AQRB-83-M-005

1983/84 Integrated Programs

Individual Project

Mid-Term Review

By

E.E. Wilson

AQRB-83-M-005

1983/84 INTEGRATED PROGRAMS

Individual Project Mid-Term Review

By

E.E. Wilson

October 1983

Introduction

The mid-term reviews of the 1983-84 AES LRTAP and Toxic Chemicals programs were held October 6 and 7, 1983, respectively. Current year activities were reviewed, by a management committee, with respect to progress achieved, milestones (on schedule or delayed) and resources commitments (insufficient or lapsing funds). Although intended to be fundamentally a management review exercise, the mid-term review does provide overall program evaluation and direction by addressing the following questions:

1. Do we have the best program in the atmospheric sector this fiscal year?

2. What have we learned that can help us plan for the future?

The individual projects were presented by the responsible leaders according to the agendas in Appendix I.

Detailed reviews for each project are given in Appendices II (LRTAP) and III (Toxics).

This document is intended for the use of division chiefs and the project leaders along with the companion document "1983/84 Integrated Programs Mid-Term Overview" by James W.S. Young and E.E. Wilson.

APPENDIX I

AES LRTAP Scientific Program

MID-TERM REVIEW

Thursday, October 6, 1983

SCHEDULE OF PRESENTATIONS

Morning Session: 9 a.m. - 12 Noon

9:00 - 9:10	Opening Remarks		
	Modelling Component		
9:10 - 9:20	Lagrangian Model	(20026)	Olson
9:20 - 9:30	Control Stratey Model	(80207)	Young
9:30 - 9:40	Eulerian Model	(80252)	Christie
9:40 - 9:50	Flow over Complex Terrain	(80206)	Walmsley
9:50 - 10:00	Snowmelt Shock Potential	(20025)	Louie
10 a.m.	COFFEE		
10:30 - 10:40	Advanced Chemistry	(80209)	Bottenheim
10:40 - 10:50	PAN in the Environment	(80210)	Bottenheim
	Monitoring Component		
10:50 - 11:00	CAPMoN Operation (T, C & N)	(20027)	Still
11:00 - 11:10	CAPMoN Operation (A & P)	(80208)	Still
11:10 - 11:20	CAPMoN Upgrade	(80257)	Still
11:20 - 11:30	Oxidant Climatology	(20030)	Mickle/Mukammal
	Deposition Reduction Assessment Component		
11:30 - 11:40	CAPMoN (A & P) Analysis	(20031)	Sirois/Barrie
11:40 - 11:50	CAPMoN (N) Data Analysis	(20033)	Barrie
NOON	LUNCH		

AES LRTAP Scientific Program

MID-TERM REVIEW

Thursday, October 6, 1983

SCHEDULE OF PRESENTATIONS

Afternoon Session: 12:30 p.m. - 4:30 p.m.

Lab and Field Studies Component

12:30 - 12:40	CAPMoN Analysis	(80201)	Wiebe
12:40 - 12:50	Aerosol Acidity	(80202)	Wiebe
12:50 - 1:00	Atmospheric Nit. Cpds.	(80203)	Wiebe/Anlauf
1:00 - 1:10	Cloud Chemistry Research	(80204)	Wiebe/Anlauf
1:10 - 1:20	CAPMoN Trajectory Analysis	(20028)	Anlauf
1:20 - 1:30	Nitric Acid Monitor	(80250)	Anlauf
1:30 - 1:40	Oxidant Coordination	(20034)	Anlauf
1:40 - 1:50	Cloud Chemistry Field Proj.	(80255)	Summers/Isaacs
1:50 - 2:00	CAPTEX	(80253)	Summers
2:00 - 2:10	Precipitation Chemistry	(80254)	McBean
2:10 - 2:20	Dry Deposition Project	(80256)	den Hartog/Neumann

