

dopos

MINI AUDIT

FOR THE

CITY OF BLOOMINGTON



rieke carroll muller associates inc



architects engineers land surveyors planners MARCH, 1981

RCM JOB NO. 801704

A	BUILDING NAME Lift Station - Sanitary Sew	age	NAME OF ORGANIZATION City of Bloomington	2/18/81
	BUILDING ADDRESS 10313 10th Avenue Circle		ADDRESS 2215 West Old Shakopee Road	
ACT	CITY Bloomington	ZIP CODE 55431	CITY Bloomington	ZIP CODE 55431
CONT	PERSON COMPLETING FORM	TELEPHONE	CONTACT PERSON	TELEPHONE
őõ	Randy Smith	935-6901	Arthur Vensen	881-5811

B		structions: For blocks 1 and 2 escribes the building type and							our categories
	1.	OWNERSHIP TYPE XQPublic (F Onon-Profit Association	PUB) (NAP)	3a.	SCHOOLS □Elementary □Secondary □Coll. or Univ.	(SCHL-ELM) (SCHL-SECD) (SCHL-POST)	C.	LOCAL GOVERNMENT Office Storage	(LOCG-OFFC) (LOCG-STRG) (LOCG-SERV)
ODE	2.	ULTIMATE OWNER County XXICity	(CNTY) (CITY)		□Vocational □Education Agency □Administration □OTHER	(SCHL-VOCL) (SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR)		□Library □Police □Fire □OTHER	(LOCG-LBRY) (LOCG-PLCE) (LOCG-FIRE) (LOCG-OTHR)
BUILDING ELIGIBILITY CO		☐ Township☐ State☐ Public School☐ Private School☐ Non-Profit Association☐ Indian Tribe	(TOWN) (STAT) (PUSC) (PRSC) (NPAP) (INDN)	b.	PUBLIC CARE Nursing Home Long Term Care Rehab. Facility Public Health Ctr. Res. Child Care Ctr.	(PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-HCTR) (PBCR-RCCC)	d.	HOSPITALS General Tuberculosis OTHER	(HOSP-GENL) (HOSP-TUBR) (HOSP-OTHR)

C	Instructions: With reference to page 23 entitled Funding Information, determine if the facilities are eligible for both Federal and State funding or just Federal funding, then answer the questions correctly for the situation. This section must be signed and dated by the head of the organization
	If eligible for both Federal and State Funding: Have you received a mini-audit grant before? Pes ZKNo Have you previously applied for mini-audit funding? EXYes No Do you wish to apply for mini-audit funding? Yes ZKNo March 18, 1981 Date
	Name Arthur Jensen Signature Whun White
	If eligible for Federal funding only: Have you received a mini-audit grant-before? □ Yes□ No Have you previously applied for mini-audit funding? □ Yes□ No Do you wish to apply for mini-audit funding? □ Yes□ No The 50% match for Federal funds will come from: (Use additional sheets if necessary.)
MINI-AUDIT	Date
MINI-AU FUNDIN	Signature

D	Check the type of energy report which was completed and submitted p	rior to this mini-audit report.
EPORT	☐ Elementary School Energy Report (Form No. ED-00444-02) ☐ Secondary School Energy Report (Form No. ED-00445-02) ☑ Existing Building Energy Report (Form No. EN-00041-01)	
ENERGY REPORT CHECK-OFF	If an energy report has not been completed previous to this mini-audit vocational schools should use form ED-00444-02 or form ED-00445-02, d building energy report, form EN-00041-01.	report, one must be included with this report. Elementary, secondary, and spending on building complexity. All other buildings should use the existing
	Instructions: This section is to be completed and signed by a registered completed the State of Minnesota's Mini-Audit Procedures Course. This sare completed. All blanks must be filled in.	d professional engineer or by a certified mini-auditor who has successfully ection should be completed after this mini-audit report and an energy report
	I have reviewed the energy report and/or the energy report results for the corrected any misinformation on the energy report which will be result	is building. I found all information contained therein to be correct <i>OR</i> I have mitted with this mini-audit report to the Minnesota Energy Agency
l	I am not directly responsible for the day to day operations of this build	ling being audited.
	I have fully disclosed my financial interests relating to this mini-audit a	and any energy conservation measures considered by this audit.
	I have walked through this building and have found the recommendal maintenance changes, and low cost energy conservation measures, where the content is the content of the cost energy conservation measures.	tions listed in section I of this mini-audit report to be the operations and nich would reduce energy consumption in this building.
	listed in section I. I am not responsible if the actual savings resulting f	
	Based on actual records, the energy conservation operating and mainte 20% of the building's energy consumption as specified in section 1.	nance procedures listed in section K d1d not save at least (did. did not)
	(should, should not)	ding and the building's major energy using systems, I recommend that this to make the maxi-audit funding determination based on this mini-audit report
	and other criteria.	
	Based upon the information in section E and the information referred to	(Should, Should hot)
	undergo further solar conversion analysis, and/or <u>SNOULG_NO</u> wind, wood. (Circle proper resources) (should, should	t undergo further analysis of the renewable resources waste
	In my judgement, as a mini-auditor, all of the above statements are tro	ue and correct.
		Witnessed by:
	Randy Smith	March 18, 1981
	Mini-Auditor's Name (Print or Type)	Building Organizational Authority (Print or Type)
	Sugnature 206	Signature Cusin
	Rieke Carroll Muller Assoc., Inc.	March 18, 1871
	P.O. Box 130 Hopkins, Minn. 55343	
	612/935-6901 Phone	
	March 18, 1981	
	Date	
1		

MINI-AUDIT STATEMENTS

		BASE F	PERIOD YEA	R		Fiscal Year	
ENERGY TYPE	ENERGY	USAGE	C	CONVERSION FACTOR		BTU USAGE	
Electricity							
Fuel 1							
Fuel 2							
TOTAL							
		20% SA	VINGS YEAI	a		Fiscal Year	
ENERGY TYPE	ENERGY		<u> </u>		EACTOR	BTU USAGE	
- CHEMOT TIPE	ENERGY	USAGE		ONVERSION	FACTOR	BTO USAGE	
Electricity							
Fuel 1							
Fuel 2							
TOTAL							
Instructions: This section is to be	completed by the min	i-auditor after t	he walk-thru	portion of the	mini-audit. Fir	rst, check the appropriate boxes w	
state the roughly estimated range of the new mini-audit opportuni percentages by the annual electr	of the percent of total ties listed in section I rical and fuel consum	electrical and f L. Secondly, c	uel consump	tion which wo	uld be saved re	esulting from the implementation	
of the new mini-audit opportuni percentages by the annual electric Check two boxes in each category.	of the percent of total ties listed in section l rical and fuel consum ry —	electrical and f L. Secondly, o ption data on	uel consump alculate the the energy r	otion which wo range of ener eport.	uld be saved regy and cost s	esulting from the implementation assurings by multiplying the estim	
of the new mini-audit opportuni percentages by the annual electrical Savings —	of the percent of total ties listed in section in cical and fuel consumptry —	electrical and f L. Secondly, o ption data on	duel consump calculate the the energy r	ption which wo range of energeport.	uld be saved regy and cost s	esulting from the implementation is avings by multiplying the estim	
state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings —	of the percent of total ties listed in section in cical and fuel consumptry — 12 0% XDX 5%	electrical and f L. Secondly, o ption data on	uel consump alculate the the energy r	otion which wo range of ener eport.	uld be saved regy and cost s	esulting from the implementation assuings by multiplying the estim	
state the roughly estimated range of the new mini-audit opportuni percentages by the annual electr Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings —	of the percent of total ties listed in section in cical and fuel consumptry — 12 0% XDX 5%	electrical and f L. Secondly, c ption data on 10% 10%	duel consump calculate the the energy r	tion which wo range of energeport.	uld be saved regy and cost s	esulting from the implementation is avings by multiplying the estim	
state the roughly estimated range of the new mini-audit opportuni percentages by the annual electr Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and o	of the percent of total ties listed in section I ricel and fuel consum ry — 12 0%	electrical and f L. Secondly, c ption data on 10% 10% Range of Range of	uel consumpalculate the the energy r	otion which wo range of energeport.	uld be saved regy and cost s	esulting from the implementation savings by multiplying the estim other (specify) other (specify) Electrical Range of Elect	
state the roughly estimated range of the new mini-audit opportuni percentages by the annual electr Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings —	ry — State of the percent of total ties listed in section in increase and fuel consuming ty — State of the section of the sect	electrical and f L. Secondly, c ption data on 10% 10% Range of Range of	uel consump alculate the the energy r 15% 15%	20% 20% 20% Range	□ 25% □ 25% Annual E	osulting from the implementation savings by multiplying the estimate of the control of the contr	
state the roughly estimated range of the new mini-audit opportuni percentages by the annual electr Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and of Range	ry — Q 0%	electrical and f L. Secondly, c ption data on 10% 10% Range of Range e Sav =	uel consumpraiculate the the energy r 15% 15% Electrical Second Energy vings	20% 20% 20% Range	□ 25% □ 25% Annual E	osulting from the implementation savings by multiplying the estimate of the control of the contr	
state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and other Range Mange	ry — Q 0%	electrical and f L. Secondly, c ption data on 10% 10% Range of Range e San =	uel consumpalculate the the energy r	20% 20% 20% Range 6 to	uld be saved regy and cost s □ 25% □ 25% □ 25% Annual E Dollars x \$ _18	osulting from the implementation savings by multiplying the estimate of the control of the contr	
state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and of the Range of Electric Range Range lower bound — 0 — % x	of the percent of total ties listed in section in rical and fuel consumptry — 120 0% XX 5% 100 0% 5% 100 05% 100 100 100 100 100 100 100 100 100 10	electrical and file. Secondly, control at a one of the second sec	Lel consumpraiculate the the energy r 15% 15% Electrical Satisfied Satisfi	20% 20% 20% Range to 5	uld be saved regy and cost s □ 25% □ 25% □ 25% Annual E Dollars x \$ _18	osulting from the implementation savings by multiplying the estimate of the control of the contr	
state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and of the sample of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and of the sample lower bound — 0 — % x to to upper bound — 5 — % x	of the percent of total ties listed in section in rical and fuel consumptry — 120 0% XX 5% 100 0% 5% 100 05% 100 100 100 100 100 100 100 100 100 10	electrical and file. Secondly, option data on 10% 10% Range of Range of Save — 0 = 252 Range Range	uel consumpraiculate the the energy r 15% 15% Electrical Sator Energy vings kwh, _ to _ 6 kwh, _	20% 20% 20% Range to 5	uld be saved regy and cost s 25% 25% Annual E Dollars x \$ 18;	osulting from the implementation savings by multiplying the estimate of the control of the contr	
state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and of the sample of Electric Savings — When the sample Savings — Calculate ranges of energy and of the sample Savings — When the savings — When the sample Savings — When the savings	of the percent of total ties listed in section in ricel and fuel consumption. Ty — Ty 0% XX 5% 0% 5% cost savings — Annual Electrical Consumption 5052 kwh 1se any fuel Annual Fuel	electrical and file. Secondly, option data on 10% 10% Range of Range of Save — 0 = 252 Range Range	Lel consumpraiculate the the energy response to the energy response to the energy vings the energ	avings % Range 0 % to 5 % Range % Range	uld be saved regy and cost s 25% 25% Annual E Dollars x \$ 18;	coulting from the implementation as avings by multiplying the estimate of the	

Instructions. Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor. OPTIONAL: OPTIONAL CLASSIFICATION ITEM NO **ENERGY** DATE OF IMPLEMENTATION PAST ENERGY CONSERVATION ACTIONS COST MAJOR NO **SAVINGS** SUB SAVINGS CLASS **CLASS** 1 Routine Maintenance Schedule

Note Reproduce this page as necessary

JEW DPPORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

ITEM	CLASSIF			OPTIONAL: ENERGY	ENERGY	
NO.	MAJOR CLASS	SUB CLASS	NEW MINI-AUDIT OPPORTUNITIES	SAVINGS	COST SAVINGS	DATE OF IMPLEMENTATIO
1	1	1	Keep all controls free of dust.		!	
2	1	2	Look for loose connections and bad connections on a regular basis.			
			demine of the different busis.			
3	1	2	Check alignment of motors to driven equipment and tighten as necessary.			
	-	-	requirement and orgincen as necessary.			
4	1	2	Replace worn or defective motors with motors that are sized as close			
	†		to the load as possible and use the			
			highest efficiency motors available.			
r	<u> </u>		Where it is impractical to replace			
5	1	2	motors which have low loads and pow- er factors, use capacitors at motor			
			terminals to correct the power factor to 90%.			
6	1	3	Instantaneous power factor reading			
	<u> </u>		was ⁰ 95 note capacitors are installed	•		
7	3	3	Check for packing wear which can			
	3	3	cause excessive Teakage. Repack to			
*			shaft erosion.			
	$\frac{1}{2}$		Inspect bearings and drive belts for			
8	3	3	wear and binding. Adjust, repair or replace as necessary.			
9	5	1	Keep records of the operating schedul	е,		
<u> </u>	1 3	1	monthly energy consumption and pur- chase of any new equipment that			
			affects energy consumption of efficiency of the building. These record	s		
·	1	<u> </u>	will indicate the impact of energy conservation measures.			
10	5	1	Review the records books on a regular			
10	+ 2	$\frac{1}{1}$	basis.		_	

A	BUILDING NAME Lift Station - Sanitary Sewa	age	NAME OF ORGANIZATION City of Bloomington DATE March 19, 1					
	BUILDING ADDRESS 5113 West 80th. Street		ADDRESS West Old Shakopee Road	d				
ACT.	CITY Bloomington	ZIP CODE 55431	с их Bloomington	zip cone 5543Î				
CONTACT	PERSON COMPLETING FORM Randy Smith	TELEPHONE 935-6901	contact person Arthur Jensen	TELEPHONE 881-5811				

ပို့ရီ	Randy Smith	935-6901	Arthur Jensen		001-3011
В	Instructions: For blocks 1 and 2 check the box describes the building type and then within the				of the four categories
BUILDING ELIGIBILITY CODE	1. OWNERSHIP TYPE Public (PUB) Non-Profit Association (NAP) 2. ULTIMATE OWNER County (CNTY) City (CITY) Township (TOWN) State (STAT) Public School (PUSC) Private School (PRSC) Non-Profit Association (NPAP) Indian Tribe (INDN)	3a. SCHOOLS Elementary Secondary Coll. or Univ. Vocational Education Ag Administratio OTHER D. PUBLIC CARE Nursing Hom Long Term C Rehab. Facili Public Health Res. Child Care	(SCHL-ELM) (SCHL-SECD) (SCHL-POST) (SCHL-POCL) (SCHL-ADMN) n (SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR) ee (PBCR-NURS) tare (PBCR-TERM) ty (PBCR-HAB) of Ctr. (PBCR-HCTR)	c. LOCAL GOVERN Office Storage Service Library Police Fire OTHER d. HOSPITALS General Tuberculosis	MENT (LOCG-OFFC) (LOCG-STRG) (LOCG-SERV) (LOCG-LBRY) (LOCG-PICE) (LOCG-FIRE) (LOCG-OTHR) (HOSP-GENL) (HOSP-TUBR) (HOSP-OTHR)
C	Instructions: With reference to page 23 entitled just Federal funding, then answer the question				
	If eligible for both Federal and State Funding: Have you received a mini-audit grant before Have you previously applied for mini-audit funding Date: March 18, 1981 Name: Arthur Jensen Signature: Little Little Little If eligible for Federal funding only: Have you received a mini-audit grant before Have you previously applied for mini-audit f Do you wish to apply for mini-audit funding The 50% match for Federal funds will come	unding? AYes □ No ? □ Yes □ No unding? □ Yes □ No unding? □ Yes □ No			
EST	,		,		
EOU	Date:		-		
100	Name:				
MINI-AUDIT FUNDING REQUEST	Signature:		•		
	J				

	Check the type of energy report which was completed and submitted pri	or to this mini-audit report.
REPORT	☐ Elementary School Energy Report (Form No. ED-00444-02) ☐ Secondary School Energy Report (Form No. ED-00445-02) ☐ Existing Building Energy Report (Form No. EN-00041-01)	
ENERGY REPORT CHECK-OFF	If an energy report has not been completed previous to this mini-audit re vocational schools should use form ED-00444-02 or form ED-00445-02, dep building energy report, form EN-00041-01.	sport, one must be included with this report. Elementary, secondary, and bending on building complexity. All other buildings should use the existing
E	Instructions: This section is to be completed and signed by a registered a completed the State of Minnesota's Mini-Audit Procedures Course. This seare completed. All blanks must be filled in.	professional engineer or by a certified mini-auditor who has successfully ction should be completed after this mini-audit report and an energy report
	I have reviewed the energy report and/or the energy report results for this corrected any misinformation on the energy report which will be resubm	building. I found all information contained therein to be correct OR I have itted with this mini-audit report to the Minnesota Energy Agency.
	I am not directly responsible for the day to day operations of this building	ng being audited.
	I have fully disclosed my financial interests relating to this mini-audit an	d any energy conservation measures considered by this audit.
	I have walked through this building and have found the recommendation maintenance changes, and low cost energy conservation measures, which	ons listed in section I of this mini-audit report to be the operations and the would reduce energy consumption in this building.
	I have made a rough estimate, in section G, of the range of savings which listed in section I. i am not responsible if the actual savings resulting fro	m this mini-audit do not fall within the estimated range.
	Based on actual records, the energy conservation operating and mainten 20% of the building's energy consumption as specified in section I.	ance procedures listed in section K did not save at least (did, did not)
	Based upon my observation of the physical characteristics of this building SNOULC NOT be the subject of a maxi-audit. (should, should not)	
	I realize that this is not a final judgement, that the State reserves the right to and other criteria.	
	Based upon the information in section E and the information referred to in	section F, I recommend that this building should not (should, should not)
	undergo further solar conversion analysis, and/or wind, wood. (Circle proper resources) should not (should, should)	undergo further analysis of the renewable resources — waste,
	In my judgement, as a mini-auditor, all of the above statements are true	and correct.
	•	
		Witnessed by
		Witnessed by: Assistant Maintenance Supervisor
	Randy Smith Mini-Auditor's Name (Print or Type)	Building Organizational Authority (Print or Type)
	famoly Smith 206	Cethen W Lower
	Signatur	Signature
	Rieke Carroll Muller Associates, INc.	March 18, 1981
	Firm Name (if none, enter none) P.O. Box 130	Date
1 1	Address	
	612-935-6901	
	Phone 1001	
	<u>March 18, 1981</u>	

F	NAME	POSITION	ORGANIZATION
	Randy Smith	Certified Mini-Auditor	Rieke Carroll Muller Assoc. Inc.
Ì			
ŀ	Scott Hutchins	Certified Technical Engr.	Rieke Carroll Muller Assoc. Inc.
	Art Parvey		City of Bloomington
AUDIT			
AF			
	BRIEF DESCRIPTION OF GENE	ERAL BUILDING CONDITION (i.e. type, and functi	00)
G	good, underground		
Ī		WITHIN NEXT 15 YEARS (i.e. demolition, rehabilita	tion, conversion from one building type to another)
Š.	None STRUCTURAL COMPONENTS	OF ROOF (i.e. metal beams, wooden rafters, concr	ete)
MAA	Concrete		
BUILDING	ROOFING MATERIAL (i.e. tar a	nd gravel, shingles, tile)	
∞ ≤	Metal Hatch		
H	INSTRUCTIONS: Correctly ansi	wer the following questions for the building being i	mini-audited.
	Is there open land adjacent to the		
	☐ Yes ■ No	ed in an unshaded area. Is the roof of the building and	I the south facing wall unshaded between the hours of 9 a.m. and
	3 p.m.? Roof: C Yes □ No South facing Wall: □ Yes	•	
		aded, what percentage of the surface is unshaded?	
Ì	% of roof unshaded % of south facing wall unshad		
	What is the overall shape of the Ø square □ rectangle □	e building? H-shaped □ E-shaped □ other (specify)	
	Is the roof of the building flat o		
	•	orientation of the ridgeline?	
	If pitched, what is the angle that	at the roof makes with horizontal?	
	Are there large obstructions on ☐ Yes ☑ No	the roof such as chimneys, rooms for mechanical	
	What is the exterior facing mate	erial for the south facing wall?	<u>e</u>
	What percentage of the south f	lacing wall is glass?%	
	Is the building's space heating ☐ Yes ☐ No NONE	equipment located within or on the building? (A new	o answer indicates the equipment is in a separate building.)
SOLAR POTENTIAL INFORMATION			ver indicates the equipment is in a separate building)
R POT	If the water heating equipment Ground Floor Basem	t is inside the building, where is it located? nent Other (specify)	
SOLA	Is the water heating system a c	central system, does it consist of multiple units, or Combination	is it a combination of the central and multiple units?

