed information.

REASON FOR DELAY CODE

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ADMINISTRATIVE - A

AD - Equipment Delays
 AF - Equipment Failure
 AG - Grant/Contract Delay (specify)
 AO - Other Administrative (specify)
 AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BA026	2 Roap No. 21AKP	3. Roap Title Predictive Model of Chemical Bio-logical & Physical Process Affecting Pollution of Large Lakes			4. Date	5. Page No. -- 1 -- of -- 1 --
6 Total Tasks in Roaps 24	7. No. Tasks Completed 2	8. No. Active Tasks 20	9. No. on Schedule 21	10. No Completed CFV 2	11 No. Delayed 1	12.
13 Program Chief Nelson Thomas		14 Roap Manager W. Richardson			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
19	Models for other Great Lakes	2 mns	10/73	2/1/74	A0	Resolved	Richardson

17 REMARKS

REASON FOR DELAY CODE

FUNDING -- F

FF - Funds Frozen
 FI - Funding Insufficient
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 FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

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 AF - Equipment Failure
 AG - Grant/Contract Delay (specify)
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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BA026	2 Roap No. 25ADX	3. Roap Title Guidelines for the Control of Dredge Operations & Disposal of Dredge Spoils in Lg Lakes			4 Date 1/9/74	5 Page No -1----- of -1-----
6 Total Tasks in Roaps 5	7. No. Tasks Completed 0	8. No Active Tasks 3	9. No on Schedule 4	10. No Completed CFY 0	11 No Delayed 1	12

13. Program Chief Nelson Thomas	14. Roap Manager M. Mullen	15.
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16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
04	Grant 801062 Dredging Report	1	11/73	2/11/74	AG	None	Mullen

17. REMARKS.

REASON FOR DELAY CODE

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ADMINISTRATIVE - A

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BA027	2 Roap No 07ABL	3 Roap Title Identification of Chemical Pollutants in Industrial Wastewaters			4 Date 1/7/74	5 Page No 1 of 1
6 Total Tasks in Roaps 15	7 No Tasks Completed 0	8 No Active Tasks 8	9 No on Schedule 5	10 No Completed CFV 0	11 No Delayed 3	12
13 Program Chief W. T. Donaldson		14 Roap Manager A. W. Garrison			15	
16 TASKS DELAYED						

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
02	Identify Pollutants in Kraft Paper Mill Wastewaters After Aerated Lagoon Treatment	6	12/31/73	6/30/74	0*	Reschedule final report to 6/30/74	
03	Identify Pollutants in Kraft Paper Mill Wastewaters after Lime Treatment	6	12/31/73	6/30/74	0*	Combine with report for task 02 (6/30/74)	
04	Identify Pollutants in Petroleum Refinery Wastewaters	7	12/31/73	7/31/74	DO**	Postpone report on separation techniques for Petroleum Refinery Pollutants to 7/31/74; Postpone Report on Neutral Pollutants Present after Biological Treatment to 12/31/74.	
10	Identify Pollutants in Metal Finishing Wastewaters	5	12/31/73	5/31/74	AD, O+	Reschedule Report on Metals Present After Treatment to 5/31/74.	

17 REMARKS

- * Delay due to underestimation of time required for analyzing data and writing final report.
- ** Time diverted to tasks 02 and 03.
- + Some time diverted to task 05, ROAP 16ACG.

REASON FOR DELAY CODE

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BA027	2 Roap No. 16 ACG	3. Roap Title Identification of Chemical Pollutants in Municipal Wastewaters			4 Date 1/7/74	5. Page No 1 of 1
6. Total Tasks in Roaps 9	7. No. Tasks Completed 1	8. No Active Tasks 4	9. No on Schedule 3	10. No Completed CFY 0	11. No. Delayed 1	12.
13 Program Chief W. T. Donaldson		14 Roap Manager A. W. Garrison			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
05	Identify Pollutants in Physical-Chemical and Activated Sludge Treated Municipal Wastes	5	12/31/73	5/31/74	AF, DA, AP*	Reschedule Report on Component in Acid Fraction to 5/31/74 and on Components in Neutral-base Fractions to 11/30/74.	

17 REMARKS

* Recent addition of personnel has alleviated this shortage.

REASON FOR DELAY CODE

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BA027	2 Roap No. 16 ADN	3. Roap Title Identification of Organic, Inorganic & Elemental Chem. Pol. in Wat.	4 Date 1/7/74	5 Page No 1 of 2
6 Total Tasks in Roaps 74	7 No Tasks Completed 19	8 No Active Tasks 25	9 No. on Schedule 13	10 No Completed CFV 2 (#31, 61)
13. Program Chief W. T. Donaldson		14 Roap Manager Hoover/Garrison/McGuire		

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
22	Spark Source Mass Spectrometry	8	9/1/73	5/15/74	DA, O (Planning)	Reschedule	Prog. Ch.
25	Expand Spectra Interpretation Program	2	11/15/73	1/15/74	AD	None-equipment is in transit	-
27	Low Resolution Mass Spectrometry	2 1/2	11/1/73	1/15/74	AD	None-equipment is in transit	-
29	Grant (Expand Mass Spectra Library)	6	9/30/73	4/15/74	FF, AG	Expedite awarding contract	HQ
32	Evaluate Microwave Emission Spectrometry	4	8/15/73	1/15/74	AO (Publication time not estimated)	None	-
37	Separation and Concentration Techniques	6	12/31/73	6/30/74	DA, DO*	Combine research report on microreticular resins with report on extraction, separation & concentration of volatile	-

pollutants, due 6/1/74.

17 REMARKS

- *(1) Time diverted to unscheduled report on "Current Practice in GC/MS Analysis of Organics in Water" and
- (2) Microreticular resin report would logically be part of a bigger report on extraction, separation, and concentration techniques.

REASON FOR DELAY CODE

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BA027	2 Roap No. 16ADN (con't)	3 Roap Title			4 Date	5 Page No 2 of 2
6 Total Tasks in Roaps	7 No. Tasks Completed	8 No Active Tasks	9 No on Schedule	10 No Completed CFY	11 No. Delayed	12.
13 Program Chief		14 Roap Manager			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
38	Dissolved Molecular H ₂ S	1	12/1/73	6/30/74	AD, DO (16ADN-37)	Reschedule	Prog. Ch.
64	Establish Taste & Odor Panel	2	5/1/74	6/30/74	AG**	Postpone 2 months	
65	Pesticide Degradation	2	1/1/74	3/15/74	AD	None-equipment is being installed	-
67	X-ray Fluorescence Techniques	2	11/1/73	10/1/74	FI	Reschedule for FY '75	Prog. Ch.
71	Plasma Emission Spectrometry	1	12/1/73	3/1/74	FF	Reschedule	-

17 REMARKS

**Grant funds delayed

REASON FOR DELAY CODE

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BA029	2 Roap No. 25AJX	3. Roap Title Survey of Nutrient Loadings to Lakes			4 Date 12/28/73	5 Page No 1 of 1
6 Total Tasks in Roaps 10	7. No. Tasks Completed 3	8 No Active Tasks 7	9. No on Schedule 6	10. No Completed CFY 1	11. No Delayed 1	12
13 Program Chief J. H. Gakstatter		14 Roap Manager Marvin O. Allum			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
5	Plan and initiate trib and MSTP sampling in 21 states west of Mississippi	5	10/74		AO FI	Program Coordinator has prepared decision memorandum for EPA Deputy Administrator	H.Q.

17 REMARKS

The decision to extend the survey into states west of the Mississippi has still not been made by the EPA Administrator nor has OMB decided whether or not to fund the survey in western states.

No advice of allowance has been received to fund work already underway in eastern states.

REASON FOR DELAY CODE

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ADMINISTRATIVE - A

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QUARTERLY ROAP STATUS REPORT

1. Program Element 1BA031	2. Roap No. 21 Aiy	3. Roap Title Determination of the Effectiveness of Lake Restoration Procedures			4. Date 12/19/73	5. Page No ---1--- of ---2---
6. Total Tasks in Roaps 40	7. No Tasks Completed 4	8. No Active Tasks 26	9. No on Schedule 21	10. No Completed CFY 1	11. No Delayed 5	12.
13. Program Chief Thomas E. Maloney <i>Tom</i>		14. Roap Manager Kenneth W. Malueg			15.	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
04	Literature search on lake restoration demonstration.	4	9/1/73	2/74	A0(1)	Publish finished document as soon as possible.	Branch Chief
12	Evaluate nutrient diversion as a lake restoration technique at Detroit Lakes, Minnesota.	7	7/76	2/77	A0(2)	Continue on minimum monitoring and research program, which is being done.	Branch Chief

17 REMARKS

- (1) Final report draft and format took longer than anticipated.
- (2) Construction program delayed because of wastewater system redesign.

