MEMO

To: ICCR Coordinating Committee

From: John A. Paul, Chair
Milestone Tracking Subgroup

Subject: Milestone Tracking Group Report

Date: July 16, 1998

On Thursday, May 21, 1998, John Paul, chairman of the milestone tracking subgroup, spoke with ICCR EPA co-chair Fred Porter regarding the desire and need for an extensive update to the April Milestone Tracking Summary Tables for the Work Groups. Between the two of us we felt that, with minor additions, the April report could very well serve the July meeting. Fred agreed to meet with the Work Group EPA co-chairs to discuss this possibility.

In June, Fred met with the Work Group EPA co-chairs and decided that, with two exceptions, the April milestone tracking report remained appropriate. The two exceptions are the Testing and Monitoring Protocol Work Group and the Combustion Turbines Work Group. Each of these Work Groups submitted a supplement to the April Milestone Tracking Report. Attached to this memorandum is the April report with the two supplements. This will serve as the Milestone Tracking Report for the July meeting of the Coordinating Committee.

The Milestone Tracking Subgroup asks each Committee member to review the attached materials. Time will be provided on the agenda for the Committee to review and discuss the overall progress and milestones of the Work Groups. If, as you review these materials in preparation for this discussion, you have some question concerning a milestone or some aspect of the summarized information, please do not hesitate to contact the appropriate Work Group Stakeholder or EPA co-chair.

Finally, the Milestone Tracking Subgroup would again like to express its appreciation for the help and assistance provided by the EPA Work Group co-chairs in preparing the attached materials. We feel the attached tables are very helpful.

Milestone Tracking Group Members:

John Paul	Bob Morris	Steve Gerritson
Rich Anderson	Fred Porter	Miriam Lev-On

kam\N:\TTN\BOILERS\MILESTTR.WPD

ATTACHMENT A

SUBGROUP TRACKING SHEET

ICCR SUBGROUP TRACKING SHEET

GROUP/ (Number of members)	Subgroup Information				
	Name	Number of Members	Mission/Goal/Products	Timeline	Status
COORDINATING COMMITTEE (34)	ICCR Document	6	Review draft document outlining organizational structure and administrative procedures for ICCR Advisory Committee, recommend revisions to document, and incorporate changes adopted by the Coordinating Committee (CC)	10/95-5/97	Task Complete
	ICCR Budget	14	Review estimated budget and recommend revisions	1/97-3/97	Task Complete
	Information Collection Request (ICR)	17	Review ICR developed by EPA, consider information in ICCR inventory database and Work Group recommendations, and develop a revised ICR and sampling plan, and submit revised ICR to EPA as a CC recommendation	1/97-3/97	Task Complete
	Solid Waste Definition Process	8	Review issues associated w/solid waste under Section 129 of CAA, develop recommendations on: (1) Whether CC should proceed in developing a definition, and (2) If recommendation is to proceed, the process and procedure for how to proceed.	5/97-7/97	Task Complete
	Solid Waste Definition	10-12	Develop recommendations for the definition of solid waste for purposes of section 129. Report back to CC in September. Present recommendations to CC by November.	7/97-11/97	Task Complete
	Subgroup Tracking	6	Compile a list of subgroups within the ICCR, identify their mission, and the timeframe for achieving their mission	5/97-	Active
	Pollution Prevention (P2)	18	Research specific P2 techniques applicable to combustion sources within the scope of the ICCR and, based on this research, develop recommendations and guidance for consideration by the CC on how the source WG's might incorporate P2 into regulatory recommendations. The subgroup has formed 4 working teams: (1) input (fuel/waste management); (2) device operation (GCP); (3) operator training; and (4) output (energy management). **The subgroup presented recommendations regarding device operation (GCP) to the CC in February and requested an extension of its charter to develop recommendations in the remaining areas; the CC extended the subgroup's charter to April.**	11/97-**4**/98	Active

***Additions and significant changes are bolded.**

ICCR SUBGROUP TRACKING SHEET (CONTINUED)