Coordination Component

2:20 - 2:30	LRTAP Scientific Liaison	(80258)	Whelpdale
2:30 - 2:40	WATOX	(20032)	Whelpdale
2:40 - 3:00	Regional Studies		FSD Representative
3 p.m.	COFFEE		
3:30 - 4:30	Program Summary		

AES Toxic Chemicals Scientific Program

MID-TERM REVIEW

Friday, October 7, 1983

SCHEDULE OF PRESENTATIONS

9:00 - 9:10	Opening Remarks		
	Atmospheric Pathways and Characteristics		
9:10 - 9:20	Air-Water Partitioning	(20042)	Schroeder
9:20 - 9:30	Chemical Speciation	(20043)	Schroeder
9:30 - 9:40	Scientific Program Coord.	(20046)	Schroeder
9:40 - 9:50	Pathways - GLWQP	(20053)	Schroeder
9:50 - 10:00	Toxics Model Development	(20045)	Matthias
10 a.m.	COFFEE		
	Sampling and Analytical Methods Development		
10:20 - 10:30	Pilot Station Operation	(20041)	Lane
10:30 - 10:40	Organic Desorption	(20040)	Lane
10:40 - 10:50	GCMS Laboratory	(20039)	Lane/Sanderson
	Atmospheric - Environmental Measurements		
10:50 - 11:00	Forest Canopy Turbulence	(20036)	Mickle
11:00 - 11:10	Remote Sensing of O_3 and SO_2	(20037)	Hoff
11:10 - 11:20	Organic Dispersion	(20038)	Hoff
11:20 - 11:30	Deposition to Bio. Receptors	(20035)	Phillips/Puckett
	GLWQP		
11:30 - 11:40	Organics Deposition	(20044)	Kerman
11:40 - 11:50	St. Lawrence Valley	(20019)	Taylor
11:50 - 12:00	Toxaphene Model	(20054)	Voldner
12:00 - 12:10	Nutrients & Trace	(20055)	Voldner
12:10 - 12:30	Summary		

APPENDIX II

AES LRTAP Program

1983-84 Mid Term Review

Project #: 20025

Project Title: Snowmelt Shock Potential

Progress: U.S. W.S. snowmelt model has been coded and implemented on AS/6. This model and AQRB model algorithm used for snowmelt shock potential are being tested on a number of small basins near Dorset. Planning completed for construction of snowmelt plot.

Milestones: 1., 2. - completed; 3., 4., 5. - underway

Problems:

- Field experiment depends on snow (if no snow, no data and project must continue later).
- Peak snowmelt period occurs at end of fiscal year so data will not be completed unitl next year.

Resources: Only 4.0 K O&M required (Capital to be converted to O&M).

Recommendations:

- Project to continue
- All funding is in O&M (although BIBS does not record this).
- Chemical analysis of snowmelt be carried out.

AES LRTAP Program

1983-84 Mid Term Review

Project #:	20026
Project Title:	Lagrangian Model
Progress:	Trajectories provided to various users. Concentration - Deposition Model development continuing. 1980 model evaluation to take place during latter half of fiscal year.
Milestones:	1. - 3. ongoing; 4. on schedule
Problems:	Nil
Resources:	On target
Recommendations:	Continue project

AES LRTAP Program

1983-84 Mid Term Review

Project #:	20027
Project Title:	CAPMoN Operation (T, C and N)
Progress:	Operation and maintenance of networks ongoing. Dr. Shaw doing work on calibration of sunphotometers.
Milestones:	1., 2., 3. underway; 4. visit to sites will take place in Nov.
Problems:	Nil
Resources:	Capital is overbudget. 30 K O&M still required for CO_2 analyses (Victoria), sunphotometer filters, data publications.
Recommendations:	The northern (N) and CO_2 (C) networks fit under LRTAP. Turbidity (T) does not and will be under another activity next fiscal year.