REASON FOR DELAY CODE

FUNDING -- F

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 FL - Funds Late (Example: delay in advice of allowance)

ADMINISTRATIVE - A

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QUARTERLY ROAP STATUS REPORT

1. Program Element TBA031	2. Roap No. 21 AIY	3. Roap Title The Determination of the Effectiveness of Lake Restoration Procedures		4. Date 12/19/73	5. Page No. 2 of 2
6. Total Tasks in Roaps 40	7. No. Tasks Completed 4	8. No. Active Tasks 26	9. No. on Schedule 21	10. No. Completed CFY 1	11. No. Delayed 5
13. Program Chief Thomas E. Maloney		14. Roap Manager Kenneth W. Malueg		15.	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
35	A&E study for design of experimental ponds.	12	1/73	1/74	0(1)	New sites being sought.	Branch Chief
36	Develop procedures to evaluate nutrient inactivation techniques.	2	1/74	3/74	AP(2)	Report due 1/74 is in advanced stages of preparation.	Section Chief
37	Conduct pilot scale nutrient inactivation studies on ponds or small lakes.	5	10/73	3/74	0(3)	Initiate pilot scale studies 3/74.	Section Chief

17. REMARKS:

- (1) Potential construction sites not available.
- (2) Certain experimental procedures required more time for completion than anticipated. This was especially true for development of new micro-techniques.
- (3) Pilot scale studies are dependent on laboratory studies in task 36.

REASON FOR DELAY CODE

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ADMINISTRATIVE - A

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QUARTERLY ROAP STATUS REPORT

1. Program Element 1BAQ31	2. Roap No. 21 AJE	3. Roap Title Development of Techniques to Measure Nutrients from Diffuse Sources		4. Date 12/19/73	5. Page No 1 of 1
6 Total Tasks in Roaps 11	7. No Tasks Completed 0	8 No. Active Tasks 8	9. No. on Schedule 7	10. No Completed CFY 0	11. No Delayed 1
13. Program Chief Thomas E. Maloney		14. Roap Manager Charles E. Powers		15.	

16. TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
29	Studies of the effect of aluminum addition and aeration (two lake restoration techniques) on sediment-water nitrogen relationships.	10	9/73	7/74	FD (funds impounded by Hdqtrs)	Fund in FY-75	Branch Chief

17 REMARKS.

Two of the eight active tasks are not being supported by FY-74 funds but have been given no-cost extensions. A third task was funded in FY-73 and will be completed in FY-74 if it remains on schedule.

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QUARTERLY ROAP STATUS REPORT

1 Program Element TBA031	2 Roap No. 21 AOF	3. Roap Title Development of Methods for Assessing and Categorizing Potential Eutro. of Nat. Waters			4 Date 1/10/74	5 Page No 1 of 1
6 Total Tasks in Roaps 17	7 No Tasks Completed 0	8 No Active Tasks 13	9 No on Schedule 11	10 No Completed CFY 0	11 No Delayed 2	12
13. Program Chief Thomas E. Maloney <i>TEM</i>		14 Roap Manager William E. Miller			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
08	Environmental and nutritional requirements and physiological processes of selected fresh water and estuarine algae and aquatic plants.	06	1/1/74	7/1/74	0	Permission to hire temporary personnel	PED
17	Determine the critical levels of nitrogen, phosphorus and iron necessary to support the growth of <u>Anabaena flos-aquae</u> and <u>Microcystis aeruginosa</u> in AAP culture medium and natural waters.	06	1/1/74	7/1/74	0	Permission to hire temporary personnel.	PED

17 REMARKS.

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BA032	2 Roap No 21AJH	3 Roap Title Predictive Models for Thermal Pollution	4 Date 12/19/73	5 Page No 1 of 1
6 Total Tasks in Roaps 28	7 No Tasks Completed 10	8 No Active Tasks 11	9 No on Schedule 8	10 No Completed CFY 0
11 No Delayed 3		12		
13 Program Chief Frank H. Rainwater		14 Roap Manager Bruce A. Tichenor		

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
11	Workbook on Thermal Plume Prediction	2	12/31/73	complete 2/28/74	0 (technical)	Extend target	TPB
34	Field test cooling tower plume models	4	start 8/1/73	start 12/1/73	FF	None-Funds unfrozen as of 9/17/73	TPB
35	Improve statistical reliability of stream temperature prediction	5	start 10/1/73	start 3/1/74	AG	Cinc. Contract Office delayed date for submission of contract proposal to 1/8/74.	TPB

17 REMARKS

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB036	2 Roap No 21A2N	3. Roap Title Tech Res for the Elimination of Pollutants from the Steel Machinery, Transp etc Ind			4 Date 1/10/74	5 Page No ---2--- of ---2---
6 Total Tasks in Roaps 18	7. No Tasks Completed 5	8. No Active Tasks 12	9. No on Schedule 9	10. No Completed CFV 0	11 No Delayed 3	12
13 Program Chief Dr. Hugh B. Durham		14. Roap Manager Dr. Hugh B. Durham			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
08	"Demonstration of Ultrafiltration for Treatment of Central Cutting Oil System Emulsion Effluents"	12	5/75	4/76	AO(1)	ROAP revision - Reprogram as part of new Task 19. Approval action now being sought	HQS and NERC-CVO
15	"Characterization of Water Quality Criteria Necessary for Process Re-Use within the Carbon & Alloy Steel Industries"	9	6/74	5/75	AO(2)		
16	"Implementation of a semi-works Demonstration of the combined (coking-smelting) beneficiation of iron ore to eliminate coking & blast furnace emissions, etc."	5	6/76		AO(3)	ROAP revision - Reprogram Monies - Approval now being sought	HQS and NERC-CVO

17 REMARKS:

1. Prospective Grantee rejected - reprogramming Task 08 in new Task 19.
2. Prospective Grantee has not submitted a formal Grant Application - (to date).
3. Change in Program Priorities - Requesting a reprogramming of funds.

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ADMINISTRATIVE - A

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB036	2 Roap No. 21AZR	3 Roap Title Technology Research for the Elimination of Discharge of Pollutants from the Agri.Chem.Indus.			4 Date 12/27/73	5 Page No 1 of 4
6 Total Tasks in Roaps 36	7 No Tasks Completed 5	8 No Active Tasks 14	9 No on Schedule 6	10 No Completed CFY 0	11 No. Delayed 8	12 12
13 Program Chief Dr. H. P. Nicholson		14 Roap Manager Dr. R. R. Swank, Jr.			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
08	Pesticide/Chlorinated solvent waste brine cleanup and recycle via carbon adsorption (caustic regeneration) plus UV chlorination removal of light ends.	3	3/74	6/74	AF	Issue appropriate grant amendment to permit redesign, installation, and demonstration at <u>no</u> increase in cost to EPA	GAD
10	Thru-pilot scale evaluation of two chlorinated pesticide manufacturing effluent treatment processes: (1) Metal/bimetal couple reduction; (2) extraction plus alkyl-catalyzed Friedl-Crafts condensation of organic residue to inert, minimum volume configuration.	7	11/73	6/74	AF,FI	Reprogram sufficient funds from Task 18 to 10 to redesign and demonstrate metal couple reduction process on cyclodiene wastes at pilot scale--this has been done--contract modification in progress.	ROAP Mgr.

17 REMARKS.

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QUARTERLY ROAP STATUS REPORT

1 Program Element 18R036	2 Roap No 21 AZR	3 Roap Title			4 Date	5 Page No 2 of 4
6 Total Tasks in Roaps	7 No Tasks Completed	8 No Active Tasks	9 No on Schedule	10 No Completed CFY	11 No Delayed	12
13 Program Chief		14 Roap Manager			15	

16. TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
11	New N-P-K-S granular, slow release fertilizer process/product which minimizes effluents, utilizes steel wastes as feed stock, and reduces nutrient runoff potential.	3	12/73	3/74	AD	Extend contract (at no cost increase) to complete demo of process at miniworks scale.	Project/Contract Officers
12	Closed-loop water--nutrient recovery (zero pollutant discharge) for balanced N-fertilizer complex.	6	12/73	6/74	AD, AF	Negotiate/execute new work plan to reinstrument, re-design, install, and demonstrate at full scale (including 90-day commercial acceptance--economics evaluation) the revised closed-loop ion exchange process. Negotiations/design phases underway.	Project Officer, Technical Consultant, Grantee

17 REMARKS:

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB036	2 Roap No. 21 AZR	3 Roap Title			4 Date	5 Page No 3 of 4
6 Total Tasks in Roaps	7 No Tasks Completed	8 No Active Tasks	9 No on Schedule	10 No Completed CFY	11 No Delayed	12
13 Program Chief		14 Roap Manager			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
14	Integrated Air-Water-Solids TEC process demo for balanced N-fertilizer complex (SRO to Air).	12	3/74	3/75	FL (FY-74 SRO funds denied PAG II)	Resubmit SRO to Air programs for FY-75 action.	ROAP Mgr., PED 1BB036
15	Assess Air-Water emission potential of fertilizer bulk blend plants. Demonstrate appropriate integrated control technology at full scale (SRO to Air).	12	10/73	10/74	FL (FY-74 SRO funds denied PAG II)	Resubmit SRO to Air programs for FY-75 action.	ROAP Mgr., PED 1BB036

17 REMARKS.

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 O - Other (specify)

QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB036	2 Roap No 21 AZR	3 Roap Title			4 Date	5 Page No 4 of 4
6 Total Tasks in Roaps	7 No Tasks Completed	8 No Active Tasks	9 No on Schedule	10 No Completed CFY	11 No Delayed	12
13 Program Chief		14 Roap Manager			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
17	Demonstration of process to treat ammonia plant (urea) condensate	5	10/73	3/74	AG (Grant submitted late)	Expedite grant processing and initiate ASAP.	ROAP Mgr.
18	Miniworks--full scale demonstration of metal/bimetal reduction process for chlorinated cyclodine pesticide wastes (plant site).	4	12/73	4/74	FI, AG (Grant submitted late)	Reprogram appropriate funds to Task 18 from available tasks, e.g. 13. Initiate omnibus project so Task 19, 20, and 21 funds may be used in FY-75 upon scope expansion.	ROAP Mgr., PED 1BB036

17 REMARKS.

REASON FOR DELAY CODE

<u>FUNDING -- F</u>	<u>ADMINISTRATIVE - A</u>	<u>STAFFING - OTHER -- D/O</u>
FF - Funds Frozen	AD - Equipment Delays	DA - Diversion of Staff for Technical Assistance
FI - Funding Insufficient	AF - Equipment Failure	DO - Diversion of Staff for Other Than Technical Assistance (specify)
FD - Funds Diverted (specify)	AG - Grant/Contract Delay (specify)	O - Other (specify)
FL - Funds Late (Example delay in advice of allowance)	AO - Other Administrative (specify)	
	AP - Personnel Problems (specify)	

QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB036	2 Roap No 21 AZT	3 Roap Title Technology Research for the Elimination of Discharge of Pollutants fm Textile Industry			4 Date 11 Jan 74	5 Page No 1 of 1
6 Total Tasks in Roaps 16	7 No Tasks Completed 03	8 No Active Tasks 05	9 No. on Schedule 03	10 No. Completed CFY 0	11 No. Delayed 02	12
13. Program Chief Dr. H. P. Nicholson		14. Roap Manager Mr. T. N. Sargent			15.	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
08	Extramural project - Demonstrate membrane technology recycle/reuse at multiple sites	04	9/30/73	1/31/74	AG/grant application was submitted late	Work with potential grantee in formulating proposal	ROAP Mgr
09	Extramural project - Demonstrate the reduction/elimination of dye waste discharges using solvent dying systems	08	10/31/73	6/30/74	AG/difficult to interest industry	Work with potential grantee in preparing proposal	ROAP Mgr

17 REMARKS:

REASON FOR DELAY CODE

FUNDING -- F

FF - Funds Frozen
 FI - Funding Insufficient
 FD - Funds Diverted (specify)
 FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

AD - Equipment Delays
 AF - Equipment Failure
 AG - Grant/Contract Delay (specify)
 AO - Other Administrative (specify)
 AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

DA - Diversion of Staff for Technical Assistance
 DO - Diversion of Staff for Other Than Technical Assistance (specify)
 O - Other (specify)

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QUARTERLY ROAP STATUS REPORT

1. Program Element 1BB037	2. Roap No. 21-AZX	3. Roap Title Demonstrate Closed Loop - Wood Pulping			4. Date 7-7-74	5. Page No 1 of 1
6. Total Tasks in Roaps 60	7. No. Tasks Completed 19	8. No. Active Tasks 23	9. No. on Schedule 9	10. No. Completed CFY 7	11. No. Delayed 7	12.
13. Program Chief J.R. Boydston		14. Roap Manager H.K. Willard			15.	

16 TASKS DELAYED

Task No.	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
20	Grant 800853	7	6/73	1/74	AD	Extend Project Period 3 Mo.	PED
21	Grant 801876	6	10/73	4/74	AD		
22	Grant 12040 HDU	9	7/73	3/74	AG		
26	Grant 802157	3+	10/73	?/74	AG		
27	Grant 12040 EJU	24	6/73	6/75	AD		
29	Grant 802828	8	6/73	2/74	AG	Institute Formal Action to Obtain Final Report as Recommended by P.O.	PED
60	Grant 12040 DEH	25+	12/71	?/74	AG & AO		

17 REMARKS

- 60 - P.O. has requested assistance from PED in obtaining Final Report from delinquent grantee.
- 22 - P.O. has extended project 6 months for further data collection. Another 3 months has been requested for the writeup.
- 29 - Grantee is reconsidering acceptance of grant.
- 26 - Grantee is slow in reporting work.

REASON FOR DELAY CODE

FUNDING -- F

FF - Funds Frozen
 FI - Funding Insufficient
 FD - Funds Diverted (specify)
 FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

AD - Equipment Delays
 AF - Equipment Failure
 AG - Grant/Contract Delay (specify)
 AO - Other Administrative (specify)
 AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

DA - Diversion of Staff for Technical Assistance
 DO - Diversion of Staff for Other Than Technical Assistance (specify)
 O - Other (specify)

QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB037	2 Roap No. 21-AZY	3. Roap Title Demonstrate Closed Loop. . . Paper Products	4. Date 1-7-74	5. Page No 1 of 1
6 Total Tasks in Roaps 31	7. No. Tasks Completed	8. No. Active Tasks 7	9 No. on Schedule 3	10 No Completed CFY 1
13 Program Chief J.R. Boydston		14. Roap Manager J.S. Ruppertsberger		

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
06	Water Reuse in a Paper Reprocessing Plant S801206	6	11/73	5/74	AF	Extend Completion Date	P.O.*
07	Demonstration of Dry Forming of Paperboard	6	5/73 (Award)	1/74	AG	(Grant award delayed by grantee.) Determine Grantees Intention Towards Timely Completion of Grant.	P.O.
12	Grant	3	12/73 (Award)	3/74	AO	(No grant application.) Prospective Grantee Should Submit Application.	P.O.

17 REMARKS

- Task
- * 06 Project Officer has contacted grantee, but no request for grant extension has been received.
- 07 Grantee unresponsive to Project Officer's repeated efforts to converse on this matter. Grantee has signed O and A and apparently received advance payment funds but has made no progress (to P.O.'s knowledge).
- 12 Milestone for grant award passed without receipt of grant application to accomplish the task.

REASON FOR DELAY CODE

<u>FUNDING -- F</u>	<u>ADMINISTRATIVE - A</u>	<u>STAFFING - OTHER -- D/O</u>
FF - Funds Frozen	AD - Equipment Delays	DA - Diversion of Staff for Technical Assistance
FI - Funding Insufficient	AF - Equipment Failure	DO - Diversion of Staff for Other Than Technical Assistance (specify)
FD - Funds Diverted (specify)	AG - Grant/Contract Delay (specify)	O - Other (specify)
FL - Funds Late (Example: delay in advice of allowance)	AO - Other Administrative (specify)	
	AP - Personnel Problems (specify)	

QUARTERLY ROAP STATUS REPORT

1. Program Element 1BB037	2. Roap No. 21-AZZ	3. Roap Title Industrial Control Wood Products	4. Date 1-7-74	5. Page No 1 of 1
6. Total Tasks in Roaps 16	7. No. Tasks Completed 3	8. No Active Tasks 7	9. No on Schedule 2	10. No Completed CFY 1
11. No Delayed 4		12.		
13. Program Chief J.R. Boydston		14. Roap Manager A.L. Ewing		

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
04	Grant Monitoring, Garrett Research	2	12/73	2/74	AD	Adjust Completion Date	P.O.
05	Grant Monitoring, Koppers Co.	7	7/74	12/74	AD	Adjust Completion Date	PED
07	Final Report Published	2-7			AD	Adjust Completion Date	P.O.
09	Grant	7	10/73	5/74	FF-AG*	Shift Funds to Task No. 13	P.C.

17 REMARKS:

* For the first 6 months of FY 1974 funds were frozen thus preventing action on task No. 09. Since the freeze has been relaxed no suitable research proposals have been received.