GROUP/ (Number of members)	Subgroup Information				
	Name	Number of Members	Mission/Goal/Products	Timeline	Status
COORDINATING COMMITTEE (34) (Continued)	ICCR Source Category Survey/Inventory Database Update	EPA only	Update ICCR inventory database with additional source inventory data obtained from States, through EPA ICR, and revisions (additions, deletions, and modifications) recommended by Work Groups	Ongoing	Active
	ICCR Emission Database Update	EPA only	Update ICCR emission database with additional source test emission test data	Ongoing	Active
TESTING AND MONITORING (21)	Cost Model	2	Develop a cost model for Source Work Groups to provide consistent test plan development	1/97-7/97	Complete
	Evaluation of Formaldehyde Test Issues	2	Review and summarize knowledge of formaldehyde test method issues and their potential effects on the ICCR emissions database	1/97-7/97	Complete
	Coordination w/Work Groups	5	Act as a conduit for Work Group questions on testing, POMs, cost models, etc.	Ongoing	Active
	Guidance Documents (on Non-detects, QA/QC, and test methods)	8	Provide generic guidance on evaluating the emissions data, and screening process for adding additional data in the existing emissions database	1/97-9/97	Complete
			Provide recommendations to the Source Work Groups on potential HAPs to look for in future testing	1/97-7/97	
		2	**Provide guidance document "What is POM and how can it be tested and reported?"**	**2/98-7/98**	**Active**
	Compliance Methods	5	Provide guidance on future compliance methods	1/97-6/98	Active
	Monitoring	7	Provide guidance on potential monitoring options	11/97-9/98	Active
ECONOMICS (11)	None	Not Applicable	Not Applicable (NA)	NA	NA

***Additions and significant changes are bolded.**

ICCR SUBGROUP TRACKING SHEET (CONTINUED)

GROUP/ (Number of members)	Subgroup Information				
	Name	Number of Members	Mission/Goal/Products	Timeline	Status
IC ENGINES (23)	Emissions	18	Review emissions test data gathered in ICCR database	11/96-2/98	**Task Complete**
			Develop list of pollutants and corresponding test methods	11/96-10/97	Task Complete
			Develop a test plan for future IC engines emissions testing	11/96-11/97	Task Complete
	Diesel Ad-Hoc Group	4	Review the available options for selection of a diesel unit for testing and determine which unit should be selected for testing.	11/97-5/98	**Task Complete**
	Testing Ad-Hoc Group	7	Working on remaining issues related to emissions testing and coordinate with the EPA contractor for testing.	11/97-**11**/98	Active
	Other Fuels Ad-Hoc Group	2	Examine engines/fuels not covered by the test plan. Review the available population and emissions information on these engines and report back to the Emissions Subgroup on 1)adequacy of available data and 2) the need for additional emissions testing. In addition, will work with the Population Subgroup on these engines' preliminary MACT floor.	11/97-5/98	Active
	Above the Floor (formerly Next Steps) Ad-Hoc Group	9	Review issues needed to move from MACT floor and test plan to a MACT Standard. 4 items: 1) define preliminary subcategories from an emissions standpoint, 2) identify applicable control technologies, 3) gather cost information on controls, **and 4) develop model plants**	11/97-**8**/98	Active
	New Source MACT	3	Review issues related to developing a MACT standard for new sources.	9/97-**8**/98	Active
	Schedule	4	Review schedule and timeline of ICCR process, make sure group is on track.	**On-going**	Active
	Population and Structure Database	10	Review and enhance EPA population data for IC engines	11/96-2/98	Active
			Use data to determine subcategories, control devices, model plants, and MACT floor	11/96-**5**/98	
	Dioxin	6	Resolve the CC's concern about dioxin and mercury emissions from IC engines. Document findings.	7/97-11/97	Task Complete

***Additions and significant changes are bolded.**

ICCR SUBGROUP TRACKING SHEET (CONTINUED)

GROUP/ (Number of members)	Subgroup Information				
	Name	Number of Members	Mission/Goal/Products	Timeline	Status
TURBINES	Database Enhancement	4	QA and recommend changes to the inventory database, and summarize information in the database	3/97-**12**/98	Active
			Review emissions test data for new sources		
	Subcategory Analysis	NA	Identify potential subcategories, minimize applicable subcategories based on gathered information, and summarize the selected subcategories in a memorandum	3/97-11/97	Merged with Model Plants Task Group
	HAP Reduction Technologies	7	Identify good operating practices, and draft a memorandum	3/97-5/97	Active
			Investigate technologies for HAP prevention or reduction for new and existing sources, and provide a report.	3/97-**12**/98	
	HAP vs Criteria Pollutant	NA	Identify the relationship of HAPs vs. Criteria emissions, and document results	3/97-11/97	Completed work; any further analysis will be conducted by the MACT Floor Task Group
			Identify turbine factors which directly affect HAP emissions	8/97-11/97	
			Identify options for regulatory development	8/97-11/97	
	Testing and Monitoring	5	Identify potential HAPs emitted from turbines, and provide a list	3/97-11/97	**Task Complete**
			Draft testing protocol for HAP emissions and testing of control device efficiencies, and estimate testing budget needs	**4**/98	Active
			Recommend detection limits for HAPs as part of source testing	**2/98-4/98**	**Active**
	MACT Floor (Existing Sources)	7	Complete the MACT Floor analysis for existing sources	9/97-**4**/98	Active
	Model Plant Development/ Subcategory Analysis	8	Develop a group of model turbines that emulate the range of sizes and applications of combustion turbines. To support the economic analysis, develop model plants that emulate the industrial community using combustion turbines.	9/97-**6**/98	Active