AES LRTAP Program

1983-84 Mid Term Review

Project #:	20028
Project Title:	CAPMoN Trajectory Analysis
Progress:	Data transfer of trajectory coordinates to archiving systems proceeding on a remote basis.
Milestones:	1., 2., 3. - delayed; Data transfer of trajectory coordinates continuing.
Problems:	Project is delayed to complete work on Nanticoke and North Bay materials. Technical/computer assistance required. (A. Sirois assigned to other work.)
Resources:	Not all utilized on this project.
Recommendations:	• 3.3 O&M to be re-allocated. • As one of the highest ranked projects during scientific review of proposals, solution must be found to complete project.

AES LRTAP Program

1983-84 Mid Term Review

Project #: 20029

Project Title: Regional LRTAP Projects

Progress:

MAES: On schedule. AQRB to review results. Two additional projects. (No resources from HQTS required.) Overlap project 20029-2.

QAES: 1981 pH data analysis may not be done due to personnel changes in region. Rest on schedule.

OAES: Introduced one project (no resources requested.

CAES: Ongoing operation of Cree Lake APN.

WAES: Project #20029-10 delayed awaiting collector
Project #20029-11 awaiting chemical analysis
Project #20029-12 deferred due to reassignment of priorities to three other (new) projects
Project #20029-13 ongoing

PAES: Project #20029-14 on schedule

Resources:

Certain projects have been discontinued and resources applied to new activities (Quebec, Western Regions).
Total 31.0 K O&M for LRTAP research in Regions.
(26.2K on BIBS. Additional 4.8 K from Contingency).

MAES: 0 K. To advise re travel funds (Workshop, etc.)

QAES: 1 K lapse

QAES: 1 K O&M lapse (20029-7)

CAES: 3 K O&M lapse (20029-10)

WAES: 20029-11: 1.5 K available
20029-12: 5.2 K to three new projects.

Recommendations:

- New proposals being carried out in Regions be scientifically reviewed at upcoming Workshop.
- Regions input quarterly status reports directly on BIBS using AS/6
- AQRB obtain 1981 Quebec Region pH data
- AFWC provide CAPMoN resources breakout per Region (AFWC provided listing of resources allocation to Regions).

AES LRTAP Program

1983-84 Mid Term Review

Project #: 20030

Project Title: Oxidant Climatology

Progress: B. Mickle to return October 25, 1983. Some field data is available.

Milestones:

Problems:

Resources: Possibility of an $8.5 K O&M lapse

Recommendations:

- Dr. E. Mukammal to present seminar on progress at a later date.
- ARQD to confirm resources available.

AES LRTAP Program

1983-84 Mid Term Review

Project #: 20031

Project Title: CAPMoN (A&P) Analysis

Progress: Routine analysis program for CAPMoN data installed. 1981 CAPMoN report being printed. Two papers on analysis of precipitation chemistry data in preparation.

Milestones: 1. completed; 2. in printing; 3. in progress; 4. not much done; 5. completed

Problems: Multivariate analysis dropped due to dry deposition project to which A. Sirois has been seconded.

Resources: All funds will be spent.

Recommendations: Project to continue with reduced output.

AES LRTAP Program

1983-84 Mid Term Review

Project #:	20032
Project Title:	WATOX
Progress:	Advection climatology for east coast of North America completed. Paper on meteorological work submitted to journal. Chemistry work reported at Oxford and paper in preparation.
Milestones:	On schedule
Problems:	Nil
Resources:	To be utilized
Recommendations:	0.1 PY (Kovalick) to be reviewed for project.

AES LRTAP Program

1983-84 Mid Term Review

Project #:	20033
Project Title:	CAPMoN (N) Data Analysis
Progress:	Milestones to begin in November. Spatial field and temporal trends and variability need to be defined in this project.
Milestones:	To begin in November.
Problems:	Nil
Resources:	All resources required.
Recommendations:	.4 PY (Kovalick) to be reviewed for project.