REASON FOR DELAY CODE

FUNDING -- F

FF - Funds Frozen
FI - Funding Insufficient
FD - Funds Diverted (specify)
FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

AD - Equipment Delays
AF - Equipment Failure
AG - Grant/Contract Delay (specify)
AO - Other Administrative (specify)
AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

DA - Diversion of Staff for Technical Assistance
DO - Diversion of Staff for Other Than Technical Assistance (specify)
O - Other (specify)

QUARTERLY ROAP STATUS REPORT

1 Program Element IBB037	2 Roap No. 21-BAA	3 Roap Title Industrial Multiple Level Control Meat & Edible Oils			4 Date 1-7-74	5 Page No 1 of 1
6 Total Tasks in Roaps 46	7. No Tasks Completed 9	8 No Active Tasks 15	9. No. on Schedule 11	10 No Completed CFY 0	11 No. Delayed 4	12
13. Program Chief J.R. Boydston		14 Roap Manager Jack L. Witherow			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
12	Demonstrate Aerobic Treatment & Spray Irrigation for Small Meat Packers	18	9/73	3/75	DO (Temp. position frozen)	See Task 13	---
13	In-house Analytical Support of Task 12	18	9/73	3/75	AG (Error in contract procedures)	Contract Awarded 11/73	---
14	In-house Direction of Task 12	18	9/73	3/75	O (Result of 12&13)	Wait for Task 13	---
19	Demonstrate Fluid Bed Dryer and Incineration	--	10/74	---	AG (Grant Offer Rejected)	Delete Task	PAM PED

17 REMARKS

REASON FOR DELAY CODE

FUNDING -- F

FF - Funds Frozen
 FI - Funding Insufficient
 FD - Funds Diverted (specify)
 FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

AD - Equipment Delays
 AF - Equipment Failure
 AG - Grant/Contract Delay (specify)
 AO - Other Administrative (specify)
 AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

DA - Diversion of Staff for Technical Assistance
 DO - Diversion of Staff for Other Than Technical Assistance (specify)
 O - Other (specify)

QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB037	2 Roap No. 21-BAB	3 Roap Title Ind. Mult. Level Control: Fruits, Vegetables, Sugar & Bakery Products			4 Date 1-7-74	5 Page No ----- of ----- 2
6 Total Tasks in Roaps 100	7 No Tasks Completed 26	8 No. Active Tasks 17	9 No. on Schedule 8	10 No Completed CFV 0	11 No Delayed 9	12
13. Program Chief J.R. Boydston		14. Roap Manager Harold W. Thompson			15 	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
28	State-of-Art - Prepared Food Industry	8	8/73	4/74	AG Grantee sampling delayed	Request Second Extension	P.O.
29	Pilot Plant - Low Liquid Waste Vegetable Blancher	5	10/73	3/74	DA	Extend Termination	P.O.
		7	7/73	2/74	AG Director left country	Extend Termination	P.O.
31	State-of-Art - Sweet Potato	6	8/73	2/74	DA	Extend Termination	P.O.
33	By-Products from Waste Activated Sludge	6	9/73	3/74	AG No Appl	Wait for Application	---

17 REMARKS

REASON FOR DELAY CODE

FUNDING -- F

FF - Funds Frozen
 FI - Funding Insufficient
 FD - Funds Diverted (specify)
 FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

AD - Equipment Delays
 AF - Equipment Failure
 AG - Grant/Contract Delay (specify)
 AO - Other Administrative (specify)
 AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

DA - Diversion of Staff for Technical Assistance
 DO - Diversion of Staff for Other Than Technical Assistance (specify)
 O - Other (specify)

QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB037	2 Roap No. 21-BAB	3. Roap Title Ind. Mult. Level Control: Fruits, Vegetables, Sugar & Bakery Products			4. Date 1-7-74	5. Page No 2 of 2
6 Total Tasks in Roaps 100	7. No Tasks Completed 26	8 No Active Tasks 17	9. No on Schedule 8	10. No Completed CFY 0	11. No Delayed 9	12.
13. Program Chief J.R. Boydston		14 Roap Manager Harold W. Thompson			15.	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
35	Demonstrate Low Liquid Waste Vegetable Blancher	6	11/73	5/74	AG No Appl.	Wait for Application	---
36	Low Water Use - Leafy Vegetable Cleaning	6	8/73	2/74	AG Appl. late	Process Grant Application	P.O.
38	Low Water Use for Cleaning Root Crops	8	8/73	4/74	AG No Appl.	Wait for Application	---
85	Cane Harvesting & Cleaning	9	7/73	4/74	AG Three mo. strike	Grant Extended	---
88	Beet Sugar Unit Process Water Quality Requirements	---	8/73	---	AG No Appl.	Delete Task	PAM

17 REMARKS.

REASON FOR DELAY CODE

FUNDING -- F

FF - Funds Frozen
 FI - Funding Insufficient
 FD - Funds Diverted (specify)
 FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

AD - Equipment Delays
 AF - Equipment Failure
 AG - Grant/Contract Delay (specify)
 AO - Other Administrative (specify)
 AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

DA - Diversion of Staff for Technical Assistance
 DO - Diversion of Staff for Other Than Technical Assistance (specify)
 O - Other (specify)

QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB037	2 Roap No 21-BAC	3 Roap Title Ind. Mult. Level Control Grain Mills & Beverages			4 Date 1-7-74	5 Page No ----- of ----- 1
6 Total Tasks in Roaps 34	7 No. Tasks Completed 5	8 No. Active Tasks 9	9 No on Schedule 5	10 No Completed CFY 0	11 No Delayed 4	12 12
13 Program Chief J.R. Boydston		14 Roap Manager Max W. Cochran			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
04	Treatment and Reuse in Wine Production	8	8/73	4/74	FF and AG (No Appl.)	Wait for Grant Application	---
08	Activated Sludge Treatment of Winery Wastewater.	8	7/73	3/74	DA	Complete Review of Final Report	P.O.
10	Pilot Plant Treatment of Wine Stillage	8	7/73	3/74	DA	Complete Review of Final Report.	P.O.
11	Concentrate Brewery Spent Grain Liquor	7	10/73	5/74	AG (Final report late)	Contact Grantee	P.O.

17. REMARKS:

REASON FOR DELAY CODE

FUNDING -- F

FF - Funds Frozen
 FI - Funding Insufficient
 FD - Funds Diverted (specify)
 FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

AD - Equipment Delays
 AF - Equipment Failure
 AG - Grant/Contract Delay (specify)
 AO - Other Administrative (specify)
 AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

DA - Diversion of Staff for Technical Assistance
 DO - Diversion of Staff for Other Than Technical Assistance (specify)
 O - Other (specify)

QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB037	2 Roap No. 21-BAD	3 Roap Title Dairy Products and Ind. Mult. Level Control: Miscellaneous Foods			4 Date 1-7-74	5 Page No 1 of 1
6 Total Tasks in Roaps 42	7 No. Tasks Completed 10	8 No Active Tasks 8	9 No on Schedule 6	10 No Completed CFY 0	11 No Delayed 2	12
13 Program Chief J.R. Boydston		14 Roap Manager Max W. Cochrane			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
05	Dissolved-Air Flotation of Seafood Processing Waste	9	6/73	3/74	FF and AG No Appl.	Wait for Grant Application	---
14	Literature Review - Misc. Food Processing Wastes	7	8/73	3/74	FF and AG No Appl.	Wait for Grant Application	---

17 REMARKS

REASON FOR DELAY CODE

FUNDING -- F

FF - Funds Frozen
 FI - Funding Insufficient
 FD - Funds Diverted (specify)
 FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

AD - Equipment Delays
 AF - Equipment Failure
 AG - Grant/Contract Delay (specify)
 AO - Other Administrative (specify)
 AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

DA - Diversion of Staff for Technical Assistance
 DO - Diversion of Staff for Other Than Technical Assistance (specify)
 O - Other (specify)

QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB037	2 Roap No. 21-BAE	3. Roap Title Industrial - Misc. Ind./ Stone, Clay, Glass			4. Date 1-7-74	5 Page No 1 of 1
6 Total Tasks in Roaps 12	7. No Tasks Completed 0	8. No Active Tasks 12	9 No on Schedule 10	10. No Completed CFY 11	11 No. Delayed 2	12
13. Program Chief J.R. Boydston		14 Roap Manager M.D. Knittel			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
17	Grant - Reuse Brines from Ion Exchange Softening	3	8/73	11/73	AF	Grant Period Extended	P.O.
18	Mag. Carb. Coag. for Municipal Water	3	9/73	12/73	AG(1)	Grant Period Extended	P.O.

17 REMARKS:

(1) Grant amendment issued 7/73.

REASON FOR DELAY CODE

FUNDING -- F

FF - Funds Frozen
 FI - Funding Insufficient
 FD - Funds Diverted (specify)
 FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

AD - Equipment Delays
 AF - Equipment Failure
 AG - Grant/Contract Delay (specify)
 AO - Other Administrative (specify)
 AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

DA - Diversion of Staff for Technical Assistance
 DO - Diversion of Staff for Other Than Technical Assistance (specify)
 O - Other (specify)

QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB037	2 Roap No. 21-BAF	3. Roap Title Industrial - Joint Light Ind./ Munic.	4 Date 1-18-74	5. Page No. 1 of 1
6. Total Tasks in Roaps 21	7. No Tasks Completed 10	8. No Active Tasks 12	9. No. on Schedule 3	10. No. Completed CFY 2
13 Program Chief J.R. Boydston		14 Roap Manager M.D. Knittel		

16. TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
03	Edit & retype final report - Task 02	6	10/73	4/74	DA	Additional staff recruited	
07	Full scale evaluation - municipal plus potato wastes (12130 DJB)	6	11/73	5/74	AG*	Expedite completion	PO
12	Edit & retype final report - Task 11	7	9/73	4/74	DA	Additional staff recruited	
13	Demonstrate regional whey drying facility (12130 ENF)	12	1/76	1/77	AG*	Terminate project	DO
16	Demonstrate regional treatment for four industries (12120 GER)	6	9/75	3/76	AD	Extend project	PO
18	Lab studies joint tertiary treat (12120 HRA)	6	9/73	3/74	AG*	Extend project	PO
19	Joint treat. paper proc. wastes (802157)	3	10/73	1/74	AG*	Expedite completion	PO

17 REMARKS

* Grantee didn't meet grant time schedule.