				BASE	PERIOD YEA	\R		Fiscal Y	ear	
_	ENERGY TYPE	E	NERGY U	SAGE	0	ONVERSION	FACTOR		BTU US	AGE
_	Electricity					angan sa man nyi nyaya wa amin ay ar ili na ma	all de graph de speech ar stransch de graph de la serie			
•	Fuel 1									
	Fuel 2									
	TOTAL					Andrew Control of the				
				20% SA	VINGS YEA	R		Fiscal Y	ear	
	ENERGY TYPE	E	NERGY U	SAGE		CONVERSION	FACTOR		вти и	SAGE
	Electricity									
	Fuel 1									
	Fuel 2									
		1						1		
_	TOTAL Instructions: This section is to be a	completed by	the mini-	auditor after	the walk-thru	u portion of the	mini-audit. Fire	st, check the	appropria	te boxes which
		of the percer ties listed in ical and fuel	it of total el section L.	ectrical and Secondly.	fuel consump calculate the	ption which wo	uld be saved re	sulting from	the implen	nentation of
	Instructions: This section is to be a state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categorial	of the percenties listed in ical and fuel	it of total el section L.	ectrical and Secondly.	fuel consump calculate the	ption which wo	uld be saved re	sulting from avings by m	the implen iultiplying	nentation of the estimat
_	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportunit percentages by the annual electricheck two boxes in each categor Range of Electrical Savings —	of the percenties listed in ical and fuel	t of total el section L. consumpt	ectrical and Secondly, ion data on	fuel consum calculate the the energy (ption which wo range of ene- report.	uld be saved re rgy and cost s	sulting from avings by m	the implem nultiplying (specify)	nentation of the estimat
_	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportunit percentages by the annual electricheck two boxes in each categor Range of Electrical Savings —	of the percenties listed in ical and fuel y — 20 0%	toftotalel section L. consumpt	ectrical and Secondly, ion data on	fuel consum calculate the the energy i	ption which wo range of energent.	uld be saved re rgy and cost s	sulting from avings by m	the implem nultiplying (specify)	nentation of the estimat
	Instructions: This section is to be a state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings —	of the percer lies listed in ical and fuel ry — 20 0% 0% cost savings	section L. consumpt	ectrical and Secondly, ion data on 10%	fuel consum calculate the the energy in the	ption which wo by range of energe port.	□ 25%	sulting from avings by m	the implemultiplying (specify) (specify)	nentation of the estimat
_	Instructions: This section is to be a state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings —	of the percenties listed in ical and fuel y — 20 0%	25 5%	ectrical and Secondly, ion data on 10% 10% Range of Range	fuel consum calculate the the energy i	ption which wo by range of energe port.	uld be saved re rgy and cost s	sulting from avings by m	(specify) (specify)	nentation of the estimat
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and continuous control of the control of	of the percer lies listed in ical and fuel y — 220 0% cost savings Annual Ele	25 5% cotrical election L. consumpt 5 5 5 6 ctrical electrical electrical	ectrical and Secondly, ion data on 10% 10% Range of Sa	fuel consum calculate the the energy in the	ption which wo by range of energy report.	25% 25% Annual E	other clectrical Spent	(specify) (specify)	nentation of the estimate
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and compared to the same of the same of the savings — Range of Fuel Savings — Calculate ranges of energy and compared to the same of the savings — Range	of the percer lies listed in ical and fuel y — 220 0% □ 0% Cost savings Annual Ele Consump	25 5% cotrical election L. consumpt 5 5 5 6 ctrical electrical electrical	ectrical and Secondly, ion data on 10% 10% Range of Sa	fuel consum calculate the the energy in the	ption which wo by range of energy report.	25% 25% Annual E	sulting from avings by m	(specify) (specify) Rang	nentation of the estimat
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and compare the section of the Range of Electrical Savings — Calculate ranges of energy and compare the section of	of the percer lies listed in ical and fuel y — 220 0% □ 0% Cost savings Annual Ele Consump	25 5% cotrical elements of total elements of total elements of the consumpt o	ectrical and Secondly, ion data on 10% 10% Range of Sa	fuel consum calculate the the energy in the energy in ther	ption which wo range of energe of en	25% 25% Annual E Dollars	other lectrical Spent	(specify) (specify) Rang Doi - \$	nentation of the estimate the estimate the estimate the estimate the estimate the estimate the estimate the estimate
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and compare the Range of Fuel Savings — Range of Fuel Savings — Calculate ranges of energy and compare the Range of Fuel Savings — % Range — % X	of the percenties listed in ical and fuel y — 20 0% cost savings Annual Ele Consums 12974	28 5% Consumpt 5% ctrical ption kwh	ectrical and Secondly, ion data on 10% 10% Range of Range = 6	fuel consum calculate the the energy in the energy in ther	ption which wo range of energe report. 20% 20% 20% 4 Range 0 % to 5 %	25% 25% Annual E Dollars	other other lectrical Spent 1.95	(specify) (specify) Rang Doi - \$	nentation of the estimat
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and compared to the same of the	of the percenties listed in ical and fuel y — 20 0% cost savings Annual Ele Consums 12974	of total el section L. consumpt 25 5% Ctrical el section kwh kwh fuel	ectrical and Secondly, ion data on 10% 10% Range of Range Range Sa	fuel consum calculate the the energy of the	ption which wo range of energe report. 20% 20% 20% 4 Range 0 % to 5 %	uld be saved rergy and cost s □ 25% □ 25% Annual E Dollars x \$ 44 Annual	other other lectrical Spent 1.95	(specify) (specify) Rang Doi - \$	nentation of the estimate of Electric liars Savings 0 to 22.10
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and compared to the same of the	of the percer lies listed in ical and fuel y — 28 0% osst savings Annual Ele Consump 12974 12974 Se any Annual	of total el section L. consumpt 25 5% Ctrical el section kwh kwh fuel	ectrical and Secondly, ion data on 10% 10% Range of Range Range Sa	fuel consum calculate the the energy of 15% 15% Electrical 8 of Energy livings 0 kwh, _ to 48 kwh, _	ption which wo range of energe of en	uld be saved rergy and cost s □ 25% □ 25% Annual E Dollars x \$ 44 Annual	ulting from avings by m other other lectrical Spent 1.95	(specify) (specify) Rang Doi - \$	nentation of the estimate the of Electric llars Savings

Instructions: Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor. OPTIONAL: OPTIONAL CLASSIFICATION **ENERGY** ITEM NO. **ENERGY** DATE OF IMPLEMENTATION PAST ENERGY CONSERVATION ACTIONS COST MAJOR SAVINGS SUB SAVINGS CLASS CLASS 5 2 1 Routine Maintenance Schedule

Note Reproduce this page as necessary 64 EW PPORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

20			tion of the mini-addit report should be completed by the mini-addit	OPTIONAL:		
ITEM	CLASSIF NO) .	NEW MINI-AUDIT OPPORTUNITIES	ENERGY	ENERGY COST	DATE OF IMPLEMENTATION
NO.	MAJOR CLASS	SUB CLASS		SAVINGS	SAVINGS	
1	1	1	Keep all controls free of dust.			
2	1	2	Look for loose connections and bad contacts on a regular basis.			
			Lubricato motore to reduce trace and			
3	1	2	Lubricate motors to reduce wear and excessive torque.			
4	1	2	Check alignment of motors to drive equipment, align and tighten as neo			
	1	2	Replace worn or defective motors			
5	1	2	with motors that are sized as close			
6	1	2	Where it is impractical to replace motors which have low loads and			
			power factors, use capacitators at motor terminals to correct the power factor at 90%.			
	1	3	An instantaneous power factor			
			reading was. 92.			
8	3	3	Check for packing wear which can			
			cause excessive leakage. Repack to avoid excessive water wastage and shaft erosion.			
9	3	3	Inspect bearings and drive belts for wear and binding. Adjust, repair or replace as necessary.			
10	5	1	Keep records of the operating schedumonthly energy consumption and purcl	le		
			of any new equipment that affects energy consumption of efficiency of			
			the building. These records will indicate the impact of energy conservation measures.	r -		
11	5	1	Review the record books on a regular	r basis		

A	BUILDING NAME		NAME OF ORGANIZATION	DATE		
A	Lift Station - Sanitary Sewa	age	City of Bloomington	3/18/81		
	BUILDING ADDRESS		ADDRESS			
	2509 West 98th Street	·	2215 West Old Shakopee Road			
-	CITY	ZIP CODE	CITY	ZIP CODE		
S	Bloomington	55431	Bloomington	55431		
CONTACT	PERSON COMPLETING FORM	TELEPHONE	CONTACT PERSON	TELEPHONE		
ပ္မည္ဆို	Randy Smith	935-6901	Arthur Jensen	881-5811		

DNon-Profit Association (NAP)	Instructions: For blocks 1 and 2 check the box which best fits the building ownership conditions. For block 3 determine which of the four categories describes the building type and then within the category check off the sub category befitting the building function.					
2. ULTIMATE OWNER Cacunty C(NTY) Dadministration (SCHL-ADMN) Pipelice (County C(NTY) Dadministration (SCHL-ADMN) Fire (C(NTY) Dadministration (SCHL-ADMN) Dadministration (SCHL-ADMN)	LOCG-OFFC) LOCG-STRG) LOCG-SERV) LOCG-LBRY)					
State Public School Private School PRISC Private School Privat	LOCG-LBHY) LOCG-PLCE) LOCG-FIRE) LOCG-OTHR)					
If eligible for both Federal and State Funding: Have you received a mini-audit grant before?	HOSP-GENL) HOSP-TUBR) HOSP-OTHR)					
Have you received a mini-audit grant before? Yes No Have you previously applied for mini-audit funding? Yes No	funding or rganization.					
Signature:						
Signature:						
If eligible for Federal funding only: Have you received a mini-audit grant before?						
Have you received a mini-audit grant before?						
TSJ						
TEST						
TEST						
TEST						
JEST						
JEST .						
JEST .						
삑						
Date:						
LW Name:						
Name: Name: Signature:						

D	Check the type of energy report which was completed and submitted price	or to this mini-audit report.
EPORT F	☐ Elementary School Energy Report (Form No. ED-00444-02) ☐ Secondary School Energy Report (Form No. ED-00445-02) ☐ Existing Building Energy Report (Form No. EN-00041-01)	
ENERGY REPORT CHECK-OFF	If an energy report has not been completed previous to this mini-audit revocational schools should use form ED-00444-02 or form ED-00445-02, depubuilding energy report, form EN-00041-01.	port, one must be included with this report. Elementary, secondary, and ending on building complexity. All other buildings should use the existing
E	Instructions: This section is to be completed and signed by a registered p completed the State of Minnesota's Mini-Audit Procedures Course. This sec are completed. All blanks must be filled in.	rofessional engineer or by a certified mini-auditor who has successfully tion should be completed after this mini-audit report and an energy report
	I have reviewed the energy report and/or the energy report results for this to corrected any misinformation on the energy report which will be resubmi	building. I found all information contained therein to be correct <i>OR</i> I have tted with this mini-audit report to the Minnesota Energy Agency.
	I am not directly responsible for the day to day operations of this building	g being audited.
	I have fully disclosed my financial interests relating to this mini-audit and	any energy conservation measures considered by this audit.
	I have walked through this building and have found the recommendation maintenance changes, and low cost energy conservation measures, which	
	I have made a rough estimate, in section G, of the range of savings which listed in section I. i am not responsible if the actual savings resulting from	may result from the implementation of all of the mini-audit opportunities method that the mini-audit do not fall within the estimated range.
	Based on actual records, the energy conservation operating and maintena 20% of the building's energy consumption as specified in section I.	nnce procedures listed in section K <u>did not</u> save at least (did, did not)
	Based upon my observation of the physical characteristics of this buildin Should not be the subject of a maxi-audit. (should, should not) I realize that this is not a final judgement, that the State reserves the right to	
	and other criteria.	·
	Based upon the information in section E and the information referred to in a	(snould, snould not)
	undergo further solar conversion analysis, and/or <u>should not</u> wind, wood. (Circle proper resources) (should, should n	ot) undergo further analysis of the renewable resources — waste,
	In my judgement, as a mini-auditor, all of the above statements are true	and correct.
		Witnessed by:
	Randy Smith	Assistant Maintenance Supervisor
	Randy Smith Mini-Auditor's Name (Print or Type)	Building Ofanizational Authority (Print or Type)
	Signature 206	Signature fruits
	Rieke Carroll Muller Associates, Inc Firm Name (if none, enter none)	March 18, 1981
	P.O. Box 130	
	612/935-6901 Phone	
	<u>March 18, 1981</u> Date	
NTS		
MINI-AUDIT STATEMENTS		
ZZ		

F	NAME	POSITION	ORGANIZATION							
	Randy Smith	Certified Mini-Auditor	Rieke Carroll Muller Assoc., I							
	Scott Hutchins	CET	Rieke Carroll Muller Assoc., I							
	Art Parvey		City of Bloomington							
L M										
TEAM										
G	BRIEF DESCRIPTION OF GENER	AL BUILDING CONDITION (i.e. type, and function)								
	Good, underground lift station MAJOR CHANGES PLANNED WITHIN NEXT 15 YEARS (i.e. demolition, rehabilitation, conversion from one building type to another)									
N O	None	ROOF (i.e. metal beams, wooden rafters, concrete)								
BUILDING	Concrete									
NFOIL	ROOFING MATERIAL (i.e. tar and Metal Hatch	gravel, shingles, tile)								
	770047 770077									
H		r the following questions for the building being mini-au	udited.							
	Is there open land adjacent to the Yes ADNo	building?								
	Solar collectors need to be located in an unshaded area. Is the roof of the building and the south facing wall unshaded between the hours of 9 a.m. and 3 p.m.? Roof: C Yes XXNo South facing Wall: Yes No None									
	If the roof or wall are partly shade % of roof unshaded % of south facing wall unshaded	d, what percentage of the surface is unshaded?								
	What is the overall shape of the bi XX square ☐ rectangle ☐ H	uilding? shaped □ E-shaped □ other (specify)								
	Is the roof of the building flat or p XX(flat □ pitched	itched?								
	If pitched, what is the compass or	ientation of the ridgeline?								
	If pitched, what is the angle that t									
	Are there large obstructions on th ☐ Yes XXNo	e roof such as chimneys, rooms for mechanical equipr	ment, ventilating units, water towers, etc?							
	What is the exterior facing materi	al for the south facing wall?								
	What percentage of the south fac-	ng wall is glass?%								
	Is the building's space heating equipment located within or on the building? (A no answer indicates the equipment is in a separate building.)									
	If the space heating equipment is Ground Floor Basemen	inside the building, where is it located? t □ Roof □ Other (specify)								
NIAL		uipment located within the building? (A no answer indi								
OLAR POTENTIAL	If the water heating equipment is Ground Floor Basemen	inside the building, where is it located? t □ Other (specify)								
OLAF VFOR		tral system, does it consist of multiple units, or is it a								

			BASE PE	RIOD YEA	R		Fiscal Ye	ear
	ENERGY TYPE	ENERGY U		T	ONVERSION F	ACTOR		BTU USAGE
	Electricity							
	Fuel 1							
	Fuel 2							
	TOTAL							
-			20% SAVI	NGS YEAF	3		Fiscal Y	ear
	ENERGY TYPE	ENERGY U	ISAGE	С	ONVERSION F	ACTOR		BTU USAGE
	Electricity							
	Fuel 1							
	Fuel 2							
	TOTAL							
	Instructions: This section is to be state the roughly estimated range	completed by the mini-	auditor after the	walk-thru	portion of the n	nini-audit. Firs	st, check the a	appropriate boxes w
	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electr Check two boxes in each category	of the percent of total e ties listed in section L rical and fuel consump	lectrical and fu . Secondly, ca tion data on th	el consump culate the e energy re	tion which wou range of energ eport.	ld be saved re gy and cost s	sulting from (avings by m	the implementation outfiplying the estim
	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each categor Range of Electrical Savings —	of the percent of total e ties listed in section L rical and fuel consump	lectrical and fue . Secondly, cal	el consump	tion which wou range of energ	ld be saved re	sulting from the avings by m	the implementation outliplying the estim
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categoriange of Electrical Savings —	of the percent of total eties listed in section Lical and fuel consump ry — 120 0% 130 5%	lectrical and fue. Secondly, caltion data on the	el consump culate the e energy re	tion which wou range of energe eport.	Id be saved regy and cost s	sulting from the avings by m	the implementation outfiplying the estim
	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings —	of the percent of total eties listed in section Lical and fuel consump ry — 120 0% 130 5%	lectrical and fue. Secondly, caltion data on the	ol consumption of the consumptio	20%	Id be saved regy and cost s	sulting from the avings by m	the implementation outliplying the estim
	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings —	of the percent of total eties listed in section Lical and fuel consump ry — 120 0% 130 5%	lectrical and fue. Secondly, caltion data on the	ol consumption of the consumptio	20%	Id be saved regy and cost s	unings by m other other	the implementation outliplying the estim
	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electr Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and of	of the percent of total eties listed in section Lical and fuel consump ry — 12 0%	lectrical and fue. Secondly, caltion data on the 10% 10% Range of E	ol consumption of the consumptio	20%	25% 25% Annual E	usulting from to avings by m other other	(specify) Range of Elect
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	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and of the Range of Electrical Savings — When the Range is th	of the percent of total eties listed in section Lical and fuel consumpry— 120 0% 121 5% 130 0% 15% 140 0% 15% 15% 15% 15% 17202 kwh 17202 kwh	lectrical and fur Secondly, caltion data on the 10% 10% Range of E Range of Savin 0 to 860	ol consumption of the consumptio	20% 20% 20% 20% to 8	25% 25% Dollars	other clectrical spent	(specify) Range of Elect Dollars Savin
	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and of the category of the savings — When the category of the categor	of the percent of total eties listed in section Lical and fuel consumpry— 120 0% 121 5% 130 0% 15% 140 0% 15% 15% 15% 15% 17202 kwh 17202 kwh	Range of E Range of E Range of E Range of Savir	of consumption collections and the consumption collections are consumptions and collections are collections and collections are collections ar	20% 20% 20% 20% to 8	25% 25% Annual E Dollars \$ 608	other clectrical spent	(specify) Range of Elect Dollars Savin
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	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and of the category of the savings — When the category of the savings — When the category of the category of the savings — When the category of the savings — When the category of the category of the savings — When the category of the savings — When the category of the category of the savings — When the category of the	of the percent of total eties listed in section Lical and fuel consumpry— 120 0% 125% 130 0% 15% 13	Range of E Range of E Range of Savi	culate the elements of the latest the elements of the latest the elements of the latest	tion which wou range of energeport. 20% 20% 20% 20% to x to x ings % Range	25% 25% 25% Annual E Dollars \$ 608 Annual E Dollars 608 A	lectrical Spent 3.35	(specify) (specify) Range of Elect Dollars Savin to Range of Function (Specify)

Instructions: Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification exheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor. OPTIONAL: OPTIONAL: CLASSIFICATION **ENERGY** ITEM NO. **ENERGY** DATE OF IMPLEMENTATION PAST ENERGY CONSERVATION ACTIONS COST NO. MAJOR SAVINGS SUB SAVINGS CLASS CLASS 5 2 1 Routine maintenance schedule

Note Reproduce this page as necessary 64

EW PPORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

ITEM	CLASSIFICATION NO.				OPTIONAL ENERGY	DATE OF IMPLEMENTATION	
NO.	MAJOR CLASS	SUB CLASS	NEW MINI-AUDIT OPPORTUNITIES	ENERGY SAVINGS	COST SAVINGS	DATE OF IMPLEMENTATION	
1	1	1	Keep all controls free of dust.		Market Spage - John State Spage Spag		
2	1	2	Look for loose connections and bad contacts on a regular basis.				
	-						
3	1	2	Lubricate motors to reduce wear and excessive torque.				
			·				
4	1	2	Check alignment of motors to driven equipment, align and tighten as				
			necessary.				
5	1	2	Replace worn or defective motors wit motors that are sized as close to	ì			
			the load as possible and use the highest efficeincy motors available.				
6	1	2	Where it is impractical to replace motors which have low loads and power				
			factors, use capacitors at motor terminals to correct the power factor				
			to 90%.				
7	1	3	An instantaneous power factor read- ing was .8.				
			Check for packing wear which can				
8	3	3	cause excessive leakage. Repack to avoid excessive water wastage and				
			shaft erosion.				
9	3	3	Inspect bearings and drive belts for wear and binding. Adjust, repair or				
			replace as necessary.				
10	5	1	Keep records of the operating schedu monthly energy consumption and pur-	'			
	,		chase of any new equipment that affe energy consumption of efficiency of the building. These records will in				
			dicate the impact of energy conserva				
			tion measures.				