AES LRTAP Program

1983-84 Mid Term Review

Project #:	20034
Project Title:	Oxidant Coordination
Progress:	Coordination of Oxidant Program with EPS and provincial agencies continue but appear to be stalemated.
Milestones:	On going
Problems:	Lack of clear definition of AES role in Oxidant Program.
Resources:	Needed for travel re cloud chemistry and atmospheric nitrogen projects.
Recommendations:	• Funds to be transferred to cloud chemistry projects. ($2.9 K O&M) • Report for Y. Chung on Stratospheric Injection required • Project to continue.

AES LRTAP Program

1983-84 Mid Term Review

Project #:	80201
Project Title:	CAPMoN Analysis
Progress:	On-going analyses. At least two complete years of data sets are needed to produce statistically significant results.
Milestones:	1., 2. in progress
Problems:	Short 1 PY (Technical) since the EG-6 is vacant.
Resources:	On target
Recommendations:	Project to continue in 84-85 pending manpower resources.

AES LRTAP Program

1983-84 Mid Term Review

Project #:	80202
Project Title:	Aerosol Acidity
Progress:	Aerosol can be changed through degradation. Analysis of samples to be conducted on day collected. Experimental results from winter field collection are expected to be different.
Milestones:	1. completed; 2. field evaluation completed; field study to take place Jan. - Feb.; 3., 4. on-going
Problems:	Nil
Resources:	Depleted. Remainder of project will be carried out through cloud chemistry budget.
Recommendations:	• Field work to be integrated with 80204 • To continue.

AES LRTAP Program

1983-84 Mid Term Review

Project #:	80203
Project Title:	Atmospheric Nitrogen Compounds
Progress:	Field program completed. Paper written, sent to Environmental Research and Technology.
Milestones:	1., 2., 3. completed; 4. discontinued.
Problems:	Too many technical problems with coating on denuder tubes.
Resources:	On target
Recommendations:	• Data reduction and reporting discontinued due to technical problems. • Diode laser system to be used in North Bay Cloud Chemistry Study in Jan. - Feb. 1984 (see project #80250) as part of this project. • Circulate papers

AES LRTAP Program

1983-84 Mid Term Review

Project #:	80204
Project Title:	Cloud Chemistry Research
Progress:	Planning of field study continues. Regional ground station set up in cooperation with BNL (their instruments). Flight plans being organized for winter conditions.
Milestones:	1. ongoing; 2. advanced to Jan./Feb. 1984; 3., 4. by April
Problems:	Nil
Resources:	Request 6K O&M
Recommendations:	- Objective/description portion of project to be rewritten - Project to be integrated with other work (CAPMoN, modelling). - Quality assurance program in place

AES LRTAP Program

1983-84 Mid Term Review

Project #: 80205

Project Title: Director's Contingency

Progress:
- fund useful to smooth out poor forecasts, extra requirements and funding cuts

Milestones: On schedule

Problems: Nil

Resources: On target

Recommendations:
- contingency be maintained next year

AES LRTAP Program

1983-84 Mid Term Review

Project #:	80206
Project Title:	Flow over Complex Terrain
Progress:	- Lecture in Sweden; report to U.S. Navy - Presented to EUROMET conference in Delphi. - Work will be conducted on developing a model for stratified flow and on conversion to CRAY computer
Milestones:	1., 2. - on schedule; 3., 4., 5. April milestones
Problems:	Relationship to LRTAP
Resources:	On target ($700 balance to be used for CMC user's committee meetings)
Recommendations:	To continue under LRTAP funding. This project has application in long-term to short-range models (i.e., to answer what happerns close to the source in grid resolution).

AES LRTAP Program

1983-84 Mid Term Review

Project #: 80207

Project Title: Control Strategy Model

Progress: Work is being carried out jointly with Rod Shaw. An option on the U.S. proposal will bring loadings close to target within model uncertainties. Paper on optimization routine for eastern NA presented in Paris is being rewritten for a journal.

Milestones: 1. - 3. - on target; 4. - work delayed until fourth quarter (milestone may not be met this year)

Problems:

Resources: Under budget 1.5 K O&M

Recommendations:

- Circulate paper.
- Continue project.