REASON FOR DELAY CODE

FUNDING -- F

FF - Funds Frozen
FI - Funding Insufficient
FD - Funds Diverted (specify)
FL - Funds Late (Example: delay in advice of allowance)

ADMINISTRATIVE - A

AD - Equipment Delays
AF - Equipment Failure
AG - Grant/Contract Delay (specify)
AO - Other Administrative (specify)
AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

DA - Diversion of Staff for Technical Assistance
DO - Diversion of Staff for Other Than Technical Assistance (specify)
O - Other (specify)

QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB039	2 Roap No 21-AYP	3 Roap Title Formulation and Field Verification of Pesticide and Nutrient Runoff Mathematical Models			4 Date 12/26/73	5. Page No ---- 1 ---- of ---- 6 ----
6 Total Tasks in Roaps 53	7 No Tasks Completed 5	8 No Active Tasks 22	9. No on Schedule 10	10 No Completed CFY 0	11 No Delayed 12	12
13 Program Chief Dr. H. P. Nicholson		14 Roap Manager Dr. George W. Bailey			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
05	Res. Grant (R800401) Nutrient Input to Streams from Fertilizer	7	6/30/73	1/30/74	AG/Final report not received	Lean even harder on grantee to finish final report	Project Officer
06	Res. Grant (13020 EBL) Movement from Cropland into Lake Erie	7	6/30/73	1/30/74	AG/Delay in review; late initial draft copy	Finish review of initial draft of final report	Project Officer

Resource issues partially resolved as result of Program Review; needed dollars (138K) provided to NERC, but 17 REMARKS: needed manpower re-allocation was not resolved. Decision made at Program Review to start development and initial testing of Nutrient Runoff Model this fiscal year rather than FY-76. Nutrient model development will be superimposed on a grant to refine Pesticide Runoff Model. Decision was made to initially develop gross rather than refine in-house submodels in Task 17, 19, 20 and 21; these are to be completed this FY. This approach is necessary to meet re-defined agency deadlines and thus model development schedules. Detailed ROAP revisions were not submitted due to lateness in fiscal year and closeness to planning cycle.

REASON FOR DELAY CODE

FUNDING -- F

FF - Funds Frozen
FI - Funding Insufficient
FD - Funds Diverted (specify)
FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

AD - Equipment Delays
AF - Equipment Failure
AG - Grant/Contract Delay (specify)
AO - Other Administrative (specify)
AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

DA - Diversion of Staff for Technical Assistance
DO - Diversion of Staff for Other Than Technical Assistance (specify)
O - Other (specify)

QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB039	2 Roap No 21 AYP	3 Roap Title Formulation & Field Verification of Pesticide & Nutrient Runoff Mathe Models	4 Date 11 Jan 74	5 Page No 2 of 6
6 Total Tasks in Roaps	7 No. Tasks Completed	8 No Active Tasks	9 No on Schedule	10 No Completed CFY
13 Program Chief		14 Roap Manager		15

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
11	Contract (68-01-0721) Pesticide Runoff Model Definition and Testing, Mechanistic Approach, ESL	10	8/30/73	6/30/74	AG/Contractual	Complete Reprogramming Action and process COFA and scope of change and cost request	Project & Contracting Officer
12	Contract (68-02-0897) Pesticide Runoff Model Definition and Testing Lumped Parameter Approach, Hydrocomp	5	8/30/73	1/30/74	AG/Delay in final report	Minor changes required in final report prior to approval	Contractor
14	Research Grant (801666) Losses of Fertilizers and Pesticides in Runoff and Erosion	2	12/30/72	2/30/74	AG/Delay in final report	Contract grantee	Project Officer

17 REMARKS: Task 11. Paper work on scope change and COFA completed during quarter. Before paper work could be processed, contractor entered request for additional funds due to approval of higher overhead costs. New contracting officer was reluctant to process two sets of paper work on contract. Completion data of contract four months after approval received.

REASON FOR DELAY CODE

FUNDING -- F

FF - Funds Frozen
FI - Funding Insufficient
FD - Funds Diverted (specify)
FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

AD - Equipment Delays
AF - Equipment Failure
AG - Grant/Contract Delay (specify)
AO - Other Administrative (specify)
AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

DA - Diversion of Staff for Technical Assistance
DO - Diversion of Staff for Other Than Technical Assistance (specify)
O - Other (specify)

QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB039	2 Roap No 21 AYP	3 Roap Title			4 Date	5 Page No 3 of 6
6 Total Tasks in Roaps	7 No Tasks Completed	8 No Active Tasks	9 No on Schedule	10 No Completed CFY	11 No Delayed	12
13 Program Chief		14 Roap Manager			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
17	Pesticide adsorption/desorption submodel	2	12/30/73	2/30/74	DO/ Diversion to 21AYP Tasks 08 and 26 to get data for Task 12	Re-direct personnel; action completed	Program Chief
18	Method to Measure and Model Surface Acidity	3	12/30/73	3/30/74	DO/ Diversion to 21AYP Tasks 08 and 26 to get data for Task 12	Re-direct personnel; action completed	Program Chief

17 REMARKS.

REASON FOR DELAY CODE

FUNDING -- F

FF - Funds Frozen
FI - Funding Insufficient
FD - Funds Diverted (specify)
FL - Funds Late (Example: delay in advice of allowance)

ADMINISTRATIVE - A

AD - Equipment Delays
AF - Equipment Failure
AG - Grant/Contract Delay (specify)
AO - Other Administrative (specify)
AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

DA - Diversion of Staff for Technical Assistance
DO - Diversion of Staff for Other Than Technical Assistance (specify)
O - Other (specify)

QUARTERLY ROAP STATUS REPORT

1. Program Element 1BB039	2. Roap No. 21 AYP	3. Roap Title			4. Date	5. Page No 4 of 6
6. Total Tasks in Roaps	7. No Tasks Completed	8. No. Active Tasks	9. No. on Schedule	10. No Completed CFV	11. No. Delayed	12
13. Program Chief		14. Roap Manager			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
19	Pesticide Microbial Degradation Submodel	5.5	9/15/73	3/1/74	0 Delay in getting field data processed	None (data now interfaced and processed by computer)	
22	Organism Uptake Submodel	5	10/15/73	3/15/74	0 Delay in starting lit search	Complete literature search and formulate model	Research Leader
26	Contract for Software Development and Data Reduction for Tasks 11, 12 and 23	12	9/30/73	9/30/74	FD*	Reprogram FY 74 funds into Task 30	NERC, PAM PED, Prog Ch, ROAP Mgr

17 REMARKS *Task 26. Majority of software development and data reduction was done by in-house personnel. This was necessary since model development contractor who was proposed to do this work was delayed in completing Task 12. Personnel were directed from Tasks 17 and 18 to do data compilation, reduction and analysis.

REASON FOR DELAY CODE

FUNDING -- F

FF - Funds Frozen
 FI - Funding Insufficient
 FD - Funds Diverted (specify)
 FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

AD - Equipment Delays
 AF - Equipment Failure
 AG - Grant/Contract Delay (specify)
 AO - Other Administrative (specify)
 AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

DA - Diversion of Staff for Technical Assistance
 DO - Diversion of Staff for Other Than Technical Assistance (specify)
 O - Other (specify)

QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB039	2 Roap No 21 AYP	3. Roap Title			4 Date	5 Page No 5 of 6
6 Total Tasks in Roaps	7 No Tasks Completed	8 No Active Tasks	9 No on Schedule	10 No Completed CFY	11 No Delayed	12
13 Program Chief		14 Roap Manager			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
27	Contract for Correlation and Analysis of Field Data from Task 23	11	11/1/73	9/30/74	FD*	Reprogram FY 74 funds into Task 30	NERC, PAM PED, Prog Ch, ROAP Mgr

17 REMARKS *Task 27. Re-definition of agency needs and deadlines necessitate reprogramming all of FY 74 funds into Task 30. Task 30 will involve refinement and testing of first pass of Pesticide Runoff Model plus development and initial testing of the Nutrient Runoff Mathematical Model.

REASON FOR DELAY CODE

FUNDING -- F

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ADMINISTRATIVE - A

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STAFFING - OTHER -- D/O

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB039	2 Roap No. 21 AYP	3. Roap Title	4 Date	5. Page No ---- 6 -- of -- 6 ----
6 Total Tasks in Roaps	7 No Tasks Completed	8. No Active Tasks	9. No on Schedule	10 No Completed CFY
		11 No. Delayed	12	
13 Program Chief		14 Roap Manager	15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
30	Contract to Refine Pesticide Runoff Mathematical Model	3	1/1/74	4/1/74	AO	Complete review of pre-proposal and have grant submitted	ROAP Manager

17 REMARKS. Task 30 -- Re-definition of agency needs required re-definition of model development needs and implementation schedules. Task 30 will constitute: (a) refinement and testing of the First Pass Pesticide Runoff Model in two geographic areas, (b) development and initial testing of a snowmelt-pesticide runoff routine in one geographic region, and (c) development and initial testing of a Nutrient Runoff Model/which was originally ascribed to Task 33.