***Additions and significant changes are bolded.**

ICCR SUBGROUP TRACKING SHEET (CONTINUED)

GROUP/ (Number of members)	Subgroup Information				
	Name	Number of Members	Mission/Goal/Products	Timeline	Status
TURBINES (Continued)	Task Group Planning	2	Track progress of Work Group task groups and recommend formation/closure of task groups	Ongoing	Active
	Gas-Fired Turbine Exclusion	**12**	**Develop information presentation for the April CC meeting. Provide recommendations for removing gas-fired turbines from the rulemaking effort.**	**2/98-7/98**	**Active**
PROCESS HEATERS (16)	De Minimis Levels	6	Develop a rational for a lower level cut-off for process heaters to be surveyed	1/97-2/97	Task Complete
	Information Collection	5	Review voluntary information collection plans for consistency with EPA's criteria	1/97-3/97	Task Complete
	Trace Constituents	6-7	Address the CCs suggestion to identify the HAPs of interest resulting from input trace constituents such as chlorine and mercury	7/97-4/98	Active
	Direct-fired process heaters	5	Develop an approach for direct-fired process heaters	11/97-2/98	Active
	Good Combustion Practice	8	Develop a definition of good combustion practices as applied to indirect-fired process heaters that may be suitable for use as a MACT floor	9/97-4/98	Active
	MACT Floor Documentation	6	Compile and develop background documentation for the MACT floor approach for gas- and liquid-fired indirect-fired heaters	1/98-2/98	Active
	Other-fired Process Heater	7	Develop a strategy to address units firing fuels other than gas and fuel oil (including fuel oil-like liquids)	1/98-6/98	Active
	Applicability Threshold	6	Develop an approach for making an applicability determination	1/98-6/98	Active
	Numeric Emission Limits	5	Investigate the feasibility of setting numeric emission limits for gas- and liquid-fired indirect-fired heaters	1/98-2/98	Active
	BWG/PHWG Coordination Team	**3**	**Coordinates with the BWG and PHWG on section 129 subcategories and RAP preparation**	**11/97-11/99**	**Active**

***Additions and significant changes are bolded.**

ICCR SUBGROUP TRACKING SHEET (CONTINUED)

GROUP/ (Number of members)	Subgroup Information				
	Name	Number of Members	Mission/Goal/Products	Timeline	Status
PROCESS HEATERS (16) (Continued)	**Pollution Prevention Support Group**	**2**	**Represents the IWG during pollution prevention subgroup meetings**	**11/97-11/99**	**Active**
	Economics Coordination Group	**4**	**Coordinates with the Economic Work Group while representing their respective IWG subteams**	**2/98-11/99**	**Active**
BOILERS (38)	Fossil Fuel-Fired Boilers	17	QA and recommend changes to population database for fossil fuel fired boilers	6/97-8/97	Active
			Review emissions database, recommend changes, and recommend further testing	7/97-**5/98**	
			Preliminary Model Plants	9/97-3/98	
			Develop preliminary subcategories	6/97-12/97	
			List of HAPs of Concern	10/97-1/98	
			Preliminary MACT Floor Determination	1/98-5/98	
			Identify data gaps/testing needs	1/98-5/98	
	Wood-Fired Boilers	9	QA and recommend changes to population database for wood fired boilers	6/97-8/97	Active
			Review emissions database, recommend changes, and recommend further testing	7/97-**5**/98	
			Preliminary Model Plants	9/97-3/98	
			Develop preliminary subcategories	6/97-2/98	
			List of HAPs of Concern	10/97-1/98	
			Preliminary MACT Floor Determination	1/98-5/98	
			Identify data gaps/testing needs	1/98-5/98	
	Non-fossil Fuel-Fired Boilers	14	QA and recommend changes to population database	6/97-10/97	Active
			Review emissions database, recommend changes, and recommend further testing	7/97-**5/98**	
			Preliminary Model Plants	9/97-**4**/98	

***Additions and significant changes are bolded.**

ICCR SUBGROUP TRACKING SHEET (CONTINUED)