AES LRTAP Program

1983-84 Mid Term Review

Project #: 80208

Project Title: CAPMoN Operation (A & P)

Progress: Operation and maintenance on-going

Milestones: 1. in printing; 2. prel. analyses completed; delayed to Nov.; 3., 4. ongoing; 5. report written, sent for comments to NADP

Problems:

- 8 stations do not have contracts (depends on resource confirmation
- shipping
- laboratory analyses

Resources: 5.0 K O&M may lapse (To be reviewed in 3rd quarter).

Recommendations:

- ARQD to write letter of understanding re funding for AFDG.
- Addition resources to be investigated.
- Continue project.

AES LRTAP Program

1983-84 Mid Term Review

Project #: 80209

Project Title: Advanced Chemistry

Progress: Simple version of non-linear chemistry has been run re NO_x modelling. Initial results indicate this model does not do worse than sulphur modelling. Beneficial to include PAN.

Milestones: 1. OK; 2. underway, no report yet; 3. delayed due to manpower shortage

Problems:

- Manpower required to work on Box Model
- Improved NO_x inventory required for Canada
- Four APN sites provide insufficient data to test model

Resources: CS required for 2-3 weeks to put box model on computer; more time required for testing.

Recommendations:

- High priority is given to Box Model. Resources will be provided.
- Request 0.1 PY (CS).

AES LRTAP Program

1983-84 Mid Term Review

Project #: 80210

Project Title: PAN in the Environment

Progress: Project has been focused on developing a long-term data set. Will be going to APN sites for all forms of data. Initial results suggest 20-30% of oxidized NO_x is PAN. Monitoring at Longwoods will continue to October then moved to another site).

Milestones: 1., 3., 4., 5. ongoing; 2. not started yet. All milestones to be completed by April.

Problems:
- Capital required for integrator.
- Funding to take part in North Bay study

Resources:
- 10 K O&M to lapse
- Proposal put forward for 10 K (UP) for Cloud Chemistry study in January.
- Require 4-5 K CAP for integrator

Recommendations: Funding to be considered.

AES LRTAP Program

1983-84 Mid Term Review

Project #:	80250
Project Title:	Nitric Acid Monitor (UP)
Progress:	Construction incomplete (Delivery date October)
Milestones:	1., 2. delayed; awaiting replacement for laser crystals
Problems:	Nil
Resources:	Last bill September. Hold back until contract is completed.
Recommendations:	Diode laser system to be used in North Bay Cloud Chemistry field study in January-February 1984 (see project #80203)

AES LRTAP Program

1983-84 Mid Term Review

Project #:	80251
Project Title:	Integrated Programs Coordination
Progress:	Coordination functions ongoing
Milestones:	Workshop delayed. Otherwise on schedule
Problems:	BIBS to be updated directly by Division Chiefs, FSD Regions before due date for quarterly reports.
Resources:	Some travel funds may lapse
Recommendations:	Determine resources requirements to April

AES LRTAP Program

1983-84 Mid Term Review

Project #:	80252
Project Title:	Eulerian Model
Progress:	Management system complete. Wind field model almost complete. Advections and dry chemistry modules being tested.
Milestones:	1. OK; 2., 3. not completed but in progress; 4., 5. work in progress
Problems:	Disc drives to be bought this year. (Capital required from Capital Replacement Program.)
Resources:	AES costs on target. (Negative Balance) OME has a cost overrun of ~ 70 K
Recommendations:	• Emissions area is weak and requires investigation. • Improved program integration is required between AES/OME/contractors with respect to scientific exchange between modellers and atmospheric chemists. • A full day meeting of all components is to be planned.