REASON FOR DELAY CODE

FUNDING -- F

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 FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

AD - Equipment Delays
 AF - Equipment Failure
 AG - Grant/Contract Delay (specify)
 AO - Other Administrative (specify)
 AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

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 O - Other (specify)

QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB039	2 Roap No 21 AYR	3. Roap Title Soil/Water Management Methods to Reduce Volume and Pollutants in Irrigation Return Flow			4 Date 12/18/73	5 Page No ----- of -----
6 Total Tasks in Roaps 17	7. No Tasks Completed 6	8. No Active Tasks 8	9. No on Schedule 7	10. No Completed CFY 0	11 No. Delayed 1	12.
13. Program Chief Marvin L. Wood		14. Roap Manager James P. Law, Jr.			15.	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
08	Prototype evaluation of irrigation management practices (In-house)	12	6/30/75	6/30/76	FI/0	Project now underway. Man-years assigned inadequate	Headquarter

17 REMARKS

REASON FOR DELAY CODE

FUNDING -- F

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FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

AD - Equipment Delays
AF - Equipment Failure
AG - Grant/Contract Delay (specify)
AO - Other Administrative (specify)
AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

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O - Other (specify)

QUARTERLY ROAP STATUS REPORT

1. Program Element 1B8039	2. Roap No. 21 AYV	3. Roap Title Concepts for Wastes from Animal Feeding Enterprises			4. Date 12/20/73	5. Page No ---1--- of ---2---
6. Total Tasks in Roaps 32	7. No. Tasks Completed 6	8. No. Active Tasks 18	9. No. on Schedule 14	10. No. Completed CFY 2	11. No. Delayed 4	12.
13. Program Chief Marvin L. Wood		14. Roap Manager Lynn R. Shuyler			15.	

16. TASKS DELAYED

Task No.	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
05	To modify existing soils with barrier at a depth which will enhance the soil's ability to remove nitrogen and phosphate from waste water and allow recovery and reuse of the waste water.	6	3/30/73	1/31/74	0	Extension granted by PO; final report not completed.	PO
06	To study the effectiveness of liquid aerobic composting on dairy wastes in Chino Valley, California, and to evaluate the results of such a system.	4	6/30/73	1/31/74	0	Extension granted by PO	PO
17	Demonstrate spray runoff treatment methods for central plains for beef cattle feedlot located in moderate rainfall area.		8/1/73 (Start)		AG, FD	Task has been deactivated for FY-74.	PED

17 REMARKS. 05 - Work completed; final report in preparation.
 06 - Work completed; final report in preparation.
 17 - The work proposed by this task is being conducted by a state agency and will be available without cost to us.

REASON FOR DELAY CODE

FUNDING -- F

FF - Funds Frozen
 FI - Funding Insufficient
 FD - Funds Diverted (specify)
 FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

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 AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB039	2 Roap No. 21 AYV	3. Roap Title Concepts for Wastes from Animal Feeding Enterprises	4 Date 12/20/73	5. Page No --2---- of --2-----
6 Total Tasks in Roaps 32	7 No Tasks Completed 6	8 No. Active Tasks 18	9. No. On Schedule 14	10 No Completed CFV 2
11 No. Delayed 4		12		
13 Program Chief Marvin L. Wood		14. Roap Manager Lynn R. Shuyler		15

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
27	Develop user-oriented state-of-the-art for land disposal of animal wastes, delineating land loading criteria for major production areas, including mathematical runoff and infiltration modeling where available.	4	9/1/73	1/1/74	FL	Funds just released; grant package in process.	

17 REMARKS- 27 - This task will be completed within the time frame if at all possible; prospective grantee is aware of critical nature of project.

REASON FOR DELAY CODE

FUNDING -- F

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ADMINISTRATIVE - A

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AF - Equipment Failure
AG - Grant/Contract Delay (specify)
AO - Other Administrative (specify)
AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

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DO - Diversion of Staff for Other Than Technical Assistance (specify)
O - Other (specify)

QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB040	2 Roap No. 21 AGF	3. Roap Title Mining Sources (Ores)	4 Date 12/21/73	5. Page No ---- 1 -- of -- 1 ----
6. Total Tasks in Roaps 9	7. No Tasks Completed 1	8. No Active Tasks 2	9. No on Schedule 0	10. No Completed CFV 1
11. No. Delayed 2		12		
13. Program Chief Marvin L. Wood		14. Roap Manager James E. Moyer		

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
02	State-of-the-Art: Uranium Mining Milling, and Refining Industry	6	6/30/73	1/31/74	DO	Final review and publication	M.L.Wood
16	Evaluation of Tailings Pond Sealants	6	6/30/73	1/31/74	DO	Complete report writing	M.L.Wood

17 REMARKS: Reason for delay - Assignment of personnel for compilation of priority report (Task 05) for ore mining industries.

REASON FOR DELAY CODE

FUNDING -- F

FF - Funds Frozen
FI - Funding Insufficient
FD - Funds Diverted (specify)
FL - Funds Late (Example: delay in advice of allowance)

ADMINISTRATIVE - A

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AG - Grant/Contract Delay (specify)
AO - Other Administrative (specify)
AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB040	2 Roap No. 21 AGG	3 Roap Title Mining Sources (Sand and Gravel)	4 Date 9/25/73	5 Page No 1 of 1
6 Total Tasks in Roaps 10	7 No. Tasks Completed 0	8 No Active Tasks 1	9 No on Schedule 0	10 No Completed CFY 0
11 No Delayed 1		12		
13 Program Chief Marvin L. Wood		14 Roap Manager James E. Moyer		

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
02	State-of-the-Art: Sand and Gravel	6	6/30/73	1/31/74	DO	Complete Report	M.L.Wood

17 REMARKS Reason for delay - Assignment of personnel for compilation of priority report (ROAP 21AGF, Task 05) for ore mining industries.
Inability to obtain state regulatory documents.

REASON FOR DELAY CODE

FUNDING -- F

FF - Funds Frozen
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FL - Funds Late (Example: delay in advice of allowance)

ADMINISTRATIVE - A

AD - Equipment Delays
AF - Equipment Failure
AG - Grant/Contract Delay (specify)
AO - Other Administrative (specify)
AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB042	2 Roap No. 2TAG1	3. Roap Title Control of Pollution Caused by Construction Project			4. Date 1/16/74	5. Page No --- of ---
6 Total Tasks in Roaps 5	7. No. Tasks Completed 1	8. No. Active Tasks 5	9. No. on Schedule 3	10 No. Completed CFY 1	11 No. Delayed 1	12.
13 Program Chief Tudor Davies		14 Roap Manager Tudor Davies			15	

16. TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
04	Field Demo for Erosion & Sediment Control	6 mns	6/73	6/1/74	AG	None required	T.Davies

17 REMARKS

REASON FOR DELAY CODE

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 FL - Funds Late (Example delay in advice of allowance)

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 AG - Grant/Contract Delay (specify)
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STAFFING - OTHER -- D/O

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB044	2 Roap No. 21ASF	3. Roap Title Alaska Village Demonstration Project			4. Date 01/08/74	5. Page No --- 1 --- of --- 1 ---
6 Total Tasks in Roaps 8	7. No. Tasks Completed 3	8 No Active Tasks 4	9. No on Schedule 3	10. No Completed CFY 0	11 No. Delayed 1	12
13 Program Chief Richard W. Latimer		14. Roap Manager Merritt A. Mitchell			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
05	Operation of Emmonak and Wainwright Projects for evaluation*						

17 REMARKS. *Wainwright facility was destroyed by fire in November 1973. Recommended action for future activity at Wainwright has been the subject of separate correspondence. No assessment of delay can be made at this time.

REASON FOR DELAY CODE

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ADMINISTRATIVE - A

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AG - Grant/Contract Delay (specify)
AO - Other Administrative (specify)
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STAFFING - OTHER -- D/O

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB044	2 Roap No. 21ASG	3 Roap Title Treatment for Municipal Wastes in Cold Climates	4 Date 01/08/74	5 Page No. ---1--- of ---1---
6 Total Tasks in Roaps 9	7 No. Tasks Completed 3	8 No. Active Tasks 4	9 No on Schedule 2	10 No Completed CFY 0
13 Program Chief Richard W. Latimer		14 Roap Manager Barry H. Reid		15.

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
04	Inventory of non-conventional process with application in Arctic	3	03/1974		D.O.	No additional action is needed at this time. New proposed target dates will be established.	
05	Conference on non-conventional processes	3	03/1974				

17 REMARKS

This reprogram action is within the same program element 1BB044.