	UNITIES
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Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

ITEN	A I	CLASSIFICATION NO.		NEW MINI-AUDIT OPPORTUNITIES	OPTIONAL: ENERGY SAVINGS	ENERGY COST SAVINGS		
NO.		MAJOR SUB CLASS CLASS				SAVINGS	DATE OF IMPLEMENTATION	
1	1	5	1	Review the record books on a regular basis.				
							·	
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	\top							
			W-11					
		5.1 · · · · · · · · · · · · · · · · · · ·						
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A	BUILDING NAME Lift Station - Sanitary Sev	NA CO	NAME OF ORGANIZATION City of Bloomington 3-18-81		
	BUILDING ADDRESS 1701 West 106th. Street	vu gc	ADDRESS 2215 West Old Shakopee Road		
ACT	CITY Bloomington	ZIP CODE 55431	CITY Bloomington	ZIP CODE 55431	
CONT	PERSON COMPLETING FORM Randy Smith	TELEPHONE 935-6901	CONTACT PERSON Arthur Jensen	TELEPHONE 881-5811	

В	Instructions: For blocks 1 and 2 check the box which describes the building type and then within the category					he four categories
	1. OWNERSHIP TYPE (PUB) Non-Profit Association (NAP)	SCHOOLS □Elementary □Secondary □Coll. or Univ. □Vocational	(SCHL-ELM) (SCHL-SECD) (SCHL-POST) (SCHL-VOCL)	C.	LOCAL GOVERNME Office Storage Service Library	NT (LOCG-OFFC) (LOCG-STRG) (LOCG-SERV) (LOCG-LBRY)
ODE	2. ULTIMATE OWNER County (CNTY) City (CITY) Township (TOWN)	□Education Agency □Administration □OTHER	(SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR)		□Police □Fire □OTHER	(LOCG-PLCE) (LOCG-FIRE) (LOCG-OTHR)
BUILDING ELIGIBILITY CODE	State (STAT) b. State (STAT) c. Stat	PUBLIC CARE Nursing Home Long Term Care Rehab. Facility Public Health Ctr. Res. Child Care Ctr.	(PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-HCTR) (PBCR-RCCC)	d.	HOSPITALS □General □Tuberculosis □OTHER	(HOSP-GENL) (HOSP-TUBR) (HOSP-OTHR)
C	Instructions: With reference to page 23 entitled Fund just Federal funding, then answer the questions corre	ing Information, determine ctly for the situation. This	o if the facilities are section must be sig	eligii ned a	ble for both Federal and nd dated by the head o	d State funding or fithe organization.
	If eligible for both Federal and State Funding: Have you received a mini-audit grant before?					
	Have you previously applied for mini-audit funding Do you wish to apply for mini-audit funding?					
	Date: March 18, 1981					
	Name: Arthur Jensen					
	Signature: William fruin					
	If eligible for Federal funding only; Have you received a mini-audit grant before? Have you previously applied for mini-audit funding Do you wish to apply for mini-audit funding? The 50% match for Federal funds will come from: (? 🗆 Yes 🗆 No Yes 🗆 No	ecessary.)			
			,,			,
		,				
EST	TSJ .					
EOC	Date:					
NG R	Name:					
MINI-AUDIT FUNDING REQUEST	Signature:					
Tar.	th.					

D	Check the type of energy report which was completed and submitted pri	or to this mini-audit report.
REPORT	☐ Elementary School Energy Report (Form No. ED-00444-02) ☐ Secondary School Energy Report (Form No. ED-00445-02) ☑ Existing Building Energy Report (Form No. EN-00041-01)	
ENERGY REPORT CHECK-OFF	If an energy report has not been completed previous to this mini-audit re vocational schools should use form ED-00444-02 or form ED-00445-02, dej building energy report, form EN-00041-01.	eport, one must be included with this report. Elementary, secondary, and pending on building complexity. All other buildings should use the existing
E	Instructions: This section is to be completed and signed by a registered completed the State of Minnesota's Mini-Audit Procedures Course. This se are completed. All blanks must be filled in.	professional engineer or by a certified mini-auditor who has successfully ction should be completed after this mini-audit report and an energy report
	I have reviewed the energy report and/or the energy report results for this corrected any misinformation on the energy report which will be resubm	building. I found all information contained therein to be correct OR I have litted with this mini-audit report to the Minnesota Energy Agency.
	I am not directly responsible for the day to day operations of this building	ng being audited.
	I have fully disclosed my financial interests relating to this mini-audit an	d any energy conservation measures considered by this audit.
	I have walked through this building and have found the recommendation maintenance changes, and low cost energy conservation measures, which	ons listed in section I of this mini-audit report to be the operations and ch would reduce energy consumption in this building.
	I have made a rough estimate, in section G, of the range of savings which listed in section I. i am not responsible if the actual savings resulting from	may result from the implementation of all of the mini-audit opportunities om this mini-audit do not fall within the estimated range.
	Based on actual records, the energy conservation operating and mainten 20% of the building's energy consumption as specified in section I.	ance procedures listed in section K <u>did not</u> save at least (did, did not)
	(should, should not)	ng and the building's major energy using systems, I recommend that this
	I realize that this is not a final judgement, that the State reserves the right to and other criteria.	make the maxi-audit funding determination based on this mini-audit report
	Based upon the information in section E and the information referred to in	should not
	undergo further solar conversion analysis, and/or should no	(should should not)
	wind, wood. (Circle proper resources) (should, should	not)
	In my judgement, as a mini-auditor, all of the above statements are true	and correct.
		Witnessed by:
	Dondy, Contab	Assistant Maintenance Supervisor
	Randy Smith Mini-Auditor's Name (Print or Type)	Building Organizational Authority (Print or Type)
	Komby Sut 206	(Mthus W) Sinun
	Signature	Signature
	Rieke Carroll Muller Associates, Inc. Firm Name (if none, enter none)	March 18, 1981
	P.O. Box 130, Hopkins, MN 55343 Address	
	612-935-6901 Phone	
	March 18, 1981	
MINI-AUDIT STATEMENTS		
I-AU		
STA		

	NAME	POSI	TION	ORGANIZATION	
8					
	Randy Smith	Certified	Mini-Auditor	Rieke Carroll Muller	Assoc., Inc.
	Scott Hutchins	Certified	Electrical Tech.	Rieke Carroll Muller	Assoc., Inc.
	Art Parvey			City of Bloomington	
	<i>y</i>				
AUDIT			areas and a second a second and		
3,					
G	BRIEF DESCRIPTION OF GENER Good, lift stati				
z	major changes planned w None	ITHIN NEXT 15 YEA	RS (i.e. demolition, rehabilitation,	conversion from one building type to ar	nother)
BUILDING	STRUCTURAL COMPONENTS O	PF ROOF (i.e. metal I	beams, wooden rafters, concrete)		
O S	ROOFING MATERIAL (i.e. tar an	d gravel, shingles, til	le)		
SE	Tar and Gravel				
		,			
H		· ·	stions for the building being mini-	audited.	
	Is there open land adjacent to the ☐ Yes ☑ No	e building?			
	Solar collectors need to be located 3 p.m.?	in an unshaded area	a. Is the roof of the building and the	outh facing wall unshaded between the h	ours of 9 a.m. and
	Roof: Yes □ No South facing Wall: Yes □	J No			
	If the roof or wall are partly shad % of roof unshaded % of south facing wall unshade	%	of the surface is unshaded?		
	What is the overall shape of the I	building? H-shaped □ E-sha _l	ped Oother (specify)		
	Is the roof of the building flat or Market pitched	pitched?			
	If pitched, what is the compass of	prientation of the ride	geline?		
	If pitched, what is the angle that				i
	Are there large obstructions on t ☐ Yes ☑ No	he roof such as chin	nneys, rooms for mechanical equi	oment, ventilating units, water towers, et	c?
	What is the exterior facing mater	rial for the south fac	ing wall? Face I	Brick	
	What percentage of the south fa-				
	Is the building's space heating e	quipment located wi	thin or on the building? (A no ans	wer indicates the equipment is in a sepa	arate building.)
	If the space heating equipment i	s inside the building nt D Roof D Oth	, where is it located? her (specify)		
SOLAR POTENTIAL				dicates the equipment is in a separate b	
R POT		s inside the building nt DOther (specif	, where is it located? ly)		
SOLA	Is the water heating system a ce □ Central □ Multiple □ (entral system, does it Combination	t consist of multiple units, or is it a	combination of the central and multiple	e units?

L		BASE F	ERIOD YEA	Fiscal Year					
	ENERGY TYPE	ENERGY USAGE			С	ONVERSION	FACTOR		BTU USAGE
	Electricity								
	Fuel 1								
	Fuel 2								
	TOTAL								
				20% SA	VINGS YEAF	3		Fiscal Y	ear
	ENERGY TYPE		ENERGY USAGE CONVERSION FA			FACTOR		BTU USAGE	
1	Electricity								
	Fuel 1								
	Fuel 2								
_									
	TOTAL Instructions: This section is to	be complete	nd by the min	i-auditor after	he walk-three	portion of the	mini-audit Fiz	st chacktha	appropriate hoves whi
	Instructions: This section is to state the roughly estimated ran of the new mini-audit opports percentages by the annual ele	ige of the pe unities listed	rcent of total	electrical and f L. Secondly, c	uel consump	tion which wo	uld be saved re	sulting from	the implementation of
	Instructions: This section is to state the roughly estimated ran of the new mini-audit opports	ige of the pe unities listed ectrical and	rcent of total	electrical and f L. Secondly, c	uel consump	tion which wo	uld be saved re	sulting from	the implementation of
	Instructions: This section is to state the roughly estimated ran of the new mini-audit opportu percentages by the annual ele	ege of the pe unities listed ectrical and egory —	rcent of total	electrical and f L. Secondly, c	uel consump	tion which wo	uld be saved re	esulting from savings by m	the implementation of
	Instructions: This section is to state the roughly estimated ran of the new mini-audit opports percentages by the annual election. Check two boxes in each cate	ige of the pe unities listed ectrical and gory —	rcent of total d in section I fuel consum	electrical and f L. Secondly, c ption data on	uel consump alculate the the energy r	otion which wo range of ener eport.	uld be saved re	esulting from savings by m	the implementation of jultiplying the estimat
	Instructions: This section is to state the roughly estimated ran of the new mini-audit opports percentages by the annual electrical Savings —	age of the peunities listed carrical and agory —	rcent of total d in section of fuel consum	electrical and f L. Secondly, option data on	uel consump alculate the the energy re	ption which wo range of energeport.	uld be saved regy and cost a	esulting from savings by m	the implementation of ultiplying the estimat
	Instructions: This section is to state the roughly estimated ran of the new mini-audit opports percentages by the annual electrical Savings — Range of Fuel Savings —	age of the peunities listed carrical and agory —	rcent of total d in section of fuel consum	electrical and file. Secondly, option data on	uel consump alculate the the energy re	otion which wo range of energeport.	uld be saved regy and cost a	esulting from savings by m	the implementation of ultiplying the estimat
	Instructions: This section is to state the roughly estimated ran of the new mini-audit opports percentages by the annual electrical Savings — Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy an	ge of the pe unities listed octrical and gory — □ 0% □ 0% d cost savin	rcent of total d in section if fuel consum 55% 55% sgs — Electrical umption	electrical and fi L. Secondly, c ption data on 10% 10% Range of Range	uel consump alculate the the energy r	otion which wo range of energeport.	□ 25% □ 25% □ Dollars	osulting from savings by m other other clectrical	the implementation of ultiplying the estimat
	Instructions: This section is to state the roughly estimated ran of the new mini-audit opports percentages by the annual electrical savings — Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and — % Range	nge of the peunities listed octrical and octrical and ogory — 0% O% O	rcent of total d in section if fuel consum 55% 55% sgs — Electrical umption	electrical and fi L. Secondly, c ption data on 10% 10% Range of Range San = 0	uel consump alculate the the energy ro 15% 15% Electrical Sa of Energy rings	otion which wo range of energe port.	□ 25% □ 25% □ Dollars	osulting from savings by m other other	the implementation of ultiplying the estimate (specify) (specify) Range of Electric Dollars Saving:
	Instructions: This section is to state the roughly estimated ran of the new mini-audit opports percentages by the annual electrical savings — Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and — % Range	age of the peunities lister octrical and agory — 60% and cost savir	rcent of total din section of the consumption of th	electrical and fi L. Secondly, c ption data on 10% 10% Range of Range San = 0	uel consump alculate the the energy ro 15% 15% Electrical Sa of Energy rings kwh,	to 5	□ 25% □ 25% □ 25% ■ 25% ■ 25% ■ 25% ■ 25% ■ 25%	osulting from savings by m other other clectrical	(specify) Range of Electric Dollars Saving:
	Instructions: This section is to state the roughly estimated ran of the new mini-audit opports percentages by the annual electrical savings — Check two boxes in each cate Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and — % Range lower bound — 0 % to — upper bound — 5 %	age of the peunities lister octrical and gory — 0% d cost savir Annual Cons 7583	reent of total din section in fuel consum 10 5% 15 5% 15% Electrical umption 29 kwh	electrical and file. Secondly, option data on 10% 10% Range of Range of Sar = 0 3791.	uel consump alculate the the energy re 15% 15% Electrical Sa of Energy rings kwh,	vings Range to 5 %	Uld be saved regy and cost s	osulting from bavings by months of ther other other spent 9.28	the implementation of ultiplying the estimate (specify) (specify) Range of Electric Dollars Saving:
	Instructions: This section is to state the roughly estimated ran of the new mini-audit opports percentages by the annual electrical savings — Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and — % Range	ge of the peunities listed corrical and gory — 60 0% of cost saving Annual Cons at 758.	reent of total din section in fuel consum 10 5% 15 5% 15% Electrical umption 29 kwh	electrical and file. Secondly, option data on 10% 10% Range of Range of Sar = 0 3791. Range	uel consump alculate the the energy re 15% 15% Electrical Sa of Energy rings kwh,	vings Range to 5 %	uld be saved regy and cost s 25% 25% Dollars x \$ 222 Annual E	osulting from bavings by months of ther other other spent 9.28	the implementation of ultiplying the estimate (specify) (specify) Range of Electric Dollars Saving:
	Instructions: This section is to state the roughly estimated ran of the new mini-audit opports percentages by the annual electrical savings — Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and to to upper bound	age of the peunities lister octrical and ogory — 150 0% of cost savir Annual Cons 1758 2	rcent of total din section in fuel consum 10 5% 15 5% 15 5% 19 5% Liectrical umption 29 kwh 10 fuel unifuel	electrical and file. Secondly, option data on 10% 10% Range of Range of Sar = 0 3791. Range	uel consump alculate the the energy ro 15% 15% Electrical Sa of Energy rings kwh, to 5 kwh, of Fuel Savi	otion which wo range of energe port. 20% 20% 20% 4 vings 4 Range 5 % 1 Range	uld be saved regy and cost s 25% 25% Dollars x \$ 222 Annual E	osulting from savings by months of ther other other of the spent 9.28	the implementation of cultiplying the estimate (specify) (specify) Range of Electric Dollars Saving: \$ 0 to \$ 111.46

Instructions: Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor. OPTIONAL: OPTIONAL CLASSIFICATION **ENERGY ENERGY** NO. ITEM DATE OF IMPLEMENTATION PAST ENERGY CONSERVATION ACTIONS COST MAJOR SAVINGS SUB SAVINGS CLASS **CLASS** 5 2 Routine maintenance schedule. 1

Note Reproduce this page as necessary

JEW PPORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

OPTIONAL: OPTIONAL:

	· · · · · · · · · · · · · · · · · · ·			OPTIONAL:	OPTIONAL			
ITEM NO.	CLASSIFI NO MAJOR CLASS		NEW MINI-AUDIT OPPORTUNITIES	ENERGY SAVINGS	ENERGY COST SAVINGS	DATE OF IMPLEMENTATION		
1	1	1	Keep all controls free of dust.					
2	1	2	Look for loose connections and bad contacts on a regular basis.					
3	1	2	Lubricate motors to reduce wear and excessive torque.					
4	1	2	Check alignment of motors to driven equipment, align and tighten as necessary.					
5	1	2	Replace worn or defective motors wi motors that are sized as close to t load as possible and use the highes efficiency motors available.	he				
6	1	2	Where it is impractical to replace motors which have low loads and power factors, use capacitors at motor terminals to correct the power factor to 90%.					
7	1	3	An instantaneous power factor readi was .87.	ng				
8	2	2	Weatherstrip all exteriod doors.					
9	2	2	Replace an existing door with one of a higher R-value.					
10	2	8	Caulk around pipes, louvers, and other openings in the walls. Insula walls with rigid insulation on insi surfaces.					
10	3	1	65°F maximum occupied, 60°F maximum unoccupied during the heating seaso					
12	3	3	Check for packing wear which can cause excessive leakage. Repack to avoid excessive water wastage & sha		sion.			

IEW OPPORTUNITIES Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

	CLASSIF	ICATION		OPTIONAL:	OPTIONAL ENERGY		
NO.	MAJOR CLASS	O. SUB CLASS	NEW MINI-AUDIT OPPORTUNITIES	ENERGY SAVINGS	COST	DATE OF IMPLEMENTATION	
13	3	3	Inspect bearings and drive belts for wear and binding. Adjust, repair				
			or replace as necessary.				
14	5	1	Keep records of the operating schedumonthly energy consumption and purchase of any new equipment that				
			affects energy consumption of effic- iency of the building. These record will indicate the impact of energy				
15	5	1	conservation measures. Review the record books on a regular basis.		-		
16	7	4	Inspect electrical contacts and working parts of relays and maintain in good working order.				
17	7	4	Check heater elements for cleanlines Replace as necessary.	ss.			
18	7	4	Check controls for proper operation Adjust as necessary.				
19	7	4	Periodically tighten all electrical mechanical connections to prevent arcing and burning due to metal flow or loosening of terminal bolts or lugs.				
:							

A	BUILDING NAME Lift Station - Sanitary Sewa	ge	NAME OF ORGANIZATION City of Bloomington DATE 2/18/81				
	BUILDING ADDRESS 8350 West 106th Street		ADDRESS 2215 West Old Shakopee Roa	d			
ACT	0		CITY Bloomington	ZIP CODE 55431			
COMTACT	PERSON COMPLETING FORM Randy Smith	TELEPHONE 935-6901	CONTACT PERSON Arthur Jensen	TELEPHONE 881-5811			

1	OWNERSHIP TYPE		3a.	SCHOOLS		C.	LOCAL GOVERNMENT	
•	178	PUB)	Ja.	DElementary	(SCHL-ELM)	U.	Office	(LOCG-OF
	Non-Profit Association	(NAP)	l	Secondary	(SCHL-SECD)		□Storage	(LOCG-ST
	Addiciation	(1401-)	1	Coll. or Univ.	(SCHL-POST)		XX Service	(LOCG-SE
			1	□Vocational	(SCHL-VOCL)		Library	(LOCG-LB
2.	ULTIMATE OWNER		1	DEducation Agency	(SCHL-ADMN)		Police	(LOCG-PL
	□ County	(CNTY)	1	☐ Administration	(SCHL-ADMN)		□Fire	(LOCG-FIF
	Exity	(CITY)		DOTHER	(SCHL-OTHR)		OTHER	(LOCG-OT
	☐Township ☐State	(TOWN)	Ь.	PUBLIC CARE			LICEDITALS	
	DPublic School	(STAT) (PUSC)	1	□Nursing Home	(PBCR-NURS)	d.	HOSPITALS □General	(HOSP-GE
	Private School	(POSC)	1	□Long Term Care	(PBCR-TERM)		OTuberculosis	(HOSP TU
	□Non-Profit Association	(NPAP)	1	☐Rehab. Facility	(PBCR-RHAB)		OTHER	(HOSP-OT
	□Indian Tribe	(INDN)		Public Health Ctr.	(PBCR-HCTR)		ZOTTEN	(11001 01
		(114014)	ı	Res. Child Care Ctr.	(PBCR-RCCC)			