AES LRTAP Program

1983-84 Mid Term Review

Project #:	80253
Project Title:	CAPTEX
Progress:	Experiment underway. MOU on CAPTEX negotiated with U.S. and signed on August 23, 1983. Two tracer releases made (Sept. 19, 25) Four more weeks to go (further continuation depends on U.S.).
Milestones:	1., 2. completed; 3. continuing; 4., 5. on schedule
Problems:	- pilot not available for first experiment - surface samplier deficiencies - U.S. pays extra for technicians, etc. for additional time (ours on standby)
Resources:	2-3 K deficit anticipated. No major expenses contemplated.
Recommendations:	10 K to be returned to contingency

AES LRTAP Program

1983-84 Mid Term Review

Project #:	80254
Project Title:	Precipitation Chemistry - Pacific Coast
Progress:	Rain samples collected (6 to date). Collection of snow samples from Mt. Washington to start in December. Scientific analyses of data collected completed to date.
Milestones:	1. completed; 2., 3. underway; 4. completed
Problems:	Nil
Resources:	On target
Recommendations:	• Project to continue • Integration with Pacific Region project to be investigated.

AES LRTAP Program

1983-84 Mid Term Review

Project #:	80255
Project Title:	Cloud Chemistry Field Project
Progress:	Planning for winter study underway including aircraft instrumentation. Analyses and reporting of previous projects have been carried out (one journal paper and three conference papers).
Milestones:	1. to 4. completed; 5. field study to take place in January to February 1984 at North Bay.
Problems:	Anticipate problem in field with respect to coordination of meeting objective and spending.
Resources:	Forecast 20 K deficit in O&M at present, 35 K deficit in Capital
Recommendations:	- Explore ways to resolve field coordination (possibly assign someone to field study). - Greater integration of field study with other related LRTAP projects necessary.

AES LRTAP Program

1983-84 Mid Term Review

Project #: 80256

Project Title: Dry Deposition

Progress: Field projects have been carried out at Elora. A routine monitoring site has been set up. Instrument and technique development continues.

Milestones: 1. completed; 2., 3. ongoing

Problems: Require full-time employee (technical- 1 PY)

Resources: All resources required to continue project)

Recommendations:

- High priority area
- Integration with work being conducted by modellers required (incl. Eulerian)
- Program to answer workshop Recommendations
- Technical assistance will be explored by QMC

AES LRTAP Program

1983-84 Mid Term Review

Project #:	80257
Project Title:	CAPMoN Upgrade
Progress:	Awaiting response from FSD for evaluation of CAPMoN sites in west and implementation of CAPMoN in east.
Milestones:	1. OK; 2., 3., 4., awaiting Regional response. Slight delay in progam.
Problems:	PY problem. MT required with chemical experience to work independent of M. Still on the quality assurance program.
Resources:	Capital all spent. O&M required for supplies to implement CAPMoN stations in Western Canada (cables, cement peers, etc.)
Recommendations:	- Quality assurance program to begin next year pending resources - PY problem to be investigated. (Request 0.5 PY for QA/QC).

AES LRTAP Program

1983-84 Mid Term Review

Project #:	80258
Project Title:	LRTAP Scientific Liaison
Progress:	Contact has been made with regions on programs. Takes part as chairman of RMCC subgroup. Interaction with NAPAP, NATO, WMO, EMEP, CACGP, and NAS
Milestones:	On schedule
Problems:	Nil
Resources:	To be utilized
Recommendations:	Project to continue. Resources as allocated.

APPENDIX III

AES Toxic Chemicals Program

1983-84 Mid Term Review

Project #: 20035

Project Title: Deposition to Biological Receptors

Progress: The main funding is directed to support PDF salary. Director will review progress separately.

Milestones: N/A

Problems: N/A

Resources: N/A

Recommendations:

(1) An informal review of all post doctorate work was suggested. Possibility of a seminar will be discussed further.

(2) Toxic chemical deposition to lichens will be investigated under new project #80302 (supported by toxfunds).