REASON FOR DELAY CODE

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ADMINISTRATIVE - A

AD - Equipment Delays
AF - Equipment Failure
AG - Grant/Contract Delay (specify)
AO - Other Administrative (specify)
AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

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O - Other (specify)

QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB045	2 Roap No. 21-ASH	3. Roap Title Soil Systems for Municipal Wastewater Treatment			4 Date 1-8-74	5 Page No ---1--- of 1
6 Total Tasks in Roaps 37	7. No Tasks Completed 6	8. No Active Tasks 17	9 No on Schedule 14	10 No Completed CFY 0	11 No. Delayed 3	12.
13 Program Chief Curtis C. Harlin, Jr. CCH		14. Roap Manager William C. Galegar			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
14	Testing of infiltration-percolation approach for hydrology, nutrient removal, organic removal, and micro-organism removal.	4	6/81		AD/DO ^{1/}	Finish report so involved personnel can be shifted to this project. Continue assembling equipment with available personnel.	Branch Chief
15	Management of soil systems for land restoration through wastewater reuse.	6	6/79		AO/O ^{2/}	Initiate in-house activity.	Branch Chief
29	Demonstration of a Soil System for Economical Wastewater Reclamation and Beneficial Reuse, City of Phoenix, Arizona, Grant No. 802435.	3	11/76		AG ^{3/}	Encourage grantee to complete construction as soon as possible.	P.O.

17 REMARKS Task 37 and 38 cover SRO's submitted to other program elements. The status of work under these tasks is not known at this time.

1/Diversion of staff to complete project report on previously completed research.

2/This task is preliminary laboratory work for Task 19 which is scheduled for funding in FY '75; therefore, activity will be started in the third quarter of FY '74.

3/Construction of experimental facilities delayed.

REASON FOR DELAY CODE

FUNDING -- F

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ADMINISTRATIVE - A

AD - Equipment Delays
AF - Equipment Failure
AG - Grant/Contract Delay (specify)
AO - Other Administrative (specify)
AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB045	2 Roap No. A21-ASH	3. Roap Title Soil Systems for Municipal Wastewater Treatment			4. Date 1-8-74	5. Page No ---1--- of ---1-----
6. Total Tasks in Roaps 14	7. No. Tasks Completed 0	8. No Active Tasks 8	9. No on Schedule 7	10. No. Completed CFY 0	11 No. Delayed 1	12
13 Program Chief Curtis C. Harlin, Jr. C C A		14 Roap Manager William C. Galegar			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
14	Spray-runoff development project in the south central area.	4	1/74	4/74	AG ^{1/}	Fund project as soon as appropriate application is received and processed.	Branch Chief

17 REMARKS: Task 06 is a supplement to ROAP 21-ASH, Task 11.
Task 07 is a supplement to ROAP 21-ASH, Task 12.

1/Receipt of appropriate grant application delayed funding of project.

REASON FOR DELAY CODE

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ADMINISTRATIVE - A

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STAFFING - OTHER -- D/O

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB045	2 Roap No 21-ASJ	3. Roap Title Biological/Ecological Municipal Wastewater Treatment/Control Systems			4 Date 1-8-74	5 Page No --- 1 --- of --- 1 ---
6. Total Tasks in Roaps 4	7 No. Tasks Completed 1	8 No Active Tasks 3	9 No on Schedule 2	10 No Completed CFY 0	11 No. Delayed 1	12
13. Program Chief Curtis C. Harlin, Jr. <i>CCF</i>		14 Roap Manager William C. Galegar			15	

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
02	Laboratory and field tests to determine the influence of trace elements on the kinds of algae which attain dominance in ponds and streams.	4	11/73	4/74	AG ^{1/}	Urge grantee to complete final report.	P.O.

17 REMARKS: Completion date for Task 02 was extended to November 30, 1973.

1/Final report has not been received.

REASON FOR DELAY CODE

FUNDING -- F

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ADMINISTRATIVE - A

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AP - Personnel Problems (specify)

STAFFING - OTHER -- D/O

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1BB392	2 Roap No. 21AZU	3. Roap Title Industrial Water Control Technology-Elec. Power Gen.	4 Date 12/19/73	5. Page No --- of ---
6. Total Tasks in Roaps 30	7 No Tasks Completed 16	8. No Active Tasks 8	9. No on Schedule 4	10 No Completed CFY 0
11 No. Delayed 4		12		
13. Program Chief Frank H. Rainwater		14 Roap Manager Alden Christianson		

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
19	Assess engineering and economic feasibility of backfitting various cooling devices to existing power plants	6	start 7/1/73	start 1/1/74	FF	Proceed ASAP -- Funds released	TPB
25	Predemonstration characterization SO ₂ scrubber water effluents and investigation of potential handling and treatment	4	start 9/1/73	start 1/1/74	FF	Proceed ASAP -- Funds released	TPB
21	Predemonstration engineering and economic assessment of once-through discharge modifications for adverse impact control	6	start 7/1/73	start 1/1/74	FF	Proceed ASAP -- Funds released	TPB
28	Demonstrate effluent control as a phase of recycle/reuse	6	start 9/1/73	start 3/1/74	AG	Pursue different (but related) demonstration project	TPB

17 REMARKS.

Task 28 -- Negotiations with potential contractor stopped because of management decisions evolving from equipment cost rise and questionable reliability.

REASON FOR DELAY CODE

FUNDING -- F

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FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

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AF - Equipment Failure
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STAFFING - OTHER -- D/O

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QUARTERLY ROAP STATUS REPORT

1 Program Element 1E1077	2 Roap No. 10AKC	3 Roap Title Effects of Selected Hazardous Synthetic Organics on the Ecology of the Coastal Environment	4 Date 1/7/74	5 Page No 1 of 1
6 Total Tasks in Roaps 40	7 No Tasks Completed 8	8 No Active Tasks 32	9 No on Schedule 29	10 No Completed CFY 0
11 No Delayed 3	12	13 Program Chief	14 Roap Manager Thomas W. Duke	15

16 TASKS DELAYED

Task No	Brief Description	months delayed	original target	proposed target	Reason	Recommended Action	By Whom
13	Spawning experiments with grass shrimp	8	7/1/73	3/1/74	DA	Extension of task	Branch Chief
23	Effects of DDT, PCB, and dieldrin on oysters	8	10/30/73	6/30/74	AO	Recommend extension of task	Laboratory Director
18	Effects of pesticides on crustacean	3	6/30/74	9/30/74	AD, AF, AP	Equipment is being repaired and request permission to hire personnel	Branch Chief

17. REMARKS

Task 18: Loss of temporary assistant, delays in receiving equipment, plus down-time will delay this project.

Task 23: Target date was delayed to maximize information from the study, e.g. to change from a one-year to a 2-year study.

A progress report has been submitted on first year's study.

REASON FOR DELAY CODE

FUNDING -- F

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FL - Funds Late (Example delay in advice of allowance)

ADMINISTRATIVE - A

AD - Equipment Delays
AF - Equipment Failure
AG - Grant/Contract Delay (specify)
AO - Other Administrative (specify)
AP - Personnel Problems (specify)
Loss of temporary help

STAFFING - OTHER -- D/O

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O - Other (specify)

PART IV

RESEARCH PUBLICATIONS

QUARTERLY ROAP STATUS REPORT

RESEARCH PUBLICATIONS

Program Chief: L. C. Raniere

Program Element: 1AA006

Date: 1/10/74

ROAP	TASK	Publication Title	How Published (Give name of series or journal, etc., Number, and Date)	Portion of Task Completed (Check)		
				ALL	PART	NONE
21ALR	10	Effects of Ozone on Soybean Nodules	Jour. of Environmental Quality Vol. 2, No. 3 Jul-Sept 1973		X	
21ALR	10	Foliar Sensitivity of Soybeans to Ozone as Related to Several Leaf Parameters	Environ. Pollution (4) 1973		X	
21ALR	9	Response of Pinto Bean and Tobacco to Ozone as Conditioned by Light Intensity and/or Humidity	Environ. Science & Technology Vol. 7, No. 9 Sept 1973		X	
21ALR	10	Ozone Alteration of Nitrate Reduction in Soybean	Physiol. Plan. Vol. 29 1973		X	
21ALR	8	Foliar Injury Responses of Eleven Plant Species to Ozone/Sulfur Dioxide Mixtures	Atmospheric Environment, Pergamon Press. Vol. 7 1973		X	
21ALR	10	How Chronic Ozone or Sulfur Dioxide Exposure, or Both, Effect the Early Vegetative Growth of Soybean	Canadian Journal of Plant Science, Vol. 53, P. 875-879, 1973		X	

QUARTERLY ROAP STATUS REPORT

RESEARCH PUBLICATIONS

Program Chief: A.S. Lefohn

Program Element: 1AA006

Date: 9/30/73

ROAP	TASK	Publication Title	How Published (Give name of series or journal, etc., Number, and Date)	Portion of Task Completed (Check)		
				ALL	PART	NONE
21 ALU	19	Nitrogen Fixation on Granite Outcrop Pioneer Ecosystems	The Bryologist, Vol. 76, No.1, 1973		X	
21 ALU	16	Lead Pollution: Records in Southern California Coastal Sediments	Science, Vol. 181, 10 Aug 73		X	
21 ALU	Term. FY-72	Orovada, Nevada Basin Environmental Study	Final Report of EPA Grant #AP0 0944 July 1973	X		