GROUP/ (Number of members)	Subgroup Information				
	Name	Number of Members	Mission/Goal/Products	Timeline	Status
BOILERS (38) (Continued)	Non-fossil Fuel-Fired Boilers (Continued)	14 (Cont.)	Develop preliminary subcategories	6/97-2/98	Active (Continued)
			List of HAPs of Concern	10/97-**4**/98	
			Preliminary MACT Floor Determination	1/98-5/98	
			Identify data gaps/testing needs	1/98-5/98	
	State Regulation	5	Obtain relevant information from States to characterize limits and controls for boilers	5/97-9/97	InActive
			Develop a database of relevant State information to be combined with inventory information	In planning	
	Waste Definition	5	Develop preliminary recommendations for a definition of solid waste	5/97-	InActive
	Testing	**10**	**Develop overall testing strategy**	**2/98-4/98**	**Active**
			Develop phase I test plan	**2/98-4/98**	
			Develop phase II test plan	**4/98-7/98**	
	Economic	**3**	**Provide SIC boiler population to Economic WG**	**2/98-4/98**	**Active**
			Identify cost algorithms	**2/98-4/98**	
			Identify necessary inputs for cost algorithms	**2/98-4/98**	
			Develop regulatory alternative	**5/98-6/98**	
			Preliminary control costs	**5/98-6/98**	
			Preliminary national cost impacts	**6/98-7/98**	
INCINERATORS (30)	Subgroup 1	8	Determine which combustion units are in the ICWI category and to identify sources of ICWI inventory and emission data readily available, both from the EPA database and other sources	11/96-12/96	Task Complete
	Subgroup 2	6	Determine what sources, other that ICWI, are in the incinerator category and to begin an inventory of incinerators. The inventory of incinerators will be used to determine which facilities will receive the questionnaire.	11/96-12/96	Task Complete

***Additions and significant changes are bolded.**

ICCR SUBGROUP TRACKING SHEET (CONTINUED)

GROUP/ (Number of members)	Subgroup Information				
	Name	Number of Members	Mission/Goal/Products	Timeline	Status
INCINERATORS (30) (Continued)	Information Collection	4	Work with the Boiler and Process Heater Work Groups and Coordinating Committee to determine how to best collect the necessary information for the ICCR database	1/97-4/97	Task Complete
	Scoping	4	Determine the scope of Work Group (addressing such issues as flares and metal recovery units), and documenting the arguments of those units that should be of lower priority or should be addressed by EPA under other rulemakings	1/97-3/97	Task Complete
	Definition of Solid Waste	10	Work with Boiler and Process Heater Work Groups to develop a definition of solid waste to be used in the ICCR.	1/97-7/97	InActive
	Subteam 1 (Pathological, Including Crematory, Wastes)	7	Identify database entries that belong in the subgroup and which belong in another subgroup, another Work Group, or not in the ICCR	3/97- 11/97	Active
			QA inventory and emissions databases, and determine data gaps that may be filled by additional questionnaires and by testing	3/97-**5**/98	
			Develop recommendations for subcategories , floors, model units, and control options	6/97-**9**/98	
	Subteam 2 (Chemical, Petroleum, and Pharmaceutical Solids, Liquids, and Sludges; LGFs)	8	Identify database entries that belong in the subgroup and which belong in another subgroup, another Work Group, or not in the ICCR	3/97- 11/97	Active
			QA inventory and emissions databases, and determine data gaps that may be filled by additional questionnaires and by testing	3/97-**5**/98	
			Develop recommendations for subcategories , floors, model units, and control options	6/97-**9**/98	
	Subteam 3 (Wood, Construction, Demolition, and Agricultural Wastes)	5	Identify database entries that belong in the subgroup and which belong in another subgroup, another Work Group, or not in the ICCR	3/97- 11/97	Active
			QA inventory and emissions databases, and determine data gaps that may be filled by additional questionnaires and by testing	3/97-**5**/98	
			Develop recommendations for subcategories , floors, model units, and control options	6/97-**9**/98	

***Additions and significant changes are bolded.**

ICCR SUBGROUP TRACKING SHEET (CONTINUED)

GROUP/ (Number of members)	Subgroup Information				
	Name	Number of Members	Mission/Goal/Products	Timeline	Status
INCINERATORS (30) (Continued)	Subteam 4 (Drum and Parts Reclaimer Units, Scrap Metal Recovery)	4	Identify database entries that belong in the subgroup and which belong in another subgroup, another Work Group, or not in the ICCR	3/97- 11/97	Active
			QA inventory and emissions databases, and determine data gaps that may be filled by additional questionnaires and by testing	3/97-**5**/98	
			Develop recommendations for subcategories , floors, model units, and control options	6/97-**9**/98	
	Subgroup 5 (Formerly Small Municipal Waste Combustors, Landfill Gas Flares, Agricultural, Concrete, and Fiberglass)	6	Identify database entries that belong in the subgroup and which belong in another subgroup, another Work Group, or not in the ICCR	3/97-6/97	InActive (assigned to other subteams)
			QA inventory and emissions databases, and determine data gaps that may be filled by additional questionnaires and by testing	3/97-10/97	
			Develop recommendations for subcategories , floors, model units, and control options	3/97-9/97	
	Waste definition support group	10	Provide support to the 2 Work Group members who are on the Coordinating Committee Solid Waste Definition Subgroup	7/97- 2/98	**InActive**