AES Toxic Chemicals Program

1983-84 Mid Term Review

Project #: 20036

Project Title: Forest Canopy Turbulence

Progress:

- field work done in cooperation with outside agencies
- 12 days (100 hours) of data obtained; towers installed;
- data undergoing processing by S. Derco.
- evaluation in progress by J. Pico (science subvention)

presentation (Raleigh, Va.); seminar planned (Nov.)

Milestones: 1. Completed; 2. On track.

Problems: Nil

Resources: Satisfactory

Recommendations:

(1) Project not to be continued next year.

(2) To use expertise in deposition to forest canopies in LRTAP program.

AES Toxic Chemicals Program

1983-84 Mid Term Review

Project #: 20037

Project Title: Remote Sensing of O_3 and SO_2 (Pesticides?)

Progress: Evaluations of existing laser equipment for application to remote sensing of atmospheric pollutant species has been carried out and an appropriate system has been designed and ordered.

Preliminary evaluations of existing equipment provided detection limits for SO_2, O_3.

Milestones: On target

Problems: Nil

Resources:

- 27K CAP required for digitizer/spectrometer

Recommendations:

(1) This project will be removed from the toxic chemicals program.

(2) Cannot do pesticides program proposed for 1984. Capability is there, but will not be doing it.

AES Toxic Chemicals Program

1983-84 Mid Term Review

Project #:	20038
Project Title:	Organics Dispersion
Progress:	First 2 weeks of sampling done. Evidence of local sources of PCB in particulates.
Milestones:	On target
Problems:	Nil
Resources:	All resources on schedule and will be required.
Recommendations:	(1) Related projects to continue next year. (2) Consideration to be given to conducting various toxic chemical experiments in the Niagara River area.

AES Toxic Chemicals Program

1983-84 Mid Term Review

Project #: 20039

Project Title: GC-MS

Progress: On-going

Milestones: Continuous

Problems: Facilities inadequate for projected toxics program. Space problem.

Resources: Satisfactory

Recommendations: (1) Necessary to expand on "lab facilities" deficiencies: describe space, personnel, equipment requirements.

AES Toxic Chemicals Program

1983-84 Mid Term Review

Project #: 20040

Project Title: Organic Desorption

Progress: Desorption cavity designed. Requisitions for "continuous wave" microwave transmitter completed and with DSS.

Milestones: 1. O.K.; 2. delayed; 3. delayed; 4., 5. still on target

Problems: 6-8 weeks for delivery of equipment (January)

Resources: 2 K Materials and Supplies - O&M may lapse (to be reviewed at end of 3rd quarter)

Recommendations: To be continued next year.

AES Toxic Chemicals Program

1983-84 Mid Term Review

Project #:	20041
Project Title:	Pilot Station Operation
Progress:	Work on TSP took place April-June of review period and report prepared with recommendations. Need identified for further information on blank levels. Project will focus on this for rest of 83-84.
Milestones:	1., 2., 3. Completed 4. 5, delayed pending staff
Problems:	Require technical help (background: lab. tech., filter analysis.)
Resources:	3 K overtime available to project. 4.7 CAP to be transferred to contingency fund (Funds available through project 80301 (TCMP) for balance/table).
Recommendations:	Identify whether overtime utilization work will be useful for completion of milestones.

AES Toxic Chemicals Program

1983-84 Mid Term Review

Project #: 20042

Project Title: Air-Water Partitioning

Progress: Materials acquired. Lab investigations continue. Dr. D. Miller in process of preparing draft report (contract). B. Schroeder will prepare final paper (joint authorship).

Milestones: 1., 2. completed. 3. delayed
4. Field work from now to December
5. Final paper may be delayed slightly.

Problems: No major problems

Resources: Satisfactory

Recommendations: This was 1st priority project. It is doing well and should continue to be supported.

AES Toxic Chemicals Program

1983-84 Mid Term Review

Project #: 20043

Project Title: Chemical Speciation

Progress: Work undertaken on 6 substances: heavy metals - Cd, Pb, Ni, Vd; trace elements - As, Se.