80 W	□ Res. Child Care Ctr. (PBCR-RCCC)
C	Instructions: With reference to page 23 entitled Funding Information, determine if the facilities are eligible for both Federal and State funding or just Federal funding, then answer the questions correctly for the situation. This section must be signed and dated by the head of the organization
	If eligible for both Federal and State Funding: Have you received a mini-audit grant before? □ Yes ☑ No Have you previously applied for mini-audit funding? □ Yes □ No Do you wish to apply for mini-audit funding? □ Yes ☑ No
	Date
	Name Arthur Jensen
	Signature Maturia Knyn
	If eligible for Federal funding only:
	Mave you received a mini-audit grant before? ☐ Yes ☐ No Have you previously applied for mini-audit funding? ☐ Yes ☐ No
	Do you wish to apply for mini-audit funding? Yes No The 50% match for Federal funds will come from: (Use additional sheets if necessary.)
-	
UES	
REG	Date
MINI-AUDIT FUNDING REQUEST	Name
M D	Signature

i	Charle the time of annual state to the same of the sam	d maine da dhia marai arrell agus a s						
	Check the type of energy report which was completed and submittee	d prior to this mini-audit report.						
	☐ Elementary School Energy Report (Form No. ED-00444-02) ☐ Secondary School Energy Report (Form No. ED-00445-02)							
	XXExisting Building Energy Report (Form No. EN-00041-01)							
	If an energy report has not been completed previous to this mini-au- vocational schools should use form ED-00444-02 or form ED-00445-02	ilt report, one must be included with this report. Elementary, secondary, t , depending on building complexity. All other buildings should use the exist						
	building energy report, form EN-00041-01.							
	Instructions: This section is to be completed and signed by a registe completed the State of Minnesota's Mini-Audit Procedures Course. The	red professional engineer or by a certifled mini-auditor who has successf is section should be completed after this mini-audit report and an energy ref						
	are completed. All blanks must be filled in.							
	I have reviewed the energy report and/or the energy report results for this building. I found all information contained therein to be correct OR I have corrected any misinformation on the energy report which will be resubmitted with this mini-audit report to the Minnesota Energy Agency							
	corrected any misinformation on the energy report which will be resubmitted with this mini-audit report to the Minnesota Energy Agency I am not directly responsible for the day to day operations of this building being audited.							
	I have fully disclosed my financial interests relating to this mini-aud							
		dations listed in section I of this mini-audit report to be the operations						
	maintenance changes, and low cost energy conservation measures,	which would reduce energy consumption in this building.						
	I have made a rough estimate, in section G, of the range of savings we listed in section I. I am not responsible if the actual savings resulting	hich may result from the implementation of all of the mini-audit opportung from this mini-audit do not fall within the estimated range.						
	Based on actual records, the energy conservation operating and maintenance procedures listed in section K did notsave at leas 20% of the building's energy consumption as specified in section I(did. did not)							
	Based upon my observation of the physical characteristics of this b	uilding and the building's major energy using systems, I recommend that						
	Based upon my observation of the physical characteristics of this building and the building's major energy using systems, I recommend that the SNOULD NOT be the subject of a maxi-audit. (should, should not)							
	I realize that this is not a final judgement, that the State reserves the right to make the maxi-audit funding determination based on this mini-audit repo							
	and other criteria.							
	Based upon the information in section E and the information referred	(should, should not)						
	undergo further solar conversion analysis, and/or Should r wind, wood. (Circle proper resources) (should, sho	<u>IOT </u>						
	In my judgement, as a mini-auditor, all of the above statements are	true and correct.						
l		Witnessed by:						
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
	Randy Smith	Assistant Maintenance Supervisor						
	Randy Smith Mini-Auditor's Name (Prinfor Type)	Assistant Maintenance Supervisor Building Organizational Authority (Frunt or Type)						
	Randy Smith Mini-Auditor's Name (Print or Type) Auditor's Name (Print or Type) Signature (Assistant Maintenance Supervisor Building Organizational Authority (Frint or Type) Little Little Little						
	Skignature 206	Assistant Maintenance Supervisor Building Organizational Authority (Frunt or Type)						
	Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none)	Assistant Maintenance Supervisor Building Organizational Authority (Frint or Type) Little Little Little						
	Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343	Assistant Maintenance Supervisor Building Organizational Authority (Frunt or Type) William W family Signature March 18, 1981						
	Signature Rieke Carroll Muller Assoc, Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address	Assistant Maintenance Supervisor Building Organizational Authority (Frunt or Type) William W family Signature March 18, 1981						
	Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone	Assistant Maintenance Supervisor Building Organizational Authority (Frint or Type) William W Kindle Signature March 18, 1981						
	Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone March 18, 1981	Assistant Maintenance Supervisor Building Organizational Authority (Frint or Type) William W Kindle Signature March 18, 1981						
	Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone	Assistant Maintenance Supervisor Building Organizational Authority (Frunt or Type) William W family Signature March 18, 1981						
	Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone March 18, 1981	Assistant Maintenance Supervisor Building Organizational Authority (Frunt or Type) Color of March 18, 1981						
	Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone March 18, 1981	Assistant Maintenance Supervisor Building Organizational Authority (Frunt or Type) Color of March 18, 1981						
	Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone March 18, 1981	Assistant Maintenance Supervisor Building Organizational Authority (Frunt or Type) William W Knutur Signature March 18, 1981						
	Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone March 18, 1981	Assistant Maintenance Supervisor Building Organizational Authority (Frunt or Type) William W Knutur Signature March 18, 1981						
	Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone March 18, 1981	Assistant Maintenance Supervisor Building Organizational Authority (Frint or Type) William W Kuntur Signature March 18, 1981						
O.Y. LWLY.	Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone March 18, 1981	Assistant Maintenance Supervisor Building Organizational Authority (Frint or Type) William W Kuntur Signature March 18, 1981						

F	NAME	POSITION	ORGANIZATION
	Dandy Smith	Contified Mini Auditor	Diale Coursell Mulley Asses
	Randy Smith	Certified Mini-Auditor	Rieke Carroll Muller Assoc., Inc
	Scott Hutchins	Certified Electronic Tech	nnician Rieke Carroll Muller Assoc,
	Art Parvey		City of Bloomington
AUDIT			
AU TE			
G		BUILDING CONDITION (i.e. type, and function)	
	Good, lift station MAJOR CHANGES PLANNED WITHI	N NEXT 15 YEARS (i.e. demolition, rehabilitation, co	onversion from one building type to another)
z	None		
BUILDING		OOF (i.e. metal beams, wooden rafters, concrete)	
MA	Concrete plank		
10 F	ROOFING MATERIAL (i.e. tar and gra	ivel, shingles, tile)	
2 = C	Tar and gravel		
Н	INSTRUCTIONS: Correctly answer th	e following questions for the building being mini-au	dited.
	Is there open land adjacent to the bui	lding?	
	Solar collectors need to be located in a	n unshaded area. Is the roof of the building and the so	uth facing wall unshaded between the hours of 9 a.m. and
ł	3 p.m.? Roof: □ Yes □ No		
	South facing Wall: Yes No		
	If the roof or wall are partly shaded, w	what percentage of the surface is unshaded?	
	% of roof unshaded, 9 % of south facing wall unshaded	%	
	What is the overall shape of the build	ing?	
		pped □ E-shaped □ other (specify)	·
	Is the roof of the building flat or pitch Q flat pitched	ed?	
j	If pitched, what is the compass orient	ation of the ridgeline?	
	If pitched, what is the angle that the	roof makes with horizontal?	
	Are there large obstructions on the re	oof such as chimneys, rooms for mechanical equipm	nent, ventilating units, water towers, etc?
	What is the exterior facing material fo	or the south facing wall?face b	prick
	What percentage of the south facing	wall is glass? %	
	Is the building's space heating equip ☑ Yes ☐ No	ment located within or on the building? (A no answe	er indicates the equipment is in a separate building.)
	If the space heating equipment is ins Ground Floor Basement	ide the building, where is it located? ☐ Roof ☐ Other (specify)	4
ENTIAL	Is the building's water heating equip □ Yes □ No NONE	ment located within the building? (A no answer indi	cates the equipment is in a separate building)
SOLAR POTENTIAL INFORMATION	If the water heating equipment is ins Ground Floor Basement	ide the building, where is it located? □ Other (specify)	
SOLA	Is the water heating system a central Dentral Dentral Dentral Dentral Dentral Dentral	system, does it consist of multiple units, or is it a coination	combination of the central and multiple units?

1		BASE PERIOD YEAR				Fiscal Year				
	ENERGY TYPE		ENERGY L	JSAGE		CONVERSION	FACTOR		BTU US	AGE
-	Electricity									
	Fuel 1								 	
	Fuel 2									
	TOTAL							,		
				20% SA	VINGS YEA	R		Fiscal \	Year	
	ENERGY TYPE		ENERGY L	JSAGE		CONVERSION	FACTOR		BTU U	SAGE
	Electricity									
	Fuel 1									
market en	Fuel 2					agenta anticon de como estre de la como de l	**************************************			
	TOTAL			· · · · · · · · · · · · · · · · · · ·		A				
				-auditor after t	he walk-thru	ent to notrog u	mini-audit. Firs	t, check the	appropriat	e boxes which
of	ite the roughly estimated range the new mini-audit opports reentages by the annual ele	unities listed	cent of total	electrical and f	uel consum	ption which wo range of ener	uld be saved re	sulting from	the implen	nentation of a
of per	the new mini-audit opport	unities listed ectrical and f	cent of total e in section L uel consump	electrical and f Secondly, c ption data on f	uel consum	ption which wo range of ener	uld be saved re	sulting from avings by m	the implemultiplying	nentation of a the estimate
Of per Ch	the new mini-audit opports reentages by the annual ele- eck two boxes in each cate ange of Electrical Savings —	tunities listed ectrical and fine egory —	cent of total e in section L uel consump	Discrical and formation data on the second se	uel consum alculate the the energy i	ption which wo range of energe report.	uld be saved rergy and cost s	sulting from avings by m	the implem nultiplying (specify)	nentation of a
of per Ch Rac	the new mini-audit opports reentages by the annual element when the element with the element of the element with the element of the element o	tunities listed ectrical and for a gory — - XX0%	cent of total ein section Luel consump	electrical and f Secondly, c ption data on f	uel consum alculate the the energy (ption which wo range of ener report.	uld be saved reargy and cost s	sulting from avings by m	the implem nultiplying (specify)	nentation of a
of per Ch Rac	the new mini-audit opports reentages by the annual ele- eck two boxes in each cate ange of Electrical Savings —	tunities listed ectrical and for a gory — - XX0%	cent of total ein section Luel consump	electrical and f	uel consum alculate the the energy i	ption which wo a range of energy report.	uld be saved rergy and cost s	sulting from avings by m	the implem nultiplying (specify)	nentation of a
of per Ch Rac	the new mini-audit opports reentages by the annual element when the element with the element of the element with the element of the element o	tunities listed ectrical and for egory — - KN0% - 0%	cent of total ein section Luel consump	electrical and f Secondly, cotion data on t 10% 10% Range of	uel consum alculate the the energy i	ption which wo a range of energy report.	uld be saved rergy and cost s	ulting from avings by m	(specify) Rang	nentation of a the estimate
of per Ch Rad	the new mini-audit opports reentages by the annual element with the care of th	ectrical and for a gory — - EXO% - 0% - nd cost saving	cent of total ein section Luel consump	electrical and f Secondly, cotion data on t 10% 10% Range of Sav	uel consum alculate the the energy i 15% 15% Electrical 8 of Energy vings	ption which wo a range of energy report. 20% 20% 20% Range	uld be saved regy and cost s 25% 25% Annual El Dollars	outling from avings by m	(specify) (specify) Rang	nentation of a the estimate
of per Ch Rad	the new mini-audit opports reentages by the annual element with the cate of th	ectrical and for a gory — - EXO% - 0% - nd cost saving	cent of total e in section L uel consump	electrical and f Secondly, cotion data on t 10% 10% Range of Range of Sav	uel consum alculate the the energy i 15% 15% Electrical 8 of Energy rings	ption which wo a range of energy report.	uld be saved regy and cost s	outling from avings by m	(specify) Rang	nentation of a the estimate strong of the est
of per Ch. Rain Rain Ca	the new mini-audit opports reentages by the annual element with the cate of th	ectrical and for a gory — - KN0% - 0% - 0% Annual Consult x _3808	cent of total ein section Luel consump	electrical and f Secondly, cotion data on t 10% 10% Range of Range of Sav	uel consum alculate the the energy i 15% 15% Electrical S of Energy vings kwh, _	ption which wo range of energy report. 20% 20% 20% Range 0 % to	uld be saved regy and cost s 25% 25% Annual El Dollars	other other spent	(specify) (specify) Rang Doi = \$.	nentation of a the estimate
of per Ch Rain Rain Ca	the new mini-audit opports reentages by the annual electrical section of Electrical Savings — ange of Fuel Savings — alculate ranges of energy and Range wer bound	etunities listed ectrical and finegory — - XX0% - 0% - 0% Annual Consux - 3808	cent of total e in section Luel consump	electrical and for Secondly, contion data on the secondly of the second	uel consum alculate the the energy i 15% 15% Electrical 8 of Energy vings kwh, _	ption which wo range of energy report. 20% 20% 20% Range 0 % to 5 %	□ 25% □ 25% □ 25% Annual El Dollars	other other spent	(specify) (specify) Rang Doi = \$.	nentation of a the estimate strength of Electric liars Savings
of per Ch Rain Rain Ca	the new mini-audit opports reentages by the annual element with the cate of th	unities listed ectrical and for egory — — XX0% — 0% Annual Consux x 3808 x 3808 USE any Annual	cent of total e in section Luel consump	electrical and for Secondly, contion data on the secondly of t	uel consum alculate the the energy i 15% 15% Electrical 8 of Energy vings kwh, _	ption which wo range of energy report. 20% 20% 20% Range 0 % to 5 %	□ 25% □ 25% □ 25% Annual El Dollars	other other sectrical Spent 9.22	(specify) Rang Doi ** ** ** ** ** ** ** ** ** ** ** ** *	re of Electric Blars Savings to 58.96
of per Ch. Rain Rain Ca	the new mini-audit opports reentages by the annual electrical seck two boxes in each cate ange of Electrical Savings — ange of Fuel Savings — alculate ranges of energy and sec bound% Range wer bound% to apper bound%	unities listed ectrical and for egory — — XX0% — 0% Annual Consux x 3808 x 3808 USE any Annual	Electrical umption BO kwh	electrical and for Secondly, contion data on the secondly of t	uel consum alculate the the energy i 15% 15% Electrical S of Energy vings kwh, _ to kwh, _	ption which wo range of energy report. 20% 20% 20% 4 Range 0 % to 5 % Fings Range	uld be saved rerry and cost s 25% 25% Annual El Dollars x \$ 117	other other sectrical Spent 9.22	(specify) Rang Doi ** ** ** ** ** ** ** ** ** ** ** ** *	nentation of a the estimate strength of Electric liars Savings

K

Instructions. Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor.

OPTIONAL: OPTIONAL: CLASSIFICATION NO. ENERGY **ENERGY** ITEM DATE OF IMPLEMENTATION PAST ENERGY CONSERVATION ACTIONS COST MAJOR SUB **SAVINGS** CLASS CLASS Routine Maintenance Schedule. 5 1

EW PPORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

ITEM	CLASSIFICATION NO.			OPTIONAL:	ENERGY		
NO.	MAJOR CLASS	SUB CLASS	NEW MINI-AUDIT OPPORTUNITIES	SAVINGS	COST SAVINGS	DATE OF IMPLEMENTATION	
1	1	1	Keep all controls free of dust.				
2	2	2	Look for loose connections and bad contacts on a regular basis.				
3	1	2	Eliminate excessive vibration.				
4	1	2	Lubricate motors to reduce wear and excessive torque.				
_							
5	1	2	Replace worn bearings.				
6	1	2	Keep motors clean to make cooling easier.				
7	1	2	Replace worn or defective motors with motors that are sized as close to the				
			load as possible and use the highest efficiency motors available. Where it is impractical to replace motors				
			which have low loads and power factor use capacitors at motor terminals to correct the power factor to 90%.	s,			
_			Instantaneous power factor reading				
8	1	3_	was .85.				
9	1	4	Shade outdoor transformer banks from solar radiation.				
10	2	2	Weatherstrip all exterior doors.				
11	2	2	Replace an existing door with one of a higher R-valve.				

NEW OPPORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

ITEM	CLASSIF			OPTIONAL:	ENERGY	DATE OF IMPLEMENTATION
NO.	MAJOR CLASS	SUB CLASS	NEW MINI-AUDIT OPPORTUNITIES	SAVINGS	COST SAVINGS	DATE OF IMPLEMENTATION
12	2	8	Caulk all cracks that allow air and moisture into the building.			
13	2	8	Insulate walls and ceiling with rigid insulation on inside surfaces.			
14	3	1	Check the calibration of all con- trollers and devices for proper set-			
			tings and operations.			
15	3 .	1	65°F maximum occupied, 60°F maximum unoccupied during the heating season.			
16	3	3	Make sure that all fans, frequently inoperative in unit heaters, fan coil			
			units, and unit ventilators are running normally to increase the heat transfer rate from heating coils			
17	3	3	Inspect bearings and drive belts for wear and binding. Adjust, repair or replace as necessary.			
18	3	3	Inspect damper blades and linkages. Clean, oil and adjust.			
19	5	1	Keep records of the operating schedule, monthly energy consumption			
		1	and purchase of any new equipment that affects energy consumption of			
			efficiency of the building. These records will indicate the impact of energy conservation measures.			
20	5	1	Review the record books on a regular basis.			
21	7	4	Inspect electrical eontacts and work- parts of relays and maintain in good working order.	•		
22	7	4	Check heater elements for cleanliness Replace as necessary.	5.		

NEW OPPORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

ITEM	CLASSIF	ICATION		OPTIONAL:	ENERGY COST	DATE OF IMPLEMENTATION	
NO.	MAJOR CLASS	SUB CLASS	NEW MINI-AUDIT OPPORTUNITIES	SAVINGS	SAVINGS	DATE OF IMPLEMENTATION	
23	7	4	Check controls for proper operation. Adjust as necessary.				
24	7	4	Periodically tighten all electrical-				
<u></u>		7	Periodically tighten all electrical- mechanical connections to prevent arcing and burning due to metal flow or loosening of terminal bolts or	·			
			lugs.				
	ļ						
	}						
·							
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					ļ		
-							
		 					

A	BUILDING NAME		NAME OF ORGANIZATION City of Bloomington	DATE 2/18/81
	Lift Station - Sanitary Sew BUILDING ADDRESS 226 East 107th Street Circle		ADDRESS 2215 West Old Shakopee Road	<u> </u>
ACT	CITY Bloomington	ZIP CODE 55431	CITY Bloomington	ZIP CODE 55431
CONT	PERSON COMPLETING FORM Randy Smith	TELEPHONE 935-6901	CONTACT PERSON Arthur Jensen	TELEPHONE 881-5811

□ Non-Profit Association (NAP) □ Secondary (SCHL-SECD) □ Storage (LOCG-S) □ Coll. or Univ. (SCHL-POST) □ Service (LOCG-S) □ Vocational (SCHL-VOCL) □ Library (LOCG-LI □ Education Agency (SCHL-ADMN) □ Police (LOCG-FI □ County (CITY) □ Administration (SCHL-ADMN) □ Fire (LOCG-FI □ DOTHER (SCHL-OTHR) □ OTHER (LOCG-O	3	Instructions: For blocks 1 and 2 check the bo describes the building type and then within the second						our categories
	3	2. ULTIMATE OWNER	3 a .	☐Elementary ☐Secondary ☐Coll. or Univ. ☐Vocational ☐Education Agency ☐Administration	(SCHL-SECD) (SCHL-POST) (SCHL-VOCL) (SCHL-ADMN) (SCHL-ADMN)	C.	Office Storage Service Lipidice Police Fire	(LOCG-OFFC) (LOCG-STRG) (LOCG-SERV) (LOCG-LBRY) (LOCG-PLCE) (LOCG-OTHR)
□ Res. Child Care Ctr. (PBCR-RCCC)	ELIGIBILI Y CO	☐ Township (TOWN) ☐ State (STAT) ☐ Public School (PUSC) ☐ Private School (PRSC)	b.	PUBLIC CARE Nursing Home Long Term Care Rehab. Facility Public Health Ctr.	(PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-HCTR)	d.	HOSPITALS General Tuberculosis	(HOSP-GENL) (HOSP-TUBR) (HOSP-OTHR)

	Instructions: With reference to page 23 entitled Funding Information, determine if the facilities are eligible for both Federal and State funding or just Federal funding, then answer the questions correctly for the situation. This section must be signed and dated by the head of the organization
•	If eligible for both Federal and State Funding: Have you received a mini-audit grant before?
	Signature
	If eligible for Federal funding only: Have you received a mini-audit grant before? Yes No Have you previously applied for mini-audit funding? Yes No Do you wish to apply for mini-audit funding? Yes No The 50% match for Federal funds will come from: (Use additional sheets if necessary.)
	Date
	Name.