***Additions and significant changes are bolded.**

ATTACHMENT B

MILESTONE TRACKING SUMMARY TABLE

MILESTONE TRACKING SUMMARY TABLE

Incinerator Work Group		
Milestone[1]	**ICCR Document Milestone Schedule**	**Status with Schedule for Completion[2]**
Information Collection Inventory Database QA/QC Review of ICCR Emissions Database Emission Testing Recommendations	**1/97-9/97**	12/98 -- The IWG subteams are in various stages of data analysis. Some are hampered by lack of waste information that should become available with release of the corrected ICR results. All subteams expect to complete definition of subcategories, based on materials combusted, in April 1998. Emission data collection and analysis will continue in parallel with the next steps throughout 1998.
MACT Floor Determination Source Subcategorization Model Plant Development	**9/97-11/97**	9/98 -- Source subcategorization by size, construction, or other characteristics and preliminary MACT floor determinations are expected by May of 1998 for most IWG subcategories. For a few subcategories, where test data is required, some delay beyond this timeframe is possible.
Identification of Regulatory Alternatives Control Technology Assessment Identification of Beyond the Floor Alternatives	**11/97-2/98**	8/98 -- Preliminary regulatory alternatives for ICWI subcategories are expected in July 1998, in time for submission to the Coordinating Committee (CC) for review, prior to CC submittal to EPA in August. For other source categories, preliminary regulatory alternatives are expected by September 1998.
Regulatory Analysis Cost Analyses Economic Analysis Emission Reduction Assessment	**3/98-8/98**	2/99 -- Regulatory analysis for ICWI subcategories should be completed by February 1999. Other subcategory analyses will follow 4-6 months later.
Preliminary Regulatory Recommendations	**9/98**	5/99 -- A draft proposal for submission to EPA is expected for ICWI subcategories in May 1999 and 4-6 months later for the other subcategories.

MILESTONE TRACKING SUMMARY TABLE (Continued)

Boilers Work Group		
Milestone[1]	**ICCR Document Milestone Schedule**	**Status with Schedule for Completion[2]**
Information Collection Inventory Database QA/QC Review of ICCR Emissions Database Emission Testing Recommendations	**1/97-9/97**	4/98 -- Has begun, expected completion date 4/98. (However, this milestone includes only review of inventory and emission databases, identification of data gaps, and recommendations for Phase I testing - results from test program are <u>not</u> expected before 10/98. Also does not include obtaining emission data from identified ICR respondents which would be in 4/98 timeframe.).
MACT Floor Determination Source Subcategorization Model Plant Development	**9/97-11/97**	6/98 -- Has begun, expected completion date for preliminary MACT floor is 6/98. Preliminary subcategories and preliminary model plants are currently being developed by each subgroup - expected completion date for these milestones is 4/98.
Identification of Regulatory Alternatives Control Technology Assessment Identification of Beyond the Floor Alternatives	**11/97-2/98**	6/98-- Control Technology Assessment begin 12/97 and is expected to be complete in 6/98. 6/98-- Identification of regulatory alternatives is expected to start 2/98, be completed by 6/98
Regulatory Analysis Cost Analysis Economic Analysis Emission Reduction Assessment	**3/98-8/98**	Not started. 6/98 -- Cost and environmental impact analysis will begin in 3/98 and is expected to be complete in 6/98. 9/98 -- Economic impact analysis will begin in 6/98 and is expected to be complete in 9/98.
Preliminary Regulatory Recommendations	**9/98**	11/98-- Not started, is expected to start 7/98, be completed by 11/98, and is (Work group's preliminary recommendation - 8/98).

MILESTONE TRACKING SUMMARY TABLE (Continued)