Lit. search on 3 elements (Pb, Cd, Vd) indicates dearth of info.

Milestones: 1., 2. search complete for 3 substances, underway for others; 3. - 5. delayed

Problems: Funding half of original requested. Chemist working on project work competition.

Resources: Human: require specialized person to complete project (review, extraction)
Overtime: available for person working on project previously.

Recommendations:

- Med. priority; ranked 5 of 10 - to be completed.
- Suggest: (1) University student
  or (2) Overtime 1 day/week, if acceptable to individual.
- Scope reduced to funding received.

AES Toxic Chemicals Program

1983-84 Mid Term Review

Project #:	20044
Project Title:	Organics Deposition to Great Lakes
Progress:	(1) Equipment purchased; contract given to Barringer (2) May change approach. Project requires more time. Objective to be increased to include spring enrichment.
Milestones:	1. awaiting equipment; 2. delayed 3. initial formulation completed.
Problems:	Not much done on milestone #2. Required add. resources re analysis of foam in Niagara.
Resources:	Further 10 K CAP required for recorder; Additional 5K O&M required for contract Travel funds/Overtime fund committed to project required.
Recommendations:	Contract to continue bubble dissolution experiment on white caps; request to be prepared for GLWQP for additional funds.

AES Toxic Chemicals Program

1983-84 Mid Term Review

Project #: 20045

Project Title: Toxics Model Development

Progress: Project to begin in December 1983

Milestones: On target

Problems:

Resources:

Recommendations: Nil

AES Toxic Chemicals Program

1983-84 Mid Term Review

Project #: 20046

Project Title: Program Coord. - Scientific

Progress: On-going participation

Milestones: On target

Problems: Takes most of time (0.3 PY spent)

Resources: Largest part is travel funds. More may be required.

Recommendations: Some committee activity may be eliminated:

(1) GLWQP is necessary (funding is good); Regional representation is to be considered (ties in with Regional chemist)
(2) NHW/DOE to be reconsidered.
(3) TCMP - will not attend unless significant funds are released (position to be considered).
(4) Regional Chemists must be emphasized.

AES Toxic Chemicals Program

1983-84 Mid Term Review

Project #: 20053

Project Title: Pathways & Characteristics (GLWQP)

Progress: "Phase I" is underway (looking at stable substances first)

Milestones: 1., 2. on target; 3. development by end October;
4. initial evaluation early January
5. on target

Problems:

Resources: Needs more funds to examine physical/chemical properties of substance.

Recommendations: Extend objectives:
(i) describe wet/dry deposition
(ii) revolatolization

The latter will be considered.

AES Toxic Chemicals Program

1983-84 Mid Term Review

Project #:	20054
Project Title:	Toxaphene Model
Progress:	The objective is to estimate overall atmospheric input. Project slightly behind since PY filled in August rather than April.
Milestones:	On target
Problems:	Unable to obtain source inventory
Resources:	Satisfactory funding. Additional technical assistance required (see project #20055)
Recommendations:	Additional 0.4 PY requirement between two projects (#20054 and 20055) to be explored and resolved.

AES Toxic Chemicals Program

1983-84 Mid Term Review

Project #:	20055
Project Title:	Nutrient and Trace Elements Loading
Progress:	Goal of program is to develop dry deposition velocity fields for Great Lakes basin. Lit. survey completed.
Milestones:	1., 2. delayed; 3. OK pending human resources
Problems:	Require computational computer assistant to complete project.
Resources:	6.8 K O&M remaining
Recommendations:	(1) 0.4 PY requirement between two projects to be resolved. (2) Explore use of urban air concentrations (NAPS) for lead data. (3) Consider activity on NHW/DOE modelling sub-group and travel funds if necessary.

nospheric Environment Service
ormation Resource Centre
brary)

Service de l'environnement atmosphérique
Centre de documentation
(Bibliothèque)

Date Due			
BRODART, INC.	Cat. No. 23 233	Printed in U.S.A.	