	Check the type of energy report which was completed and submitted	prior to this mini-audit report.
	☐ Elementary School Energy Report (Form No. ED-00444-02) ☐ Secondary School Energy Report (Form No. ED-00445-02) ÆK Existing Building Energy Report (Form No. EN-00041-01)	·
	If an energy report has not been completed previous to this mini-audit vocational schools should use form ED-00444-02 or form ED-00445-02, obuilding energy report, form EN-00041-01.	t report, one must be included with this report. Elementary, secondary, and depending on building complexity. All other buildings should use the existing
	Instructions: This section is to be completed and signed by a registere completed the State of Minnesota's Mini-Audit Procedures Course. This are completed. All blanks must be filled in.	ed professional engineer or by a certified mini-auditor who has successfull section should be completed after this mini-audit report and an energy repor
	I have reviewed the energy report and/or the energy report results for the corrected any misinformation on the energy report which will be resulted.	his building. I found all information contained therein to be correct OR I have bmitted with this mini-audit report to the Minnesota Energy Agency
	I am not directly responsible for the day to day operations of this built	Iding being audited.
	I have fully disclosed my financial interests relating to this mini-audit	
	I have walked through this building and have found the recommends maintenance changes, and low cost energy conservation measures, w	ations listed in section I of this mini-audit report to be the operations an which would reduce energy consumption in this building.
	listed in section I. I am not responsible if the actual savings resulting	
	Based on actual records, the energy conservation operating and maint 20% of the building's energy consumption as specified in section I.	tenance procedures listed in section K <u>d1d not</u> save at lea
		ilding and the building's major energy using systems, I recommend that the
	(should, should not)	
	I realize that this is not a final judgement, that the State reserves the righ	it to make the maxi-audit funding determination based on this mini-audit rep
	I realize that this is not a final judgement, that the State reserves the righ and other criteria.	-1 11
	I realize that this is not a final judgement, that the State reserves the righ and other criteria. Based upon the information in section E and the information referred to	o in section F, I recommend that this building Should not (should, should not)
	I realize that this is not a final judgement, that the State reserves the righ and other criteria. Based upon the information in section E and the information referred to	o in section F, I recommend that this building Should not (should, should not)
	I realize that this is not a final judgement, that the State reserves the righ and other criteria. Based upon the information in section E and the information referred to undergo further solar conversion analysis, and/orShould_no	t undergo further analysis of the renewable resources was
	I realize that this is not a final judgement, that the State reserves the right and other criteria. Based upon the information in section E and the information referred to undergo further solar conversion analysis, and/orShould_nowind, wood. (Circle proper resources) (should, should,	t undergo further analysis of the renewable resources was
	I realize that this is not a final judgement, that the State reserves the right and other criteria. Based upon the information in section E and the information referred to undergo further solar conversion analysis, and/orShould_nowind, wood. (Circle proper resources) (should, should,	t undergo further analysis of the renewable resources was
	I realize that this is not a final judgement, that the State reserves the right and other criteria. Based upon the information in section E and the information referred to undergo further solar conversion analysis, and/or Should no wind, wood. (Circle proper resources) (should, should in my judgement, as a mini-auditor, all of the above statements are to Randy Smith	o in section F, I recommend that this building Should not (should, should not) T undergo further analysis of the renewable resources was rue and correct. Witnessed by: Assistant Maintenance Supervisor
	I realize that this is not a final judgement, that the State reserves the right and other criteria. Based upon the information in section E and the information referred to undergo further solar conversion analysis, and/or Should no wind, wood. (Circle proper resources) (should, should in my judgement, as a mini-auditor, all of the above statements are to Randy Smith Mini-Auditor's Name Print or Type)	o in section F, I recommend that this building Should not (should, should not) t undergo further analysis of the renewable resources was lid not) rue and correct. Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type)
	Randy Smith Randy Smith Mini-Auditor's Name (Print or Type) Signature I realize that this is not a final judgement, that the State reserves the right and other criteria. Based upon the information in section E and the information referred to undergo further solar conversion analysis, and/or Should no wind, wood. (Circle proper resources) (should, should not be statements are to the should not be statements are to the should not be should not	witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature Should not (should should not) (should not)
	Randy Smith Randy Smith Randy Smith Mini-Auditor's Name (Print or Type) Land other criteria.	witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Actual Wather
	Randy Smith Mini-Auditor's Name (Print or Type) Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343	witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature March 18, 1981
	Randy Smith Mini-Auditor's Name (Print or Type) Rieke Carroll Muller Assoc., Inc. Rieke Carroll Muller Assoc., Inc. Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P. O. Box 130 Hopkins, MN 55343 Address	witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature March 18, 1981
	Randy Smith Mini-Auditor's Name (Print or Type) Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone	witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature March 18, 1981
	Randy Smith Mini-Auditor's Name Print or Type) Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P. 0. Box 130 Hopkins, MN 55343 Address 612/935-6901	witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature March 18, 1981
	Randy Smith Mini-Auditor's Name (Print or Type) Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P. 0. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone March 18, 1981	was included by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature March 18, 1981
	Randy Smith Mini-Auditor's Name (Print or Type) Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P. 0. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone March 18, 1981	witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature March 18, 1981
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ENTS	Randy Smith Mini-Auditor's Name (Print or Type) Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P. 0. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone March 18, 1981	witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature March 18, 1981
STATEMENTS	Randy Smith Mini-Auditor's Name (Print or Type) Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P. 0. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone March 18, 1981	witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature March 18, 1981

F	NAME	POSITION	ORGANIZATION	
	Randy Smith	Certified Mini-Audi	tor Rieke Carroll Muller Assoc.	. In
	Scott Hutchins	Electrical Technician	Rieke Carroll Muller Associates,	-
	Art Parvey		City of Bloomington	
AUDIT				
G		ERAL BUILDING CONDITION (i.e. type, and for		
	Good, underground	lift station, submersibl	P DUMPS bilitation, conversion from one building type to another)	
_		VITHIN NEXT 15 YEARS (i.e. demolition, reha	bilitation, conversion from one building type to another)	
<u>N</u>	None STRUCTURAL COMPONENTS	OF ROOF (i.e. metal beams, wooden rafters, o	oncrete)	
MAN	None			
BUILDING	ROOFING MATERIAL (i.e. tar a	nd gravel, shingles, tile)		
Z Z	None			
H	INSTRUCTIONS: Correctly answ	wer the following questions for the building be	ing mini-audited.	
	Is there open land adjacent to the Yes XXNo	ne building?		
		ed in an unshaded area. Is the roof of the buildin	g and the south facing wall unshaded between the hours of 9 ${f a}.m.$ an	nd
	3 p.m.? Roof: □ Yes □ No NON6 South facing Wall: □ Yes	□No None		
	If the roof or wall are partly sha	ided, what percentage of the surface is unshar	led?	
	% of roof unshaded % of south facing wall unshad	. %		
	What is the overall shape of the ☐ square ☐ rectangle ☐	building? H-shaped □ E-shaped □ other (specify)_	None	
	Is the roof of the building flat o	r nitched?		
		orientation of the ridgeline?		_
	If pitched, what is the angle that	it the roof makes with horizontal?		
	Are there large obstructions on Yes No	the roof such as chimneys, rooms for mechan	nical equipment, ventilating units, water towers, etc?	
	What is the exterior facing mate	erial for the south facing wall? None		
	What percentage of the south f	acing wall is glass?%		
,	Is the building's space heating O Yes O No None	equipment located within or on the building?	(A no answer indicates the equipment is in a separate building.)	
-	If the space heating equipment Ground Floor Basem	is inside the building, where is it located? ent □ Roof □ Other (specify)		
SOLAR POTENTIAL			answer indicates the equipment is in a separate building.)	
R POTI	If the water heating equipment Ground Floor Basem	is inside the building, where is it located?		
NFOR	Is the water heating system a c ☐ Central ☐ Multiple ☐	entral system, does it consist of multiple units	s, or is it a combination of the central and multiple units?	

				BAS	E PERIOD YE	NR .	-	Fiscal Y	ear
ENERGY TYPE		ENERGY USAGE			,	CONVERSION	FACTOR		BTU USAGE
Electricity									
Fuel 1			,						
Fuel 2									
TOTAL									
				20%	SAVINGS YEA	.R		Fiscal '	Year
ENERGY TY	PE		ENERGY	USAGE		CONVERSION	FACTOR		BTU USAGE
Electricity									
Fuel 1									
Fuel 2			ora communication de la communicación de la co				Andrew Control of the		
TOTAL			tors — decimal decimal . As all the set of re-set				24,20		
Instructions: This se	ction is to b	e complete	d by the min	ni-auditor at	ter the walk-thr	u portion of the	e mini-audit.	First, check the	appropriate boxes which
state the roughly es	timated rang dit opportui	je of the per nities listed	cent of total Lin section	electrical a L. Second	ind fuel consum ly, calculate th	ption which we e range of en	ould be save	d resulting from	the implementation of a
state the roughly es of the new mini-au	timated rang dit opportui annual elec	ge of the per nities listed strical and f	cent of total Lin section	electrical a L. Second	ind fuel consum ly, calculate th	ption which we e range of en	ould be save	d resulting from	the implementation of a
state the roughly es of the new mini-au percentages by the	timated rang dit opportui annual elec each categ	ge of the per nities listed ctrical and f mory —	cent of total Lin section	electrical a L. Second	and fuel consum ly, calculate th on the energy	ption which we e range of en	ould be save	dresulting from st savings by n	the implementation of a nultiplying the estimate
of the new mini-au percentages by the Check two boxes in	timated rang dit opportui annual elec each categ Savings —	ge of the per nities listed ctrical and f mory —	cent of total Lin section luel consum	electrical a L. Second aption data	and fuel consumity, calculate the on the energy	ption which we range of end report.	ould be save ergy and co	dresulting from st savings by n	the implementation of a nultiplying the estimate (specify)
of the new mini-au percentages by the Check two boxes in Range of Electrical	timated rang dit opportui annual elec each categ Savings —	ge of the per nities listed strical and f lory — XX 0%	XX5%	Lelectrical a L. Second aption data	and fuel consumity, calculate the on the energy	ption which we range of energy report.	ould be save ergy and co	dresulting from st savings by n	appropriate boxes which the implementation of a nultiplying the estimate (specify)
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state the roughly es of the new mini-au percentages by the Check two boxes in Range of Electrical Range of Fuel Savii Calculate ranges of	timated rang dit opportur annual elec each categ Savings — ngs — energy and	ge of the perinties listed ctrical and fory — XX 0% 0% cost savin Annual Consi	### State of total in section luck consum #### State of total in section ### State of total in section #### State of total in section ### State of total in section #### State of total in s	L Second aption data	ind fuel consum ly, calculate th on the energy 15% of Electrical Sage of Energy Savings	ption which we range of end report. 20% 20% 3avings % Range	ould be save ergy and conditions and conditions are conditions as a condition of the conditions are conditional conditions.	d resulting from st savings by n other other al Electrical ars Spent	(specify) (specify) (specify) Range of Electric Dollars Savings
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state the roughly est of the new mini-au percentages by the Check two boxes in Range of Electrical Range of Fuel Savii Calculate ranges of lower bound	timated rang dit opportuinannual electric each categon Savings — ngs — energy and Range Company of the categon of the categor of the categ	e of the perities listed strice and fory — XX0% 00% 1 cost savin Annual Const 1070 1070 Annual Const	Electrical umption kwh any fu	Range Range Range	ind fuel consum ly, calculate th on the energy 15% 15% of Electrical Sage of Energy Savings 0 kwh, to 13.5 kwh, enge of Fuel Sa	ption which we range of entreport. 20% 20% 20% 4 savings 4 Range 4 to 5 % vings % Range	Annua x \$ 74	d resulting from st savings by n other other other discontinuity of the savings at Electrical ars Spent 4.15	Range of Electric Dollars Savings \$ 0
state the roughly est of the new mini-au percentages by the Check two boxes in Range of Electrical Range of Fuel Savii Calculate ranges of lower bound	timated rang dit opportuinannual electric each categon Savings — ngs — energy and Range Company of the categon of the categor of the categ	e of the perities listed strice and fory — XX0% 00% 1 cost savin Annual Const 1070 1070 Annual Const	### Cent of total in section luel consum ###################################	Range Range Range	ind fuel consum ly, calculate th on the energy 15% 15% 15% 15% 15% 15% 15% 15% 15% 15	ption which we range of entreport. 20% 20% 20% 4 savings 4 Range 4 to 5 % vings % Range	Annua x \$ 74	d resulting from st savings by n other other other discontinuity of the savings at Electrical ars Spent 4.15	Range of Electric Dollars Savings \$ 0

K

Instructions: Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable, Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor.

<u> </u>				OPTIONAL:	OPTIONAL:	
ITEM NO.	CLASSIF N MAJOR	ICATION O. SUB	PAST ENERGY CONSERVATION ACTIONS	ENERGY SAVINGS	ENERGY COST	DATE OF IMPLEMENTATION
	CLASS	CLASS			SAVINGS	
1	5	2	Routine Maintenance Schedule.			
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Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

CLASSIFIC NO		ICATION	non of the mini-audit report should be completed by the mini-audit	OPTIONAL:	OPTIONAL ENERGY	:
NO.	MAJOR CLASS	SUB CLASS	NEW MINI-AUDIT OPPORTUNITIES	ENERGY SAVINGS	COST SAVINGS	DATE OF IMPLEMENTATION
1_	1	1	Keep all controls free of dust.			

2	1	2	Look for loose connections and bad contacts on a regular basis.			,
3	1	2	Replace worn or defective motors with motors that are sized as close to the) 1		
			load as possible and use the highest efficiency motors available. Where it is impractical to replace motors			
			which have low loads and power factors, use capacitors at motor terminals to correct the power factor to			
			90%.			
4	1	3	Instantaneous power factor reading was .99. Note: Capacitors are installed.			
5	1	4	Shade outdoor control panel from solar radiation.			
6	5	1	Keep records of the operating schedu monthly energy consumption and purchase of any new equipment that affects energy consumption of efficienc			
			of the building. These records will indicate the impact of energy conservation measures.			
	5	1	Review the record books on a regular basis.			
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at was a stance of a state of a			·			

A	BUILDING NAME Lift Station - Sanitary Sewa	ıge	NAME OF ORGANIZATION City of Bloomington	2/18/81
	BUILDING ADDRESS 9130 East Bush Lake Road		ADDRESS 2215 West Old Shakopee Road	
ACT.	CITY Bloomington	ZIP CODE 55431	CITY Bloomington	ZIP CODE 55431
CONTACT	PERSON COMPLETING FORM Randy Smith	TELEPHONE 935-6901	CONTACT PERSON Arthur Jensen	TELEPHONE 881-5811

B		structions: For blocks 1 and 2 escribes the building type and							our categories
	1	OWNERSHIP TYPE DPublic (F ONon-Profit Association	PUB) (NAP)	3a.	SCHOOLS □ Elementary □ Secondary □ Coll. or Univ.	(SCHL-ELM) (SCHL-SECD) (SCHL-POST)	C.	LOCAL GOVERNMENT Office Ostorage Service	(LOCG-OFFC) (LOCG-STRG) (LOCG-SERV)
CODE	2.	ULTIMATE OWNER County	(CNTY) (CITY)		□Vocational □Education Agency □Administration □OTHER	(SCHL-VOCL) (SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR)		OLibrary OPolice OFire OOTHER	(LOCG-LBRY) (LOCG-PLCE) (LOCG-FIRE) (LOCG-OTHR)
BUILDING ELIGIBILITY C		☐ Township ☐ State ☐ Public School ☐ Private School ☐ Non-Profit Association ☐ Indian Tribe	(TOWN) (STAT) (PUSC) (PRSC) (NPAP) (INDN)	b.	PUBLIC CARE Nursing Home Long Term Care Rehab. Facility Public Health Ctr. Res. Child Care Ctr.	(PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-HCTR) (PBCR-RCCC)	d.	HOSPITALS General Tuberculosis OTHER	(HOSP-GENL) (HOSP-TUBR) (HOSP-OTHR)

C	Instructions: With reference to page 23 entitled Funding Information, determine if the facilities are eligible for both Federal and State funding or just Federal funding, then answer the questions correctly for the situation. This section must be signed and dated by the head of the organization
	If eligible for both Federal and State Funding: Have you received a mini-audit grant before? □ Yes XIX No Have you previously applied for mini-audit funding? XIX Yes □ No Do you wish to apply for mini-audit funding? □ Yes XIX No
	DateMarch 18, 1981
	Name Arthur Jensen
	Signature
	If eligible for Federal funding only Have you received a mini-audit grant before? Yes No Have you previously applied for mini-audit funding? Yes No
	Do you wish to apply for mini-audit funding?
l	
EST	
EOL	Date
MINI-AUDIT FUNDING REQUEST	Name
NON-	Signature
Z Ľ	

Check the type of energy report which was completed and submitted prior to this mini-audit report. Elementary School Energy Report (Form No. ED-00445-02) Secondary School Energy Report (Form No. EN-00041-01) Existing Building Energy Report (Form No. EN-00041-01) If an energy report has not been completed previous to this mini-audit report, one must be included with this report. Elementary, vocational schools should use form ED-00445-02 or form ED-00445-02, depending on building complexity. All other buildings should building energy report, form EN-00041-01.	
Elementary School Energy Report (Form No. ED-00445-02) Secondary School Energy Report (Form No. ED-00445-02) Existing Building Energy Report (Form No. EN-00041-01) If an energy report has not been completed previous to this mini-audit report, one must be included with this report. Elementary, vocational schools should use form ED-00444-02 or form ED-00445-02, depending on building complexity. All other buildings should building energy report, form EN-00041-01.	
If an energy report has not been completed previous to this mini-audit report, one must be included with this report. Elementary, vocational schools should use form ED-00444-02 or form ED-00445-02, depending on building complexity. All other buildings should building energy report, form EN-00041-01.	
Zi Company Com	secondary, and duse the existing
Instructions: This section is to be completed and signed by a registered professional engineer or by a certified mini-auditor who completed the State of Minnesota's Mini-Audit Procedures Course. This section should be completed after this mini-audit report and are completed. All blanks must be filled in.	has successfully an energy report
I have reviewed the energy report and/or the energy report results for this building. I found all information contained therein to be corrected any misinformation on the energy report which will be resubmitted with this mini-audit report to the Minnesota Energ	correct OR I have by Agency
I am not directly responsible for the day to day operations of this building being audited.	
I have fully disclosed my financial interests relating to this mini-audit and any energy conservation measures considered by this	s audit.
I have walked through this building and have found the recommendations listed in section I of this mini-audit report to be the maintenance changes, and low cost energy conservation measures, which would reduce energy consumption in this building.	e operations and
I have made a rough estimate, in section G, of the range of savings which may result from the implementation of all of the mini-audisted in section I. I am not responsible if the actual savings resulting from this mini-audit do not fall within the estimated range	udit opportunities I
Based on actual records, the energy conservation operating and maintenance procedures listed in section K did not 20% of the building's energy consumption as specified in section I. (did. did not)	save at least
Based upon my observation of the physical characteristics of this building and the building's major energy using systems. I reconstructed in the subject of a maxi-audit.	ornmend that this
(should, should not) I realize that this is not a final judgement, that the State reserves the right to make the maxi-audit funding determination based on this	
and other criteria.	
(should, s	ild not
undergo further solar conversion analysis, and/or Should not undergo further analysis of the renewable re wind, wood. (Circle proper resources) (should, should not)	sources waste
In my judgement, as a mini-auditor, all of the above statements are true and correct.	
Witnessed by:	
Randy Smith Assistant Maintenance Super Mini-Auditor's Name (Print or Type) Building Organizational Authority (Print or Type)	<u>rvisor</u>
Romely Snike 206 (11the, W. Kinder	
Signature	
Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) Amarch 18, 1981 Date	
P.O. Box 130 Hopkins, MN 55343	
_612/935-6901	
Phone	
I I Manch 10 1001	
Date	
Date	

	NAME	POCITION	ODCANIZATION
F	· · · · · · · · · · · · · · · · · · ·	POSITION	ORGANIZATION
	Randy Smith	Certified Mini-Auditor	Rieke Carroll Muller Assoc.,
	Art Parvey		City of Bloomington
TEAM	Scott Hutchins	Electrical Technician	Rieke Carroll Muller Assoc., 1
_			
G	Good, underground	AL BUILDING CONDITION (i.e. type, and function)	
1	MAJOR CHANGES PLANNED WI	THIN NEXT 15 YEARS (i.e. demolition, rehabilitation, co	inversion from one building type to another)
NO	None		
BUILDING	Concrete with meta	FROOF (i.e. metal beams, wooden rafters, concrete)	
98	ROOFING MATERIAL (i.e. tar and	gravel, shingles, tile)	
ZZ	Metal cover		
H	INSTRUCTIONS: Correctly answe	r the following questions for the building being mini-au	dited.
	Is there open land adjacent to the	building?	
	••	in an unshaded area. Is the roof of the building and the soc	uth facing wall unshaded between the hours of 9 a.m. and
	3 p.m.? Roof: ⊠Yes □ No South facing Wall: □ Yes □	No None	
	If the roof or wall are partly shade % of roof unshaded, % of south facing wall unshade	od, what percentage of the surface is unshaded?	
	What is the overall shape of the b ⊠ square □ rectangle □ H	uilding? -shaped De-shaped Dother (specify)	
	Is the roof of the building flat or p ☑ flat □ pitched	pitched?	
	If pitched, what is the compass or	rientation of the ridgeline?	
	If pitched, what is the angle that t	he roof makes with horizontal?	
	Are there large obstructions on the Property of No	ne roof such as chimneys, rooms for mechanical equipm	nent, ventilating units, water towers, etc?
	What is the exterior facing materi	al for the south facing wall? None	The second secon
	What percentage of the south fac	ing wall is glass?%	
	Is the building's space heating ed Yes No None	uipment located within or on the building? (A no answe	er indicates the equipment is in a separate building.)
	If the space heating equipment is Ground Floor Basemen	inside the building, where is it located? t □ Roof □ Other (specify)	
SOLAR POTENTIAL	Is the building's water heating eq Pes No None	uipment located within the building? (A no answer indic	cates the equipment is in a separate building)
RIMATIC	If the water heating equipment is Ground Floor Basemen	inside the building, where is it located? It Other (specify)	
SOLA	Is the water heating system a cer	ntral system, does it consist of multiple units, or is it a combination	ombination of the central and multiple units?