QUARTERLY ROAP STATUS REPORT

RESEARCH PUBLICATIONS

Program Chief: Richard W. Latimer

Program Element: 1BA021

Date: 01/08/74

ROAP	TASK	Publication Title	How Published (Give name of series or journal, etc., Number, and Date)	Portion of Task Completed (Check)		
				ALL	PART	NONE
21ARX	04	Water Quality of Caribou-Poker Creeks Research Watershed, Alaska	AERL Working Paper Series, #24, December 1973		X	
21ARX	01	Design Considerations for Sampling Programs in Remote Areas	AERL Working Paper Series, #23, November 1973. Paper presented at "Symposium on Water Quality Para- meters--Selection, Measurement and Monitoring," Burlington, Ontario, Canada			X

QUARTERLY ROAP STATUS REPORT

RESEARCH PUBLICATIONS

Program Chief: Dr. Eric D. Schneider

Program Element: 1BA022

Date: 1/17/74

ROAP	TASK	Publication Title	How Published (Give name of series or journal, etc., Number, and Date)	Portion of Task Completed (Check)		
				ALL	PART	NONE
16AAV	04	Interaction between Marine Organisms and Oil Pollution	Ecological Research Series, EPA-R3- 73-042 May 1973	X		
16AAV	03	Using Artemia to assay oil disper- sant toxicities	Journal Water Pollution Control Federation, Washington, DC Nov 1973		X	

QUARTERLY ROAP STATUS REPORT

RESEARCH PUBLICATIONS

Program Chief: Richard W. Latimer

Program Element: 1BA022

Date: 01/08/74

ROAP	TASK	Publication Title	How Published (Give name of series or journal, etc., Number, and Date)	Portion of Task Completed (Check)		
				ALL	PART	NONE
21ARZ	02	Effects of Crude Oil and Some of its Components on Young Coho Sockeye Salmon	Ecological Research Series EPA-660/3-73-018, November 1973	X		

QUARTERLY ROAP STATUS REPORT

RESEARCH PUBLICATIONS

Program Chief: Sanders

Program Element: IBA023

Date: 10 January 74

ROAP	TASK	Publication Title	How Published (Give name of series or journal, etc., Number, and Date)	Portion of Task Completed (Check)		
				ALL	PART	NONE
31031	QQG(FY72)	Chemistry of Methylmercurials in Aqueous Solution	Chemosphere No. 4, pp.147-152 (1973)		x	
310301	QQG(FY72)	Chemical and Photochemical Fate of Organomercurials in Aquatic Systems	EPA Research Report (EPA-660/3-73-012) September (1973)	x		
310301	QPL(FY72)	Effects of Protozoa on the Fate of Particulate Carbon	EPA Research Report (EPA-660/3-73-007) August (1973)	x		
21A IL	06	Phytoplankton Population Changes and Nutrient Fluctuations in a Simple Aquatic Ecosystem Model	Modeling the Eutrophication Process, Workshop Proceedings, Utah State University, Logan, Utah, PRW6136-1, pp. 131-138, November 1973.		x	
21AIM	13	A Physical Model for Simulation of Acquatic Ecosystems	Modeling the Eutrophication Process, Workshop Proceedings, Utah State University, Logan, Utah, PRW6136-1, pp. 159-170, November 1973		x	

QUARTERLY ROAP STATUS REPORT

RESEARCH PUBLICATIONS

Program Chief: D. J. Baumgartner

Program Element: 1BA025

Date: 1/4/74

ROAP	TASK	Publication Title	How Published (Give name of series or journal, etc., Number, and Date)	Portion of Task Completed (Check)		
				ALL	PART	NONE
21AIS	34	Effects of algal extracellular products on marine bacteria.	Biological Bulletin 145(2): 424, October 1973, by W. Ball and R. Mitchell		X	
21AIS	38	Methylmercury in estuarine sediments.	Nature 245(0085): 256 (1973) by W. Anders and Robert W. Harris		X	
21AIT	02	Dispersion in hydrologic and coastal environments.	Ecol. Res. Ser. EPA-660/3-73-010 August 1973	X		
21AIV	01	Some pathways, fate, and disposition on marine waters.	EPA 660/3-73-013, Ecol. Res. Ser. Milton H. Feldman	X		
	16070EKZ	Anaerobic metabolism in Lake Washington sediments	Limnology and Oceanography 18(4): 611 (1973) by M. Pamatmat and A. M. Bhagwat	X		

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RESEARCH PUBLICATIONS

Program Chief: Donaldson

Program Element: IBA027

Date: 10 January 1974

ROAP	TASK	Publication Title	How Published (Give name of series or journal, etc., Number, and Date)	Portion of Task Completed (Check)		
				ALL	PART	NONE
Tech Assist.	10	Environmental Applications of Adv. Instrumental Analyses: Assistance Projects, FY'72	EPA Research Report (EPA-660/2-73-013) September 1973		x	
16ADN	37	Current Practice in GC/MS Analysis of Organics in Water	EPA Research Report (R2-73-277) August 1973		x	
16ADN	31	Evaluation of Flame Emission Determination of Phosphorus in Water	EPA Research Report (EPA 660/2-73-007)	x		

QUARTERLY ROAP STATUS REPORT

RESEARCH PUBLICATIONS

Program Chief: Thomas E. Maloney *Tem* Program Element: 1BA031

Date: 1/2/74

ROAP	TASK	Publication Title	How Published (Give name of series or journal, etc., Number, and Date)	Portion of Task Completed (Check)		
				ALL	PART	NONE
Prior to System	ROAP	Biological Investigations of Lake Wingra	Ecological Research Series, EPA-R3-73-044, August 1973			
21 AIZ	06	Development of a Selective Algaecide to Control Nuisance Algal Growth	Ecological Research Series, EPA-660/3-73-006, August 1973		X	
21 AIZ	03	Weed Harvest and Lake Nutrient Dynamics	Ecological Research Series, EPA-660/3-73-001, July 1973	X		

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RESEARCH PUBLICATIONS

Program Chief: H.P. Nicholson

Program Element: 1BB036

Date: 10 January 74

ROAP	TASK	Publication Title	How Published (Give name of series or journal, etc., Number, and Date)	Portion of Task Completed (Check)		
				ALL	PART	NONE
		None				

QUARTERLY ROAP STATUS REPORT

RESEARCH PUBLICATIONS

Program Chief: Dr. H. P. Nicholson

Program Element: 1BB039

Date: 10 January 1974

ROAP	TASK	Publication Title	How Published (Give name of series or journal, etc., Number, and Date)	Portion of Task Completed (Check)		
				ALL	PART	NONE
21AYP	18	Competitive Hydration of Quinazoline at the Montmorillonite - Water Interface	Science, Vol. 82, No. 4114, pages 819-821, 1973.		X	
21AYP	18	Optical Absorption Spectra of Clay Minerals	Clays and Clay Minerals, Vol. 21, pages 59-70, 1973		X	
21AYP	53	Philosophy and Approach to Management of Pesticides Runoff by Mathematical Modeling Techniques	Economic Commission for Europe, Committee on Water Problems, Seminar on the Pollution of Waters by Agriculture and Forestry. Water/Sem.1/R.12/Com.1, Vienna, Austria, October 15-20, 1973.		X	

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RESEARCH PUBLICATIONS

Program Chief: Curtis C. Harlin, Jr.

CCF

Program Element: 1BB045

Date: 1-8-74

ROAP	TASK	Publication Title	How Published (Give name of series or journal, etc., Number, and Date)	Portion of Task Completed (Check)		
				ALL	PART	NONE
*		"Tertiary Treatment with a Controlled Ecological System"	EPA-660/2-73-022	X		
*		"Hypolimnion Aeration with Commercial Oxygen, Volume I Dynamics of Bubble Plumes"	EPA-660/2-73-025a	X		
*		"Hypolimnion Aeration with Commercial Oxygen, Volume II Bubble Plume Gas Transfer"	EPA-660/2-73-025b	X		
*Carryover						

QUARTERLY ROAP STATUS REPORT

RESEARCH PUBLICATIONS

Program Chief: Frank H. Rainwater

Program Element: 1BB392

Date: 12/19/73

ROAP	TASK	Publication Title	How Published (Give name of series or journal, etc., Number, and Date)	Portion of Task Completed (Check)		
				ALL	PART	NONE
16ACQ (1B2036)	11	Technical and Economic Evaluation of Cooling System Blowdown Control Techniques	GPO-Environmental Protection Technology X Series - EPA-660/2-73-026 - October 73			

QUARTERLY ROAP STATUS REPORT

RESEARCH PUBLICATIONS

Program Chief: _____

Program Element: 1E1077

Date: 1/7/74

ROAP	TASK	Publication Title	How Published (Give name of series or journal, etc., Number, and Date)	Portion of Task Completed (Check)		
				ALL	PART	NONE
10AKC	09	Composition of <u>Thalassia testudinum</u> and <u>Ruppia maritima</u> . Gerald E. Walsh and Thomas E. Grow	Quarterly Journal of the Florida Academy of Sciences, 35(2): 97-108, 1973.		X	