Turbine Work Group		
Milestone[1]	**ICCR Document Milestone Schedule**	**Status with Schedule for Completion[2]**
Information Collection Inventory Database QA/QC Review of ICCR Emissions Database Emission Testing Recommendations	**1/97-9/97**	8/97 -- The Database Enhancement Task Group completed QA/QC efforts of the Inventory Database in August '97. 3/98 -- The Testing and Monitoring, Task Group completed QA/QA efforts of the Emissions Database (of gathered reports) in August '97. Currently gathering additional test reports from state files and WG members which is expected to be completed by March '98. 1/99 -- The final emission database for controlled sources is scheduled for completion in November '98 after testing has been completed. 4/98 -- Final list of HAPs to be measured was submitted to the CC in November '97 and approved by EPA in 2/98. Prepared a test plan and an estimate of testing needs. Testing recommendations will be submitted to the CC in April '98. 12/98 -- Testing to determine HAP control efficiency of control devices to be completed in December '98.
MACT Floor Determination Source Subcategorization Model Plant Development	**9/97-11/97**	7/97 -- The Subcategorization Task Group drafted a memorandum of potential subcategories in July '97. Subcategories may be developed based on model plants analyses. 4/98 -- Preliminary MACT Floor for existing sources will be completed in April '98. 2/99 -- MACT Floor for new sources is scheduled for completion in February '99, subsequent to gathering additional source tests and any WG testing efforts. 6/98 -- Initiated efforts in developing model plants. Identified a Model Plants Task Group during the WG's September meeting. Model plant information will be finalized and provided to the Economic Analysis Work Group by June '98.

MILESTONE TRACKING SUMMARY TABLE (Continued)

Turbine Work Group		
Milestone[1]	**ICCR Document Milestone Schedule**	**Status with Schedule for Completion[2]**
Identification of Regulatory Alternatives Control Technology Assessment Identification of Beyond the Floor Alternatives	**11/97-2/98**	5/97 -- The HAP Reduction Technology Task Group submitted a draft memorandum of Good Operating Practices in May '97. 7/97 -- A Technology Work Shop was held on July 25, 1997, to identify potential HAP control technologies. 12/98 -- A report listing HAP reduction and prevention technologies is scheduled for submittal in December '98. 3/99 -- Final regulatory alternatives will be submitted in March '99.
Regulatory Analysis Cost Analysis Economic Analysis Emission Reduction Assessment	**3/98-8/98**	3/98 -- The WG has not assigned a task group to review Cost Analyses. The WG initiated efforts in conducting literature searches of existing cost data for applicable controls. 7/98 -- Cost analysis for existing and new sources will be completed in July '98. 3/99-- Economic Analysis and Emission Reduction Assessment is scheduled for completion by March '99.
Preliminary Regulatory Recommendations	**9/98**	5/99-- The CTWG is in the process of identifying options for regulatory development. To date, no documentation has been drafted for regulatory options. The task HAPs vs Criteria group reviewed information on HAPs vs. Criteria emissions as a function of turbine operating parameters. Selection of Regulatory Alternatives will be completed by May '99.

MILESTONE TRACKING SUMMARY TABLE (Continued)

IC Engines Work Group		
Milestone[1]	**ICCR Document Milestone Schedule**	**Status with Schedule for Completion[2]**
Information Collection Inventory Database QA/QC Review of ICCR Emissions Database	**1/97-9/97**	1/98 -- The Population Subgroup completed QA/QC efforts of the Inventory Database in August '97. Based on comments from INGAA, additional modifications were completed and posted on the TTN in January '98. 2/98 -- The RICE Workgroup came to consensus that the population database is adequate for determining MACT Floor(s). 2/98 -- The Emissions Subgroup completed QA/QC efforts of the Emissions Database (of gathered reports) in July '97. Additional test reports were gathered from state files and WG members, and a Version 2 of the Emissions Database will be posted on the TTN in February '98. Version 2 includes emissions data for HAPs and criteria pollutants. The final database will include emissions data for all testing conducted according to the WG's test plan, and is scheduled for completion in November '98.
Emission Testing Recommendations		11/97-- Final test plan and testing site recommendations were presented to the CC in November, '97. Both were approved. 8/98 -- The RICE Workgroup initiated efforts for gathering cost information for add-on control equipment for HAPs.

MILESTONE TRACKING SUMMARY TABLE (Continued)

IC Engines Work Group		
Milestone[1]	**ICCR Document Milestone Schedule**	**Status with Schedule for Completion[2]**
MACT Floor Determination Source Subcategorization Model Plant Development	**9/97-11/97**	4/98 -- The Population Subgroup developed potential subcategories for RICE in July '97. Preliminary subcategories as well as a preliminary MACT floor (existing sources) will be presented to the CC in April '98. 5/98 -- The population subgroup has identified a preliminary MACT floor for four stroke rich burn natural gas engines. The subgroup is reviewing the applicability of certain add-on control devices for digester/landfill gas RICE. 6/98 -- The population subgroup is evaluating whether subcategories based on site and usage are appropriate. 8/98 -- Model plant development was initiated at the November meeting. The Above the Floor (formerly 'next steps') ad-hoc group is leading these efforts. 8/98 -- MACT floor determination for new sources is scheduled for completion in August '98.
Identification of Regulatory Alternatives Control Technology Assessment Identification of Beyond the Floor Alternatives	**11/97-2/98**	7/97 -- The Emissions Subgroup developed a list of potential HAP reduction technologies (presented at the July '97 WG meeting.) Feasibility for such controls has yet to be initiated. 8/98 -- Final regulatory alternatives will be submitted in August '98. 8/98 -- A new source MACT subgroup was created in September '97.
Regulatory Analysis Cost Analysis Economic Analysis Emission Reduction Assessment	**3/98-8/98**	8/98 -- The WG has not yet assigned a task group to review Cost Analysis. 8/98 -- Cost analysis for existing and new sources will be completed in August '98. 11/98-- Economic Analysis and Emission Reduction Assessment is scheduled for completion by November '98.