_				BASE P	ERIOD YEA	R		Fiscal Y	ear
	ENERGY TYPE	NERGY TYPE ENERGY USAGE			c	CONVERSION FACTOR			BTU USAGE
	Electricity								
	Fuel 1								
	Fuel 2								
	TOTAL								
-				20% SA	VINGS YEA	R		Fiscal `	Year
	ENERGY TYPE		ENERGY	USAGE		CONVERSION	FACTOR		BTU USAGE
_	Electricity								
	Fuel 1								
	Fuel 2								
	TOTAL								
	Instructions: This section is to be state the roughly estimated range	a complete	d by the mini	i-auditor after t	he walk-thru	portion of the	mini-audit. Fir	st, check the	appropriate boxes which
	state the roughly estimated rang of the new mini-audit opportur percentages by the annual elec Check two boxes in each categ	e of the per nities listed trical and f ory —	cent of total in section I uel consum	electrical and f L. Secondly, c ption data on f	uel consum alculate the the energy i	ption which wo range of ener eport.	uld be saved re rgy and cost s	esulting from savings by n	ithe implementation of al nultiplying the estimated
	state the roughly estimated rang of the new mini-audit opportur percentages by the annual elec Check two boxes in each categ Range of Electrical Savings —	e of the per nities listed trical and f ory —	cent of total in section I uel consum	electrical and f L. Secondly, c ption data on t	uel consum alculate the the energy i	ption which wo range of energeport.	uld be saved regy and cost s	esulting from savings by n	the implementation of all nultiplying the estimated of th
-	state the roughly estimated rang of the new mini-audit opportur percentages by the annual elec Check two boxes in each categ Range of Electrical Savings — Range of Fuel Savings —	e of the per nities listed trical and f ory — \$\times 0\%	cent of total in section I uel consum \$\overline{\Omega}\$ 5% \$\overline{\Omega}\$ 5%	electrical and f L. Secondly, c ption data on f	uel consum alculate the the energy i	ption which wo range of ener eport.	uld be saved re rgy and cost s	esulting from savings by n	ithe implementation of al nultiplying the estimated
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	state the roughly estimated rang of the new mini-audit opportur percentages by the annual elec Check two boxes in each categ Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and	e of the per nities listed trical and f ory — (X) 0% — 0% — cost savin	Cent of total in section I uel consum \$\times 5\%	electrical and f L. Secondly, o ption data on t 10% XX 10% Range of Range of	uel consum; alculate the the energy is 15% 15% Electrical S of Energy	ption which wo range of energe port.	□ 25% □ 25% Annual E	osulting from savings by n other other	nthe implementation of all nultiplying the estimated of all respective in the state of the state
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	state the roughly estimated rang of the new mini-audit opportur percentages by the annual elec Check two boxes in each categ. Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and — % Range	e of the perinties listed trical and fory —	CR 5%	electrical and f L. Secondly, option data on t 10% XX 10% Range of Range of San =	uel consum; alculate the the energy in the e	ption which wo range of energe port. 20% 20% 20% Range 0 %	□ 25% □ 25% □ Dollars	osulting from savings by n other other	nthe implementation of all nultiplying the estimated of all respective in the strength of the
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	state the roughly estimated rang of the new mini-audit opportur percentages by the annual elec Check two boxes in each categ Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and ———————————————————————————————————	e of the perities listed trical and fory — Q 0% Cost savin Annual Const. 53 USE an Annual Const.	CR 5% CR	electrical and file. Secondly, control data on the secondly of	uel consum; alculate the the energy is to see the consum is a consum in the energy in the energy is a consum in the energy in the energy is a consum in the energy in the energy in the energy is a consum in the energy in the en	potion which wo range of energe port. 20% 20% 20% 4 20% 4 20% 5 % 4 Range 0 % 1 108 4 Range 8 Range 9 % 1 108 5 % 1 108	uid be saved regy and cost s 25% 25% Annual E Dollars x \$ 89 Annual Annual S	osulting from the lavings by no other lavings	Range of Electrica Dollars Savings Substitute of the estimated of the es

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Instructions. Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor.

	T CLASSIFICATION I		OPTIONAL: OPTIONAL: CLASSIFICATION						
ITEM NO.	CLASSIF N MAJOR CLASS	SUB CLASS	PAST ENERGY CONSERVATION ACTIONS	ENERGY SAVINGS	ENERGY COST SAVINGS	DATE OF IMPLEMENTATION			
1	5	2	Routine maintenance schedule.						
			,						
					1				
			·						
					1				

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

ITEAA	CLASSIF			OPTIONAL: ENERGY	ENERGY	
NO.	MAJOR CLASS	SUB CLASS	NEW MINI-AUDIT OPPORTUNITIES	SAVINGS	COST SAVINGS	DATE OF IMPLEMENTATION
1	1	1	Keep all controls free of dust.			
2	1	2	Look for loose connections and bad contacts on a regular basis.			
3	1	2	Check alignment of motors to driven equipment, align and tighten as			
			necessary.			
4	1	2	Replace worn or defective motors with motors that are sized as close to the			
·			load as possible and use the highest efficiency motors available.			
			,			
_5	1_1_	2	Where it is impractical to replace motors which have low loads and			
			power factors, use capacitors at mot- or terminals to correct the power factor to 90%.			
6	1	3	Instantaneous power factor reading was .80.			
					ļ	
7	3	3	Check for packing wear which can caus excessive leakage. Repack to avoid excessive water wastage and shaft	se 		
			erosion.			
8	3	3	Inspect bearings and drive belts for wear and binding. Adjust, repair or			
			replace as necessary.			
9	5	1	Keep records of the operating schedul monthly energy consumption and purchase of any new equipment that aff-	е,		
			ects energy consumption of efficiency of the building. These records will	/		
		<u> </u>	indicate the impact of energy con- servation measures.			
10	5	1	Review the record books on a regular pasis.			

A	BUILDING NAME Lift Station - Sanitary Sev	wage	NAME OF ORGANIZATION City of Bloomington	3-18-81	
	BUILDING ADDRESS 8400 Chalet Road		ADDRESS 2215 West Old Shakopee Road		
ACT	CITY Bloomington	ZIP CODE 55431	CITY Bloomington	ZIP CODE 55431	
CONTACT	PERSON COMPLETING FORM Randy Smith	TELEPHONE 935-6901	CONTACT PERSON Arthur Jensen	TELEPHONE 881-5811	

Ins de	structions: For blocks 1 and 2 check the bescribes the building type and then within	oox which b the catego	est fits the building owners bry check off the sub cate	ship conditions. For gory befitting the l	bloci	k 3 determine which of t ng function.	he four categories
1.	OWNERSHIP TYPE 図Public (PUB) □Non-Profit Association (NAP)	3a.	SCHOOLS □ Elementary □ Secondary □ Coll. or Univ. □ Vocational	(SCHL-ELM) (SCHL-SECD) (SCHL-POST) (SCHL-VOCL)	C.	LOCAL GOVERNME Office Storage Service Library	NT (LOCG-OFFC (LOCG-STRG (LOCG-SERV) (LOCG-LBRY)
2.	ULTIMATE OWNER □County (CNTY) ☑City (CITY) □Township (TOWN)		□Education Agency □Administration □OTHER	(SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR)		□Police □Fire □OTHER	(LOCG-PLCE (LOCG-FIRE) (LOCG-OTHF
	□ State (STAT) □ Public School (PUSC) □ Private School (PRSC) □ Non-Profit Association □ Indian Tribe (INDN)	b.	PUBLIC CARE Nursing Home Long Term Care Rehab. Facility Public Health Ctr. Res. Child Care Ctr.	(PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-HCTR) (PBCR-RCCC)	d.	HOSPITALS General Tuberculosis OTHER	(HOSP-GENL (HOSP-TUBR (HOSP-OTHF
ins jus	structions: With reference to page 23 ent st Federal funding, then answer the quest	itled Fundi tions correc	ng Information, determine tly for the situation. This t	if the facilities are section must be sig	eligil ned a	ble for both Federal and and dated by the head o	d State funding or f the organization.
	eligible for both Federal and State Fundi		Μ				
] 1	Have you received a mini-audit grant bef Have you previously applied for mini-aud Do you wish to apply for mini-audit fund	dit funding?	es ØNo 10 Yes □ No es ØNo				
	March 18, 1981	g, — 1					
	ame: Arthur Jensen						
	() ITT . (1)	relln					
	eligible for Federal funding only: Have you received a mini-audit grant be Have you previously applied for mini-aud Do you wish to apply for mini-audit fun The 50% match for Federal funds will co	dit funding?	Yes No				
	The 50 % match for regeral funds will co	ine ironi. (i	ose additional sheets if he	cessary.)			
S Z G			•				
D	Date:						
S S	lame:						
	ignature:						

D	Check the type of energy report which was completed and submitted prior	r to this mini-audit report.
REPORT	☐ Elementary School Energy Report (Form No. ED-00444-02) ☐ Secondary School Energy Report (Form No. ED-00445-02) ☑ Existing Building Energy Report (Form No. EN-00041-01)	
ENERGY REPORT CHECK-OFF	If an energy report has not been completed previous to this mini-audit rep vocational schools should use form ED-00444-02 or form ED-00445-02, depe building energy report, form EN-00041-01.	
	Instructions: This section is to be completed and signed by a registered pr completed the State of Minnesota's Mini-Audit Procedures Course. This sect are completed. All blanks must be filled in.	
	I have reviewed the energy report and/or the energy report results for this b corrected any misinformation on the energy report which will be resubmit	
	I am not directly responsible for the day to day operations of this building	p being audited.
	I have fully disclosed my financial interests relating to this mini-audit and	any energy conservation measures considered by this audit.
	I have walked through this building and have found the recommendation maintenance changes, and low cost energy conservation measures, which	
	I have made a rough estimate, in section G, of the range of savings which n listed in section I. i am not responsible if the actual savings resulting from	n this mini-audit do not fall within the estimated range.
	Based on actual records, the energy conservation operating and maintenar 20% of the building's energy consumption as specified in section I.	nce procedures listed in section K <u>did not</u> save at least (did, did not)
	Based upon my observation of the physical characteristics of this building be the subject of a maxi-audit. (should, should not) I realize that this is not a final judgement, that the State reserves the right to not a final judgement.	
		naka tha maxi-audit funding determination based on this mini-audit report
	and other criteria.	
	and other criteria. Based upon the information in section E and the information referred to in s	ection F. I recommend that this building
	Based upon the information in section E and the information referred to in sundergo further solar conversion analysis, and/orShould_not	ection F, I recommend that this building(should, should not)undergo further analysis of the renewable resources — waste.
	Based upon the information in section E and the information referred to in sundergo further solar conversion analysis, and/or should not wind, wood. (Circle proper resources) (should, should not	ection F, I recommend that this building Should not (should, should not) undergo further analysis of the renewable resources — waste,
	Based upon the information in section E and the information referred to in sundergo further solar conversion analysis, and/orShould_not	ection F, I recommend that this building Should not (should, should not) undergo further analysis of the renewable resources — waste,
	Based upon the information in section E and the information referred to in sundergo further solar conversion analysis, and/or should not wind, wood. (Circle proper resources) (should, should not	ection F, I recommend that this building Should not (should, should not) undergo further analysis of the renewable resources — waste,
	Based upon the information in section E and the information referred to in sundergo further solar conversion analysis, and/orShould_not_wind, wood. (Circle proper resources) (should, should not line my judgement, as a mini-auditor, all of the above statements are true a	ection F, I recommend that this building (should not) undergo further analysis of the renewable resources — waste, and correct.
	Based upon the information in section E and the information referred to in sundergo further solar conversion analysis, and/orShould_not_wind, wood. (Circle proper resources) (should, should not limit may judgement, as a mini-auditor, all of the above statements are true at the statement of the above statements are true at the statement of the above statement of	ection F, I recommend that this building (should not) undergo further analysis of the renewable resources — waste, and correct. Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type)
	Based upon the information in section E and the information referred to in sundergo further solar conversion analysis, and/orShould_not_wind, wood. (Circle proper resources) (should, should not line my judgement, as a mini-auditor, all of the above statements are true a	ection F, I recommend that this building
	Based upon the information in section E and the information referred to in sundergo further solar conversion analysis, and/or	should not (should, should not) undergo further analysis of the renewable resources — waste, and correct. Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type)
	Based upon the information in section E and the information referred to in sundergo further solar conversion analysis, and/orShould_notwind, wood. (Circle proper resources) (should, should not in my judgement, as a mini-auditor, all of the above statements are true a Randy Smith Mini-Auditor's Name (Print or Type)	should not ection F, I recommend that this building (should, should not) undergo further analysis of the renewable resources — waste, and correct. Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature March 18, 1981
	Based upon the information in section E and the information referred to in sundergo further solar conversion analysis, and/or	should not ection F, I recommend that this building (should, should not) undergo further analysis of the renewable resources — waste, and correct. Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature March 18, 1981
	Based upon the information in section E and the information referred to in sundergo further solar conversion analysis, and/or	should not ection F, I recommend that this building (should, should not) undergo further analysis of the renewable resources — waste, and correct. Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature March 18, 1981
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	Based upon the information in section E and the information referred to in sundergo further solar conversion analysis, and/or	should not ection F, I recommend that this building (should, should not) undergo further analysis of the renewable resources — waste, and correct. Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature March 18, 1981
TS	Based upon the information in section E and the information referred to in sundergo further solar conversion analysis, and/or Should not wind, wood. (Circle proper resources) (should, should not lin my judgement, as a mini-auditor, all of the above statements are true a significant statement of the short statement of th	should not ection F, I recommend that this building (should, should not) undergo further analysis of the renewable resources — waste, and correct. Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature March 18, 1981
UDIT	Based upon the information in section E and the information referred to in sundergo further solar conversion analysis, and/or Should not wind, wood. (Circle proper resources) (should, should not lin my judgement, as a mini-auditor, all of the above statements are true a significant statement of the short statement of th	should not ection F, I recommend that this building (should, should not) undergo further analysis of the renewable resources — waste, and correct. Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature March 18, 1981
MINI-AUDIT STATEMENTS	Based upon the information in section E and the information referred to in sundergo further solar conversion analysis, and/or Should not wind, wood. (Circle proper resources) (should, should not lin my judgement, as a mini-auditor, all of the above statements are true a significant statement of the short statement of th	should not ection F, I recommend that this building (should, should not) undergo further analysis of the renewable resources — waste, and correct. Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature March 18, 1981

F	NAME	POSITION	ORGANIZATION
	_		
ļ	Randy Smith	Certified Mini-Auditor	Rieke Carroll Muller Assoc. Inc.
	Scott Hutchins	Certified Electrical Tech.	Rieke Carroll Muller Assoc, Inc.
	SCOLL HULCHINS	certified Liectrical fecil.	Rieke Carrott Mutter Assoc, Inc.
ĺ	Art Parvey		City of Bloomington
E s			
AUDIT			
	BRIEF DESCRIPTION OF GENER	IAL BUILDING CONDITION (i.e. type, and function	2)
G	Good, lift stat		"
Ì		THIN NEXT 15 YEARS (i.e. demolition, rehabilitation	on, conversion from one building type to another)
Z	None		
P I		F ROOF (i.e. metal beams, wooden rafters, concret	e)
BUILDING	Wood Beams ROOFING MATERIAL (i.e. tar and	t gravel shingles tile)	
NE NE	Shingles	graver, similgres, the)	
	Jiring ics		
H	INSTRUCTIONS: Correctly answer	er the following questions for the building being mi	ini-audited
	Is there open land adjacent to the		in-addied.
	Ø Yes □ No	Salaring.	
	Solar collectors need to be located 3 p.m.?	in an unshaded area. Is the roof of the building and t	he south facing wall unshaded between the hours of 9 a.m. and
	Roof: 🛱 Yes □ No	1 •	
	South facing Wall: 🦃 Yes 🗆	No	
	if the roof or wall are partly shade % of roof unshaded	ed, what percentage of the surface is unshaded?	
	% of roof unshaded, % of south facing wall unshade	d%	
	What is the overall shape of the b	ouilding? I-shaped	
	Is the roof of the building flat or p ☐ flat Ø pitched	ontoneu /	
	If pitched, what is the compass of	rientation of the ridgeline?East-	West
		the roof makes with horizontal?	
		he roof such as chimneys, rooms for mechanical e	Quinment ventilating units water towers etc?
	☐ Yes Ø No	,	quipment, ventuating units, water towers, etc.
	What is the exterior facing mater	ial for the south facing wall?Shingles_	
	What percentage of the south fac	ing wall is glass? 0 %	
	is the building's space heating ed ☑ Yes □ No	quipment located within or on the building? (A no	answer indicates the equipment is in a separate building.)
	If the space heating equipment is ☑ Ground Floor ☐ Basemer	s inside the building, where is it located? nt □ Roof □ Other (specify)	
SOLAR POTENTIAL	Is the building's water heating ed Yes No None	juipment located within the building? (A no answe	r indicates the equipment is in a separate building.)
R POT	If the water heating equipment is Ground Floor Basemen	s inside the building, where is it located? nt Other (specify)	
SOLA	Is the water heating system a cel	ntral system, does it consist of multiple units, or is combination	it a combination of the central and multiple units?

L			BASE PERIOD YEAR				Fiscal Year		
	ENERGY TYPE		ENERGY L	SAGE	C	ONVERSION F	ACTOR		BTU USAGE
	Electricity								
	Fuel 1								
	Fuel 2								
	TOTAL								
				20% SA\	/INGS YEAF			Fiscal Y	ear
	ENERGY TYPE		ENERGY USAGE		С	CONVERSION FACTOR			BTU USAGE
	Electricity								
	Fuel 1								
_	Fuel 2								
	TOTAL							1	
L	Instructions: This section is to I								
	Instructions: This section is to I state the roughly estimated ran of the new mini-audit opportu percentages by the annual ele	ge of the per inities listed ctrical and	rcent of total e	lectrical and for Secondly, c	uel consump alculate the	tion which wou range of energ	ld be saved rea	ulting from	the implementation of
	Instructions: This section is to I state the roughly estimated ran of the new mini-audit opportu	ge of the per inities listed ctrical and	rcent of total e d in section L fuel consump	lectrical and for Secondly, c	uel consump alculate the	tion which wou range of energ	ld be saved rea	ulting from	the implementation of
	Instructions: This section is to I state the roughly estimated ran of the new mini-audit opportu percentages by the annual ele	ge of the per inities listed ctrical and gory —	rcent of total ed in section L fuel consump	lectrical and for Secondly, c	uel consump alculate the	tion which wou range of energ	ld be saved rea	sulting from a vings by m	the implementation of
	Instructions: This section is to I state the roughly estimated ran of the new mini-audit opportupercentages by the annual ele Check two boxes in each cater Range of Electrical Savings — Range of Fuel Savings —	ge of the pennities listed ctrical and gory —	prent of total ed in section L fuel consump	lectrical and for secondly, continuous tition data on the second	uel consump alculate the he energy re	tion which wou range of energ aport.	ld be saved reg	avings by m	the implementation of jultiplying the estima
	Instructions: This section is to I state the roughly estimated ran of the new mini-audit opportupercentages by the annual electhical two boxes in each cate. Range of Electrical Savings —	ge of the pennities listed ctrical and gory —	prent of total ed in section L fuel consump	lectrical and for Secondly, contion data on the second sec	uel consump alculate the the energy re 15%	tion which wou range of energaport.	Id be saved regy and cost s	avings by m	the implementation of ultiplying the estimate the ultiplying the estimate the ultiplying the ult
	Instructions: This section is to I state the roughly estimated ran of the new mini-audit opportupercentages by the annual ele Check two boxes in each cater Range of Electrical Savings — Range of Fuel Savings —	ge of the pe inities listed ctrical and gory — A 0% D 0% d cost savir	prent of total ed in section L fuel consump 5% 5%	lectrical and for Secondly, contion data on the second sec	uel consump alculate the he energy re 15% 15%	tion which wou range of energaport.	Id be saved regy and cost s	ulting from wings by m	the implementation of ultiplying the estimate (specify)(specify)
	Instructions: This section is to I state the roughly estimated ran of the new mini-audit opportupercentages by the annual ele Check two boxes in each cater Range of Electrical Savings — Range of Fuel Savings —	ge of the pe inities listed ctrical and gory — A 0% 0% 0% d cost savir	prent of total ed in section L fuel consump	lectrical and for Secondly, contion data on the second sec	uel consump alculate the the energy re 15%	tion which wou range of energaport.	Id be saved regy and cost s	ulting from avings by m	the implementation of ultiplying the estimate the ultiplying the estimate the ultiplying the ult
	Instructions: This section is to I state the roughly estimated ran of the new mini-audit opportupercentages by the annual ele. Check two boxes in each cate. Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy an	ge of the pennities listed ctrical and gory — 0% 0% d cost savir	prent of total ed in section L fuel consump 5% 5% 5% section Section L fuel consump Electrical consump	lectrical and for Secondly, contion data on the second sec	uel consump alculate the he energy re 15% 15% Electrical Sa of Energy	tion which wou range of energaport.	□ 25% □ 25% □ Dollars	other other ectrical	(specify) Range of Electr
	Instructions: This section is to I state the roughly estimated ran of the new mini-audit opportupercentages by the annual ele Check two boxes in each cater Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy an % Range	ge of the pennities listed ctrical and gory — 0% 0% d cost savir	properties of total ed in section La fuel consump 5% 5% 5% 65% 65%	lectrical and for Secondly, contion data on the secondly of the second s	uel consump alculate the the energy re 15% 15% Electrical Sa of Energy rings	ition which wou range of energeport.	□ 25% □ 25% □ Dollars	other other ectrical	(specify) Range of Electr
	Instructions: This section is to I state the roughly estimated ran of the new mini-audit opportupercentages by the annual electrical Savings — Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy an — % Range	ge of the pennities lister ctrical and gory —	properties of total ed in section La fuel consump 5% 5% 5% 65% 65%	lectrical and for Secondly, contion data on the secondly of the second s	uel consump alculate the the energy re 15% 15% Electrical Sa of Energy rings kwh,	ition which wou range of energaport. 20% 20% 20% Range 3 Kange 3 Kange 3 Kange	Dollars	other	(specify) Range of Electro Dollars Saving
	Instructions: This section is to I state the roughly estimated ran of the new mini-audit opportupercentages by the annual ele Check two boxes in each cate. Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy an ### Range Wange	ge of the pennities lister ctrical and gory — 10% 0% d cost savir Annual Cons 605	prent of total ed in section L fuel consump 24 5% 5% Electrical umption 525 kwh	electrical and for Secondly, contion data on the secondly of the second	uel consump alculate the the energy re 15% 15% 15% Electrical Sa of Energy rings kwh,	tion which wou range of energeport. 20% 20% 20% wings Range 0 % × to 5 % ×	Dollars	other	(specify) Range of Electro Dollars Saving
	Instructions: This section is to I state the roughly estimated ran of the new mini-audit opportupercentages by the annual ele. Check two boxes in each cate. Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy an hower bound	ge of the pennities lister ctrical and gory — May 0% — 0% — 0% — 0% — 605 — 605 — 4 — 4 — 4 — 4 — 4 — 4 — 4 — 4 — 4 —	prent of total ed in section L fuel consump 24 5% 5% Electrical umption 525 kwh	Range of Save Save Range Range Range	uel consump alculate the the energy results to the energy results	tion which wou range of energaport. 20% 20% 20% wings Range 0 % × to 5 % ×	Dollars	other	(specify) Range of Electro Dollars Saving
	Instructions: This section is to I state the roughly estimated ran of the new mini-audit opportupercentages by the annual ele. Check two boxes in each cate. Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy an house bound	ge of the pennities lister ctrical and gory — 10% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0	Electrical umption 525 kwh	Range of Save Save Range Range Range	uel consump alculate the the energy re 15% 15% 15% Electrical Sa of Energy rings kwh, to fuel Savi	tion which wou range of energaport. 20% 20% 20% 4 svings 4 Range 0 % x to 5 % x	Id be saved reigy and cost sign and cost sign and cost sign are cost sign and cost sign are cost sign and cost sign are cost sig	other	the implementation of cultiplying the estimate (specify) (specify) Range of Electropollars Saving to \$ 9.23
	Instructions: This section is to I state the roughly estimated ran of the new mini-audit opportupercentages by the annual ele Check two boxes in each cate. Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy an way to upper bound	ge of the pennities lister ctrical and gory — 10% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0	Electrical umption 525 kwh Ty fuel Ty fuel	electrical and for Secondly, continuous and the secondly, continuous and the secondly and the second and the se	uel consump alculate the the energy re 15% 15% 15% Electrical Sa of Energy rings kwh, to fuel Savi	tion which wou range of energaport. 20% 20% 20% vings Range 0 % × to 5 % ×	Id be saved reigy and cost sign and cost sign and cost sign are cost sign and cost sign are cost sign and cost sign are cost sig	other	the implementation of cultiplying the estimate (specify) (specify) Range of Electropollars Saving to \$ 9.23

Instructions: Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor. OPTIONAL: OPTIONAL: CLASSIFICATION NO. ENERGY DATE OF IMPLEMENTATION ITEM PAST ENERGY CONSERVATION ACTIONS COST SAVINGS NO. MAJOR SUB **SAVINGS** CLASS **CLASS** 5 Routine Maintenance Schedule. 1 2

Note Reproduce this page as necessary

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

20	•		ton or the min-addit report should be completed by the min-addit	OPTIONAL:	OPTIONAL	:
ITEM	CLASSIFICATION NO.		NEW MINI-AUDIT OPPORTUNITIES		ENERGY COST	DATE OF IMPLEMENTATION
NO.	MAJOR CLASS	SUB CLASS		SAVINGS	SAVINGS	
1	1	1	Keep all controls free of dust.			
2	1	2	Look for loose connections and bad			
			contacts on a regular basis.			
3	1	2	Lubricate motors to reduce wear and			
			excessive torque.			
4	1	2	Check alignment of motors to driven			ı
			equipment, align and tighten as necessary.			
_5	1	2	Replace worn or defective motors wit	h		
			that are sized as close to the load as possible and use the highest			
			efficiency motors available.			
6	1	2	Where it is impractical to replace			
			motors which have low loads and power factors, use capacitors at			
			motor terminals to correct the power factor to 90%.			
	1_1_	3	An instantaneous power factor reading	1g		
			was .80.			
8	2	2	Weatherstrip all exterior doors.			
9	3	1	Check the calibration of all con-			
			trollers and devices for proper settings and operations.			
10	3	1	65°F maximum occupied, 60°F maximum			
			unoccupied during the heating season			
11	3	3	Check for packing wear which can			
			cause excessive leakage. Repack to avoid excessive water wastage and			
			shaft erosion.			
12	3	3	Inspect bearings and drive belts fo	n		
			wear and binding. Adjust, repair or replace as necessary.			

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

OPTIONAL: OPTIONAL:

				OPTIONAL:	OPTIONAL	·
ITEM NO.		SUB CLASS	NEW MINI-AUDIT OPPORTUNITIES	ENERGY SAVINGS	ENERGY COST SAVINGS	DATE OF IMPLEMENTATION
13	5	1	Keep records of the operating schedu	le,		
			monthly energy consumption and pur- chase of any new equipment that affe	cts		
			energy consumption of efficiency of building. These records will indica	the		
			the impact of energy conservation measures.			
14	5	1	Review the record books on a regular basis.			
15	7	4	Inspect electrical contacts and	,		
		7	working parts of relays and maintain in good working order.			
_16	7	4	Check heater elements for cleanlines Replace as necessary.	s.		
17	7	4	Check controls for proper operation. Adjust as necessary.			
18	7	4	Periodically tighten all electrical-			
			mechanical connections to prevent arcing and burning due to metal			
			flow or loosening of terminal bolts or lugs.			
		<u> </u>				
		+				

A	BUILDING NAME Lift Station - Sanitary Sew	age	NAME OF ORGANIZATION City of Bloomington	DATE 2/18/81	
	BUILDING ADDRESS 11200 France Avenue South		ADDRESS 2215 West Old Shakopee Road		
ACT	cıry Bloomington	ZIP CODE 55431	сıтү Bloomington	ZIP CODE 55431	
CONT	PERSON COMPLETING FORM Randy Smith	TELEPHONE 935-6901	CONTACT PERSON Arthur Jensen	TELEPHONE 881-5811	

1.	OWNERSHIP TYPE		3a.	SCHOOLS		С.	LOCAL GOVERNMENT	
	🖄 Public (P	UB)		☐ Elementary	(SCHL-ELM)		Office	(LOCG-OF
	□Non-Profit Association	(NAP)	1	Secondary	(SCHL-SECD)		□Storage	(LOCG-ST
				□Coll. or Univ.	(SCHL-POST)		XXService	(LOCG-SEF
	-		1	□Vocational	(SCHL-VOCL)		Library	(LOCG-LBF
2.	ULTIMATE OWNER		ì	☐Education Agency	(SCHL-ADMN)		Police	(LOCG-PLC
	딨County	(CNTY)	l	☐ Administration	(SCHL-ADMN)		□ Fire	(LOCG-FIR
	⊠ City	(CITY)		DOTHER	(SCHL-OTHR)		DOTHER	(LOCG-OT
	Township	(TOWN)	Ь.	PUBLIC CARE				
	☐ State	(STAT)	1 5.	ONursing Home	(PBCR-NURS)	d.	HOSPITALS	#1000 OF
	Public School	(PUSC)	1	Long Term Care	(PBCR-TERM)		□General .	(HOSP-GEI
	Private School	(PRSC)	1	Rehab. Facility	(PBCR-RHAB)		Tuberculosis	(HOSP TUE
	Non-Profit Association	(NPAP)		Public Health Ctr.	(PBCR-HCTR)		DOTHER	(HOSP-OT
	□Indian Tribe	(INDN)	1	□Res. Child Care Ctr.	(PBCR-RCCC)			

	Instructions: With reference to page 23 entitled Funding Information, determine if the facilities are eligible for both Federal and State funding or just Federal funding, then answer the questions correctly for the situation. This section must be signed and dated by the head of the organization
	If eligible for both Federal and State Funding: Have you received a mini-audit grant before?
	Date <u>March 18, 1981</u>
	Signature
	If eligible for Federal funding only: Have you received a mini-audit graht before? Yes No Have you previously applied for mini-audit funding? Yes No Do you wish to apply for mini-audit funding? Yes No
	The 50% match for Federal funds will come from: (Use additional sheets if necessary.)
EST	
EOU	Date
MINI-AUDIT FUNDING REQUEST	Name
7 7	

D		
	Check the type of energy report which was completed and submitted pr	ior to this mini-audit report.
ENERGY REPORT	☐ Elementary School Energy Report (Form No. ED-00444-02) ☐ Secondary School Energy Report (Form No. ED-00445-02) XX Existing Building Energy Report (Form No. EN-00041-01)	
G Y R	If an energy report has not been completed previous to this mini-audit	eport, one must be included with this report. Elementary, secondary, and pending on building complexity. All other buildings should use the existing
CHEC	building energy report, form EN-00041-01.	pending on building complexity. All other buildings should be also should
	Instructions: This section is to be completed and signed by a registered completed the State of Minnesota's Mini-Audit Procedures Course. This stare completed. All blanks must be filled in.	professional engineer or by a certified mini-auditor who has successfully action should be completed after this mini-audit report and an energy report
		:
	I have reviewed the energy report and/or the energy report results for this corrected any misinformation on the energy report which will be result.	s building. I found all information contained therein to be correct OR I have nitted with this mini-audit report to the Minnesota Energy Agency
	I am not directly responsible for the day to day operations of this build	ing being audited.
	I have fully disclosed my financial interests relating to this mini-audit a	. nd any energy conservation measures considered by this audit.
		ions listed in section I of this mini-audit report to be the operations and
	maintenance changes, and low cost energy conservation measures, wh	ich would reduce energy consumption in this building.
	I have made a rough estimate, in section G, of the range of savings whic listed in section I. I am not responsible if the actual savings resulting fr	
	Based on actual records, the energy conservation operating and mainte 20% of the building's energy consumption as specified in section I.	nance procedures listed in section K <u>dīd not</u> save at least (dɪd. dɪd not)
	Based upon my observation of the physical characteristics of this build Should not be the subject of a maxi-audit.	ling and the building's major energy using systems, I recommend that this
	(should, should not)	
	and other criteria.	o make the maxi-audit funding determination based on this mini-audit report
	Paradoran video de la companya de la	should not
1 1	Based upon the information in section E and the information referred to i	(snould, snould not)
	undergo further solar conversion analysis, and/or Should not wind, wood. (Circle proper resources) (should, should	
	wind, wood. (Circle proper resources) (should, should	noty
	In my judgement, as a mini-auditor, all of the above statements are tru	e and correct.
1.		
1		Witnessed by:
1	_Randy_Smith	Assistant Maintenance Supervisor
1 1	Mini-Auditor's Name (Pript or Type)	Building Organizational Authority (Print or Type)
	Kandy Antel 206	Cether W Jensen
	Signature	Signature
	Rieke Carroll Muller Assoc., Inc.	March 18, 1981
	Firm Name (if none, enter none)	Date
	P.O. Box 130 Hopkins, MN 55343	
	Address	
	612/935-6901	
	Phone	
	March 18, 1981	
	Date	
S		
ENT		
MINI-AUDIT STATEMENTS		
1 4 1		
2 <		

F	NAME	POSITION	ORGANIZATION
	Randy Smith	Certified Mini-Auditor	r Rieke Carroll Muller Assoc., In
	Art Parvey		City of Bloomington
AUDIT TEAM	Scott Hutchins	Electrical Technician	Rieke Carroll Muller Assoc., In
	PRISE PEROPRISE OF PER	TO A DAME OF THE STATE OF THE S	
G	Good underground	ERAL BUILDING CONDITION (i.e. type, and functi	ion)
	MAJOR CHANGES PLANNED	NITHIN NEXT 15 YEARS (i.e. demolition, rehabilita	ation, conversion from one building type to another)
O.	None STRUCTURAL COMPONENTS	OF ROOF (i.e. metal beams, wooden rafters, concr	rete)
BUILDING	Concrete with meta	al cover	,
NFO P	ROOFING MATERIAL (i.e. tar a	nd gravel, shingles, tile)	
	Metal cover		
H	INSTRUCTIONS: Correctly ans	wer the following questions for the building being	mini-audited.
	Is there open land adjacent to t	he building?	
		4	d the south facing wall unshaded between the hours of 9 a.m. and
	If the roof or wall are partly sha % of roof unshaded % of south facing wall unshad	ided, what percentage of the surface is unshaded?% ded%	
	What is the overall shape of the	building? H-shaped □ E-shaped □ other (specify)	
	Is the roof of the building flat o ★★flat □ pitched	r pitched?	
	If pitched, what is the compass	orientation of the ridgeline?	
	If pitched, what is the angle tha	at the roof makes with horizontal?°	
!	Are there large obstructions on ☐ Yes XXNo	the roof such as chimneys, rooms for mechanical	equipment, ventilating units, water towers, etc?
	What is the exterior facing mat	erial for the south facing wall? None	
	What percentage of the south t	acing wall is glass? %	
	Is the building's space heating □ Yes □ No None	equipment located within or on the building? (A n	o answer indicates the equipment is in a separate building.)
	If the space heating equipment Ground Floor Basem	is inside the building, where is it located?	
NTIAL			wer indicates the equipment is in a separate building.)
SOLAR POTENTIAL	If the water heating equipment	is inside the building, where is it located?	
SOLA	Is the water heating system a control D Multiple D	central system, does it consist of multiple units, or Combination	is it a combination of the central and multiple units?

			BASE PE	RIOD YEAR	l		Fiscal Y	ear	
	ENERGY TYPE	ENERGY	USAGE	cc	NVERSION I	ACTOR		вти из	AGE
	Electricity								
-	Fuel 1		Martin Maria (Maria Maria Maria Maria (Maria)						
_	Fuel 2								
	TOTAL						·		
			20% SAVI	NGS YEAR	and the control of th		Fiscal '	Year	
	ENERGY TYPE	ENERGY	USAGE	cc	ONVERSION	FACTOR		BTU U	SAGE
	Electricity								
	Fuel 1							The state of the s	
	Fuel 2								
	TOTAL		~ 						
	Instructions: This section is to be state the roughly estimated range	e completed by the min	i-auditor after the	e walk-thru p	portion of the	mini-audit. Fir	st, check the	appropria	te boxes wh
	state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect	e of the percent of total nities listed in section trical and fuel consum	electrical and fu L. Secondly, cal	el consumpt iculate the r	tion which wor range of ener	uld be saved re	sulting from	the impler	nentation o
	state the roughly estimated rang of the new mini-audit opportun	e of the percent of total hities listed in section trical and fuel consum ory —	electrical and fu L. Secondly, cal	el consumpt iculate the r	tion which wor range of ener	uld be saved re	esulting from savings by n	the impler nultiplying	nentation o
	state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect Check two boxes in each category	e of the percent of total hities listed in section trical and fuel consum ory —	electrical and fue L. Secondly, cal ption data on th	el consumpt culate the r e energy re	tion which wor range of ener port.	ald be saved regy and cost s	esulting from savings by n	the impler nultiplying (specify)	nentation o the estima
	state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect Check two boxes in each category Range of Electrical Savings—	e of the percent of total nities listed in section trical and fuel consumbly ory — XX 0% XX 5%	electrical and fue L. Secondly, cal ption data on th	el consumpt lculate the r e energy re	range of ener	uld be saved regy and cost a	esulting from savings by n	the impler nultiplying (specify)	nentation o the estima
	state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect Check two boxes in each category Range of Electrical Savings — Range of Fuel Savings —	e of the percent of total nities listed in section trical and fuel consumbly ory — XX 0% XX 5%	electrical and fue L. Secondly, cal ption data on th	el consumpt lculate the r e energy re	ion which worange of ener port.	uld be saved regy and cost a	esulting from savings by n	the impler nultiplying (specify)	nentation o the estima
	state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and	e of the percent of total inties listed in section trical and fuel consumory — XX 0% XX 5% 0% D 5% cost savings — Annual Electrical Consumption	electrical and fue L. Secondly, cal ption data on th	el consumpticulate the ree energy re 15% 15% 15% Energy	ion which worange of ener port.	□ 25% □ 25%	osulting from savings by n	the impler nultiplying (specify) r (specify) Rang	nentation o the estima
	state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect Check two boxes in each category Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and	e of the percent of total lities listed in section trical and fuel consumory — XX 0% XX5% 0% 'D' 5% cost savings — Annual Electrical	electrical and fuel. Secondly, calption data on the 10% 10% Range of E	el consumpticulate the ree energy re	20% 20% Range	□ 25% □ 25% Annual E	osulting from savings by n other other	the impler nultiplying (specify) r (specify) Rang	nentation o the estima
	state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect Check two boxes in each categorange of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and — % Range 0 % x to E	e of the percent of total lities listed in section trical and fuel consum ory — XX 0% XX 5% 0% ; 17 5% cost savings — Annual Electrical Consumption 3246 kwh	electrical and fue L. Secondly, cal ption data on th 10% Range of E Range of Savii L. Common data on th	el consumpticulate the ree energy re 15% 15% 15% Energy ngs kwh, (ion which workings of ener	25% 25% Annual E Dollars	osulting from savings by n other other other other other spent	(specify) r (specify) Rang Do	nentation of the estimation of
	state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect Check two boxes in each categorange of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and ———————————————————————————————————	e of the percent of total inties listed in section trical and fuel consumory — XX 0% XX 5% 0% D 5% cost savings — Annual Electrical Consumption	electrical and fue L. Secondly, cal ption data on th 10% Range of E Range of Savii L. Common data on th	el consumpticulate the ree energy re 15% 15% 15% Energy ngs kwh, (ion which workings of ener	25% 25% Annual E Dollars	osulting from savings by n other other	(specify) r (specify) Rang	nentation o the estima
	state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect Check two boxes in each categorange of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and — % Range 0 % x to E	e of the percent of total lities listed in section trical and fuel consum ory — XX 0% XX 5% 0% XX 5% cost savings — Annual Electrical Consumption 3246 kwh	electrical and fuel. Secondly, calption data on the 10% 10% Range of E Range of Savin 10%	el consumpticulate the ree energy re 15% 15% 15% Energy ngs kwh, (20% 20% 20% Range 5 40 10 10 10 10 10 10 10 10 10 10 10 10 10	25% 25% Annual E Dollars	osulting from savings by n other other other other other spent	(specify) r (specify) Rang Do	nentation of the estimation of
	state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect Check two boxes in each categorange of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and ———————————————————————————————————	e of the percent of total lities listed in section trical and fuel consum ory — XX 0% XX 5% 0% XX 5% cost savings — Annual Electrical Consumption 3246 kwh	electrical and fuel. Secondly, calption data on the 10% 10% Range of E Range of Savin 10%	el consumpticulate the ree energy re 15% 15% 15% Energy ngs kwh,	20% 20% 20% Range 5 40 10 10 10 10 10 10 10 10 10 10 10 10 10	25% 25% Annual E Dollars \$ 11	osulting from savings by n other other other other other spent	r (specify) Rang Do - \$	nentation of the estimation of
	state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect Check two boxes in each categorange of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and ———————————————————————————————————	e of the percent of total inties listed in section trical and fuel consum ory — XX 0% XX5% 0% XX5% cost savings — Annual Electrical Consumption 3246 kwh USE any fuel Annual Fuel Consumption	electrical and fuel. Secondly, calption data on the control of the	el consumpticulate the ree energy re 15% 15% 15% Energy ngs kwh,	ion which worange of ener port. 20% 20% 20% things Kange 5 % Range	25% 25% Annual E Dollars \$ 11	coulting from savings by n other other other countries of the countries of	r (specify) Rang Do - \$	nentation of the estimate of Electrical serving to to 5.74
	state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect Check two boxes in each categorange of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and ———————————————————————————————————	e of the percent of total inties listed in section trical and fuel consum ory — XX 0% XX5% 0% XX5% cost savings — Annual Electrical Consumption 3246 kwh USE any fuel Annual Fuel Consumption	electrical and fuel. Secondly, calption data on the control of the	el consumpticulate the ree energy ree 15% 15% 15% Energy ngs kwh,	ion which worange of ener port. 20% 20% 20% things Kange 5 % Range	25% 25% Annual E Dollars \$ 11 Annu Dollar	coulting from savings by n other other other countries of the countries of	r (specify) Rang Do - \$	nentation of the estimate of Electrical serving to to 5.74

K

Instructions: Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor.

OPTIONAL: OPTIONAL: CLASSIFICATION **ENERGY** ENERGY ITEM NO. DATE OF IMPLEMENTATION PAST ENERGY CONSERVATION ACTIONS COST SAVINGS NO. MAJOR SUB SAVINGS **CLASS CLASS** 5 2 Routine maintenance schedule.