MILESTONE TRACKING SUMMARY TABLE (Continued)

IC Engines Work Group		
Milestone[1]	**ICCR Document Milestone Schedule**	**Status with Schedule for Completion[2]**
Preliminary Regulatory Recommendations	**9/98**	12/98 -- Regulatory Recommendations have yet to be initiated. Efforts will be initiated in April '98. 12/98-- Selection of Regulatory Alternatives will be completed by December '98.

MILESTONE TRACKING SUMMARY TABLE (Continued)

Process Heaters (Indirect gas- and liquid-fired units)		
Milestone[1]	**ICCR Document Milestone Schedule**	**Status with Schedule for Completion[2]**
Information Collection	**1/97-9/97**	
Inventory Database QA/QC Review of ICCR Emissions Database		2/98 -- The inventory database has been reviewed and the work group is awaiting the revised version for any further review necessary. The work group is also awaiting receipt of emissions database for review.
Emission Testing Recommendations		2/98 -- No emission test recommendations have been identified.
MACT Floor Determination	**9/97-11/97**	
Source Subcategorization		3/97 -- Subcategorization into gas- and other-fired units has been completed. 1/98 -- Subcategories defined as "gas and liquid" and "other" fired
Model Plant Development		-- The determination of whether model plants are necessary is ongoing.
Identification of Regulatory Alternatives	**11/97-2/98**	
Control Technology Assessment		3/98 -- This determination has been completed (no control technology other than "good combustion practice" and NOx controls). "MACT Documentation" subgroup is building a case supporting a finding that the MACT floor is not identifiable.
Identification of Beyond the Floor Alternatives		3/98 -- Determination of any "beyond the floor" alternatives is being explored by the "MACT Documentation" subgroup.
Regulatory Analysis	**3/98-8/98**	
Cost Analysis Economic Analysis Emission Reduction Assessment		2/98 -- Review material from Economics Work Group. 8/98 -- Expected completion date: 8/98.
Preliminary Regulatory Recommendations	**9/98**	Expected completion date: 9/98.

MILESTONE TRACKING SUMMARY TABLE (Continued)

Process Heaters (Other-fired units)		
Milestone[1]	**ICCR Document Milestone Schedule**	**Status with Schedule for Completion[2]**
Information Collection	**1/97-9/97**	
Inventory Database QA/QC Review of ICCR Emissions Database		2/98 -- The inventory database has been reviewed and the work group is awaiting the revised version for any further review necessary. The work group is also awaiting receipt of the emissions and ICR databases for review.
Emission Testing Recommendations		7/98 -- Any emission test recommendations are expected by 4/98.
MACT Floor Determination	**9/97-11/97**	
Source Subcategorization		2/98 -- The work group is awaiting receipt of the ICR database.
Model Plant Development		-- The determination of whether model plants are necessary is ongoing.
Identification of Regulatory Alternatives	**11/97-2/98**	
Control Technology Assessment		7/98 -- The control technology assessment is being evaluated by the "other-fired" subgroup.
Identification of Beyond the Floor Alternatives		7/98 -- Determination of any "beyond the floor" alternatives is being explored by the "other-fired" subgroup.
Regulatory Analysis Cost Analysis Economic Analysis Emission Reduction Assessment	**3/98-8/98**	2/98 -- Review material from Economics Work Group. 8/98 -- Expected completion date: 8/98
Preliminary Regulatory Recommendations	**9/98**	Expected completion date: 9/98.

MILESTONE TRACKING SUMMARY TABLE (Continued)

1. Major milestones are shown in bold type. Some recommended submilestones are also listed.

2. Indicate the current status of the milestone (i.e., whether it has begun, is in data gathering stage, etc.), the expected date to complete the milestone, and, if appropriate, the group or subgroup responsible for completing the milestone.

ATTACHMENT C

MILESTONE TRACKING SUMMARY GRAPHS

See file **milstgrh.xls**

SUPPLEMENT A

TESTING AND MONITORING PROTOCOLS WORK GROUP

TMPWG STATUS REPORT
July , 1998
New information noted in italics

ISSUES WITH ICCR DIRECTION WANTED:

None

STATUS Of PRODUCTS UNDER DEVELOPMENT

Compliance method recommendations. *A subgroup has been formed and an action plan developed to address methods for different pollutants. Initially, four formaldehyde measurement techniques are under review:*

1. *Extractive FT-IR,*
2. *Aqueous acetyl acetone impinger method*
3. *DNPH impinger methods*
4. *Dry DNPH method.*

TMPWG formaldehyde methods recommendations, for consideration of the SWGS, will be posted after consensus is reached at our July 31 meeting.

Monitoring method recommendations. *A subgroup has been formed and an action plan developed. Initial recommendations are expected to be available by September.*

TMPWG List of potentially significant HAP

We delivered, to the individual SWGS, consensus draft lists and explanations of how we arrived at those lists. Status is summarized in the table below. When available, the file name is provided in the table. NA means that a suggested list is not available from TMPWG. It is the SWG responsibility to decide what to do with those lists.

	Turbines	IC Engines	Boilers	Inciner-ators	Process Heaters
Natural Gas	turbnat.pdf	ricenat.pdf	boilrgas.pdf	NA	phtrgas.pdf
Refinery Gas	NA	NA	boilrgas.pdf	NA	phtrgas.pdf
Diesel	NA	ricedesl.pdf	NA	NA	NA
Oil	NA	NA	boilroil.pdf	NA	NA
Digester Gas	turbdgas.pdf	ricedgas.pdf	boilrdgas.pdf	NA	NA
Landfill Gas	NA	NA	NA	NA	NA
Coal	NA	NA	boilrcoa.pdf	NA	NA
Wood	NA	NA	being developed	NA	being developed

At the same time, we delivered a list of the test methods that were identified in the literature reviewed as being used to generate this list. We anticipate that we will work with the SWGS to identify appropriate test methods for future data gathering. *TMPWG worked with BWG to provide possible test methods for the phase I test plan recommendations.*

Test cost model

We have posted (and asked for SWG comments on format and content) a revised test cost model intended to promote SWG use of consistent test cost assumptions during the initial budget planning and test plan development for data gap filling. See file: COSTMOD, in TMPWG miscellaneous files area. *In addition, TMPWG worked with BWG to provide additional cost estimating tools for the phase I test plan recommendations.*

Report on TMPWG assessment of the significance of different test methods on the reported formaldehyde emissions

See file: FORMALD1, in TMPWG miscellaneous files area.

Guidance on additional data quality issues

How to interpret existing data that is reported as "below detection limits."

Guidance Complete. See file: TMDETECT, in TMPWG miscellaneous files area.

QA\QC and Generic guidelines for Quantitative assessment of ICCR Emissions Database

Guidance Complete. See file: TMDBASGD, in TMPWG miscellaneous files area.

Guidance to IC SWG re status of real time test methods

Guidance Complete. See file:TMREAL , in TMPWG miscellaneous files area.

Product of incomplete combustion (PIC) guidance document.

Guidance Complete. See file: TMPICGD, in TMPWG miscellaneous files area.

SUPPLEMENT B

COMBUSTION TURBINES WORK GROUP

Combustion Turbine Work Group

Modification of List of Pollutants Identified for Future Testing and Clarification of Testing Protocol at Intermediate Load Points

The Combustion Turbines Work Group (CTWG) recommends to the Coordinating Committee (CC) that four HAP pollutants be deleted from the list of test pollutants that the CC sent to EPA at the November 1997 meeting in Houston. The four compounds are methanol, styrene, phenol, and biphenyl.

There is no basis for including these pollutants in the CTWG test plan. The four pollutants were included in a list of HAPs recommended in the TMPWG to the CTWG. The CTWG included these four HAP pollutants in its list with the belief that they had been detected in combustion turbine emissions tests done by the Gas Research Institute (GRI) that were referenced by the TMPWG recommendation. When the CTWG was identifying detection limits for these compounds prior to finalizing the test plan, we discovered that these compounds were tested for but were never shown as being emitted or detected from combustion turbines. These pollutants would not have been included in the list of HAP test pollutants had this been known. The decision criteria for including or excluding pollutants on the CTWG list of compounds was that the pollutant had to be tested for and it had to be detected above the detection limit in at least one test. Excluding these pollutants would also be consistent with the RICE test plan where these pollutants are also not included in the list of test pollutants.

Refinement of Combustion Turbine Work Group Test Plan:

At the last meeting of the CC in Fort Collins, Colorado, the CTWG recommended that test data be collected at three load points. The CTWG wishes to clarify for the CC that the load and HAPs correlation is well known and tracks carbon monoxide levels very well. Accordingly, the CTWG recommends that to save time and money, only CO should be measured at all three load points, while the full profile of HAP pollutants should be measured at the high and low load points.