Note Reproduce this page as necessary

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

ITEM	CLASSIF	ICATION		OPTIONAL:	ENERGY	DATE OF IMPLEMENTATION
NO.	MAJOR CLASS	SUB CLASS	NEW MINI-AUDIT OPPORTUNITIES	SAVINGS	COST	
1	11	1	Keep all controls free of dust.			
2	1	2	Look for loose connections and bad contacts on a regular basis.			
3	1_1_	2	Check alignment of motors to driven equipment, align and tighten as			
			necessary.			
4	1	2	Replace worn or defective motors with motors that are sized as close to the			
			load as possible and use the highest efficiency motors available.			
5	1	2	Where it is impractical to replace motors which have low loads and			
			power factors, use capacitors at motors terminals to correct the power	1		
			factor to 90%.			
6	1	3	Instantaneous power factor reading was .70.			
7	3	3	Check for packing wear which can cause excessive leakage. Repack to			
			avoid excessive water wastage and shaft erosion.			
	-	<u> </u>	Inchest bearings and duite balts Con-	ļ		
8	3	3	Inspect bearings and drive belts for wear and binding. Adjust, repair or replace as necessary.			
		ļ		ļ		
9	5	1_1_	Keep records of the operating schedule, monthly energy consumption and purchase of any new equipment			
		-	that affects energy consumption of efficiency of the building. These		 	
			records will indicate the impact of energy conservation measures.	-		
	_		Review the record books on a regular			 .
10	5	1	basis.			

A	BUILDING NAME Lift Station - Sanitary Sewa	ige	NAME OF ORGANIZATION City of Bloomington	DATE 2/18/81
	BUILDING ADDRESS 11011 Glen Wilding Lane		ADDRESS 2215 West Old Shakopee Road	
ACT	city Bloomington	ZIP CODE 55431	сіту Bloomington	ZIP CODE 55431
CONT	PERSON COMPLETING FORM Randy Smith	TELEPHONE 935-6901	CONTACT PERSON Arthur Jensen	TELEPHONE 881-5811

COU	Randy Smith	935-6901	Arthur Jensen		881-5811
8	Instructions: For blocks 1 and 2 check the box describes the building type and then within the	which best fits the building e category check off the s	g ownership conditions. For block sub category befitting the building	3 determine which of function.	of the four categories
BUILDING ELIGIBILITY CODE	1 OWNERSHIP TYPE XXPublic (PUB) Non-Profit Association (NAP) 2. ULTIMATE OWNER County (CNTY) City (CITY) Township (TOWN) State (STAT) Public School (PUSC) Private School (PSC) Non-Profit Association (NPAP) Indian Tribe (INDN)	3a. SCHOOLS □ Elementary □ Secondary □ Coll. or Univ. □ Vocational □ Education Ag □ Administratic □ OTHER b. PUBLIC CARE □ Nursing Hom □ Long Term C □ Rehab. Facili □ Public Health □ Res. Child C	(SCHL-VOCL) (Jency (SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR) (Jency (PBCR-NURS) (Jency (PBCR-TERM) (Jency (PBCR-RHAB) (Jency (PBCR-RHAB) (Jency (PBCR-HCTR)	LOCAL GOVERNA Office Storage Miservice Chibrary Police Fire OTHER HOSPITALS General Tuberculosis OTHER	(LOCG-OFFC) (LOCG-STRG) (LOCG-SERV) (LOCG-LBRY) (LOCG-PLCE) (LOCG-FIRE) (LOCG-OTHR) (HOSP-GENL) (HOSP-TUBR) (HOSP-OTHR)
C	Instructions: With reference to page 23 entitled just Federal funding, then answer the question	d Funding Information, description description description description the situation	stermine if the facilities are eligible. n. This section must be signed and	e for both Federal and dated by the head	and State funding or d of the organization
	If eligible for both Federal and State Funding: Have you received a mini-audit grant before Have you previously applied for mini-audit finding. Date March 18, 1981 Name Arthur Jensen If eligible for Federal funding only: Have you received a mini-audit grant before Have you previously applied for mini-audit finding. The 50% match for Federal funds will come	unding? Yes No Pes No Pes No Pes No unding? Yes No			
NUEST					

MINI-AUDIT FUNDING REQUE

Name __

Signature. _

D	Check the type of energy report which was completed and submitted p	prior to this mini-audit report.
CHECK-OFF	☐ Elementary School Energy Report (Form No. ED-00444-02) ☐ Secondary School Energy Report (Form No. ED-00445-02) ☑ Existing Building Energy Report (Form No. EN-00041-01)	
TECK-O	If an energy report has not been completed previous to this mini-audit vocational schools should use form ED-00444-02 or form ED-00445-02, d building energy report, form EN-00041-01.	report, one must be included with this report. Elementary, secondary, and lepending on building complexity. All other buildings should use the existing
ठे		1
<u> </u>		
	Instructions: This section is to be completed and signed by a registere completed the State of Minnesota's Mini-Audit Procedures Course. This are completed. All blanks must be filled in.	d professional engineer or by a certified mini-auditor who has successfully section should be completed after this mini-audit report and an energy report.
-	I have reviewed the energy report and/or the energy report results for the corrected any misinformation on the energy report which will be result	his building. I found all information contained therein to be correct OR I have
	I am not directly responsible for the day to day operations of this built	
İ	I have fully disclosed my financial interests relating to this mini-audit	
	I have walked through this building and have found the recommenda	itions listed in section I of this mini-audit report to be the operations and
	maintenance changes, and low cost energy conservation measures, w	
-	listed in section I. I am not responsible if the actual savings resulting	ch may result from the implementation of all of the mini-audit opportunities from this mini-audit do not fall within the estimated range.
	Based on actual records, the energy conservation operating and mainto 20% of the building's energy consumption as specified in section I.	enance procedures listed in section K did not save at leas
	Based upon my observation of the obveical characteristics of this built	ding and the building's major energy using systems, I recommend that this
	(should, should not) be the subject of a maxi-audit.	
	and other criteria.	t to make the maxi-audit funding determination based on this mini-audit repoil
	Based upon the information in section E and the information referred to	in section F, I recommend that this building should not
	undergo further solar conversion analysis, and/orShould_no	t undergo further analysis of the renewable resources waste
	(On the proper (occurrence)	
	In my judgement, as a mini-auditor, all of the above statements are tr	ue and correct.
		Witnessed by:
	Randy Smith Mini-Ayditor's Name (Print of Type)	Assistant Maintenance Supervisor Building Organizational Authority (Print or Type)
	Kanaly Soft 206	Mithen W Knien
	Signature	Signature
	Rieke Carroll Muller Assoc., Inc.	March 18, 1981
	P.O. Box 130 Hopkins, MN 55343	
	Address 612/935_6901	
	612/935-6901 Phone	-
	March 18, 1981	•
ZTS		
MINI-AUDIT STATEMENTS		
TAT		
es (/)		

				7
F	NAME Randy Smith	POSITION Certified Mini-Auditor	ORGANIZATION	T.,
	Nandy Siliteir	Certified Milit-Auditor	Rieke Carroll Muller Assoc.	-1 TUC
	Scott Hutchins	Electrical Technician	Rieke Carroll Muller Assoc.	Inc.
				7
				4
				-
AUDIT				
₹F	Art Parvey		City of Bloomington	
				
G		AL BUILDING CONDITION (i.e. type, and function)		
	Good, underground	<u> </u>	nversion from one building type to another)	-
z	None		, , , , , , , , , , , , , , , , , , ,	
BUILDING		ROOF (i.e. metal beams, wooden rafters, concrete)		
NEW	Concrete with meta	l hatch		4
PF PF	ROOFING MATERIAL (i.e. tar and	gravel, shingles, tile)		
	Metal hatch			لــ
Н	INISTRUCTIONS: Correctly approx	s the fellowing processing for the building being minimum	the ad	7
n		r the following questions for the building being mini-aud	itea.	4
	Is there open land adjacent to the ☐ Yes ☒ No	building?		
		in an unshaded area. Is the roof of the building and the sout	th facing wall unshaded between the hours of 9 a.m. and	
	3 p.m.? Roof: □ Yes Ø No			
	South facing Wall: Yes D	No None		
	If the roof or wall are partly shade	ed, what percentage of the surface is unshaded?		
	% of roof unshaded	% d%		
	What is the overall shape of the b	uilding?		
		-shaped □ E-shaped KXother (specify) Round		
	Is the roof of the building flat or p ☑ flat □ pitched	itched?		
	If pitched, what is the compass or	ientation of the ridgeline?		
	•	he roof makes with horizontal?		
		ne roof such as chimneys, rooms for mechanical equipme		
	☐ Yes ☑No	te root such as chimineys, rooms for mechanical equipme	ent, ventilating units, water towers, etc?	
	What is the exterior facing materi	al for the south facing wall? None		
	What percentage of the south fac			
	Is the building's space heating eq	uipment located within or on the building? (A no answer	rindicates the equipment is in a separate building.)	
	None		•	
	If the space heating equipment is	inside the building, where is it located? t □ Roof □ Other (specify)		
AL.				
ZZ	Yes ONO NONE	uipment located within the building? (A no answer indici	ates the equipment is in a separate building.)	
OTE	If the water heating equipment is	inside the building, where is it located?		
A B B	☐ Ground Floor ☐ Basemen	t Other (specify)		
SOLAR POTENTIAL	Is the water heating system a cer	ntral system, does it consist of multiple units, or is it a co ombination	embination of the central and multiple units?	

		BASE PE	ERIOD YEAR		Fiscal Year _	
ENERGY TYPE	ENERGY U	ISAGE	CONVERSION	FACTOR	ВТЦ	USAGE
Electricity		A Market Manage of the Section of th				
Fuel 1						
Fuel 2						
TOTAL						,
	Anna agus a coma	20% SAV	INGS YEAR	****	Fiscal Year	
ENERGY TYPE	ENERGY L	JSAGE	CONVERSION	FACTOR	ВТ	U USAGE
Electricity				engereary effects (iv a.m a.A.F. finest	·	
Fuel 1						
Fuel 2				gan gan kadaya sa mata di Santa da ana da ayan da di Santa da ayan da di Santa da Arab		
TOTAL						
Instructions: This section is to be a state the roughly estimated range	completed by the mini-	-auditor after th	ne walk-thru portion of th	e mini-audit. Fir	st, check the appro	priate boxes which
state the roughly estimated range of the new mini-audit opportunit percentages by the annual electri	of the percent of total e ties listed in section L ical and fuel consump	electrical and fu Secondly, ca	uel consumption which w alculate the range of en	ould be saved re	sulting from the im	plementation of all
state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor	of the percent of total e ties listed in section L ical and fuel consump	electrical and fu Secondly, ca partion data on the	iel consumption which walculate the range of en the energy report.	ould be saved re ergy and cost s	esulting from the im savings by multipl	ppiementation of all ying the estimated
state the roughly estimated range of the new mini-audit opportunit percentages by the annual electricheck two boxes in each categor Range of Electrical Savings —	of the percent of total e ties listed in section L ical and fuel consump	electrical and fu Secondly, ca	uel consumption which w alculate the range of en	ould be saved re	sulting from the insavings by multiple	pplementation of all ying the estimated
state the roughly estimated range of the new mini-audit opportunit percentages by the annual electricheck two boxes in each categor Range of Electrical Savings — Range of Fuel Savings —	of the percent of total elies listed in section Lical and fuel consump y — 30 0% 5% 5%	electrical and function data on the	uel consumption which walculate the range of en the energy report.	ould be saved reergy and cost s	sulting from the insavings by multiple	pplementation of all ying the estimated
state the roughly estimated range of the new mini-audit opportunit percentages by the annual electricheck two boxes in each categor Range of Electrical Savings — Range of Fuel Savings —	of the percent of total elies listed in section Lical and fuel consump y — 30 0% 5% 5%	lectrical and fu Secondly, caption data on the last second last	uel consumption which walculate the range of en the energy report.	ould be saved reergy and cost s	sulting from the insavings by multiple	pplementation of all ying the estimated
state the roughly estimated range of the new mini-audit opportunit percentages by the annual electricheck two boxes in each categor Range of Electrical Savings — Range of Fuel Savings —	of the percent of total elies listed in section Lical and fuel consump y — 30 0% 5% 5%	lectrical and function data on the secondly, caption data on the second	uel consumption which walculate the range of en the energy report.	ould be saved reergy and cost s	osulting from the interest of the control of the co	pplementation of all ying the estimated
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state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and co	of the percent of total elies listed in section Lical and fuel consump y — 0%	Plectrical and function data on the state of	el consumption which walculate the range of en the energy report. 15% 20% 15% 20% Electrical Savings of Energy ings % Range	Ould be saved reergy and cost statement of the saved reer	osulting from the insavings by multiple other (spec	eify) Range of Electrical Dollars Savings
state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and company the sample of the savings in the savi	of the percent of total elies listed in section Lical and fuel consump y — 30% \$35% 0% \$5% 0% \$5% cost savings — Annual Electrical Consumption	Plectrical and function data on the state of	el consumption which walculate the range of en the energy report. 15% 20% 15% 20% Electrical Savings of Energy ings % Range kwh, 0 % to	Ould be saved reergy and cost s	osulting from the insavings by multiple other (spec	eify) Range of Electrical Dollars Savings
state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and compared to the sample of the sample of the savings of energy and compared to the sample of	of the percent of total elies listed in section Lical and fuel consumpty — \$\infty\$ 0% \$\infty\$ 5% \$\infty\$ 0% \$\infty\$ 5% cost savings — Annual Electrical Consumption \$\frac{2622}{2622}\$ kwh	Plectrical and function data on the secondly, caption data on the second	el consumption which walculate the range of en the energy report. 15% 20% 15% 20% Electrical Savings I Energy ings % Range kwh, 0 %	Ould be saved reergy and cost statement of the saved reer	osulting from the insavings by multiple other (spec	eify) Range of Electrical Dollars Savings
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state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Range of Fuel Savings — Range of Fuel Savings — Range of Electrical Savings — Range of Fuel Savings — Range of Electrical Savings — Range of Fuel Savings — Range of Electrical Sa	of the percent of total eties listed in section Lical and fuel consumpty — NOW NOTE: OW NOTE: OWN NOTE: Section 1 Sw. Annual Electrical Consumption 2622 kwh Section 2 Sw. Annual Fuel Annual Fuel	Plectrical and function data on the secondly, caption data on the second	el consumption which walculate the range of en he energy report. 15% 20% 15% 20% Electrical Savings of Energy ings % Range kwh, 0 % to 1 kwh, 5 % of Fuel Savings	ould be saved reergy and cost series. 25% 25% Annual E Dollars x \$ 95 x \$ 95	esulting from the insavings by multiple of their (special special spec	Range of Electrical Dollars Savings \$ to \$ Range of Fuel

Instructions. Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor. OPTIONAL: OPTIONAL: CLASSIFICATION **ENERGY** ITEM NO. **ENERGY** DATE OF IMPLEMENTATION PAST ENERGY CONSERVATION ACTIONS COST SAVINGS NO. MAJOR SUB SAVINGS CLASS CLASS 5 2 Routine Maintenance Schedule. 1

Note Reproduce this page as necessary

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

žō	CLASSIF	ICATION		OPTIONAL:	OPTIONAL	<u>:</u>
NO.	MAJOR CLASS		NEW MINI-AUDIT OPPORTUNITIES	ENERGY SAVINGS	COST	DATE OF IMPLEMENTATION
1						
1	$\frac{1}{1}$	1	Keep all controls free of dust.			
	-		Look for Josephan and Look			
2	1	2	Look for loose connections and bad contacts on a regular basis.	Name and the same of the same		
3	1	2	Lubricate motors to reduce wear and excessive torque.			
4	1	2	Check alignment of motors to driven equipment, align and tighten as			
			necessary.			
5	1	2	Replace worn or defective motors with			
	†		motors that are sized as close to the load as possible and use the highest efficiency motors available. Where			
	<u> </u>		it is impractical to replace motors			
			which have low loads and power factor use capacitors at motor terminals to	<u>s. </u>		
			correct the power factor 90%.			
	<u> </u>		Note motors are overloaded thus caus-			
6	1	2	<pre>ing poor instantaneous power factor readings of pump 1 .74 - pump 2 .64.</pre>			
			· ·			
7	3	3	<u>Inspect</u> air compressor intake filter pads and clean or replace as necess-			
			ary.			
8	3	3	Check the compressor's oil level.			
9	5	1	Keep records of the operating schedul monthly energy consumption and pur-	е		·
			chase on any new equipment that aff- ects energy consumption of efficiency	,		
			of the building. These records will indicate the impost of energy con-			
		1	servation measures.			
10	5	1	Review the record books on a regular			
10	1 5	$\frac{1}{1}$	basis.			

A	BUILDING NAME		NAME OF ORGANIZATION	DATE
	<u>Lift Station - Sanitary Sew</u>	age	City of Bloomington	2/18/81
	BUILDING ADDRESS		ADDRESS	
	11101 Hampshire Avenue Sout	h	2215 West Old Shakopee Roa	d
-	CITY	ZIP CODE	CITY	ZIP CODE
FACT	Bloomington	55431	Bloomington	55431
MA	PERSON COMPLETING FORM Randy Smith	TELEPHONE	CONTACT PERSON	TELEPHONE
ŭà	Randy Smith	935-6901	Arthur Jensen	881-5811

B	ins de	structions: For blocks 1 and 2 scribes the building type and	check the box then within th	which b	est fits the building owners ory check off the sub cate	ship conditions. Fo gory befitting the	r bloc buildi	k 3 determine which of the fing function.	our categories
	1.	OWNERSHIP TYPE EDRublic (I DNon-Profit Association	PUB) (NAP)	За.	SCHOOLS DElementary Secondary Coll. or Univ.	(SCHL-ELM) (SCHL-SECD) (SCHL-POST)	C.	LOCAL GOVERNMENT Office Storage Service	(LOCG-OFFC) (LOCG-STRG) (LOCG-SERV)
CODE	2.	ULTIMATE OWNER ☐ County ☐ City ☐ Township	(CNTY) (CITY) (TOWN)		□Vocational □Education Agency □Administration □OTHER	(SCHL-VOCL) (SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR)		OLibrary OPolice Ofire OOTHER	(LOCG-LBRY) (LOCG-PLCE) (LOCG-FIRE) (LOCG-OTHR)
BUILDING		☐ State ☐ Public School ☐ Private School ☐ Non-Profit Association ☐ Indian Tribe	(STAT) (PUSC) (PRSC) (NPAP) (INDN)	b.	PUBLIC CARE Nursing Home Long Term Care Rehab. Facility Public Health Ctr. Res. Child Care Ctr.	(PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-HCTR) (PBCR-RCCC)	d.	HOSPITALS General Tuberculosis OTHER	(HOSP-GENL) (HOSP-TUBR) (HOSP-OTHR)

C	Instructions: With reference to page 23 entitled Funding Information, determine if the facilities are eligible for both Federal and State funding or just Federal funding, then answer the questions correctly for the situation. This section must be signed and dated by the head of the organization
	If eligible for both Federal and State Funding: Have you received a mini-audit grant before? □ Yes ᡌ No Have you previously applied for mini-audit funding? ☑ Yes □ No Do you wish to apply for mini-audit funding? □ Yes 図 No
	Date March 18, 1981
	Name Arthur Jensen
	Signature Myself Worth
	If eligible for Federal funding only: Have you received a mini-audit grant before? Yes No Have you previously applied for mini-audit funding? Yes No Do you wish to apply for mini-audit funding? Yes No The 50% match for Federal funds will come from: (Use additional sheets if necessary.)
	·
UEST	
REO	Date
MINI-AUDIT FUNDING REQUEST	Name
E S	Signature.

	☐ Elementary School Energy Report (Form No. ED-00444-02)	ior to this mini-audit report.
	Secondary School Energy Report (Form No. ED-00445-02) XX Existing Building Energy Report (Form No. EN-00041-01)	
	If an energy report has not been completed previous to this mini-audit revocational schools should use form ED-00444-02 or form ED-00445-02, depuilding energy report, form EN-00041-01.	eport, one must be included with this report. Elementary, secondary, a pending on building complexity. All other buildings should use the exist
	Instructions: This section is to be completed and signed by a registered completed the State of Minnesota's Mini-Audit Procedures Course. This se are completed. All blanks must be filled in.	professional engineer or by a certified mini-auditor who has successfuection should be completed after this mini-audit report and an energy rep
,	I have reviewed the energy report and/or the energy report results for this corrected any misinformation on the energy report which will be resubm	s building. I found all information contained therein to be correct OR I h nitted with this mini-audit report to the Minnesota Energy Agency
	I am not directly responsible for the day to day operations of this building	ing being audited.
	I have fully disclosed my financial interests relating to this mini-audit and	nd any energy conservation measures considered by this audit.
	I have walked through this building and have found the recommendation maintenance changes, and low cost energy conservation measures, whi	ions listed in section I of this mini-audit report to be the operations ich would reduce energy consumption in this building.
	I have made a rough estimate, in section G, of the range of savings which listed in section I. I am not responsible if the actual savings resulting from	h may result from the implementation of all of the mini-audit opportun om this mini-audit do not fall within the estimated range.
	Based on actual records, the energy conservation operating and mainten	44 d mm+
	20% of the building's energy consumption as specified in section I.	(did, did not)
	Based upon my observation of the physical characteristics of this building Should not be the subject of a maxi-audit. (should, should not) I realize that this is not a final judgement, that the State reserves the right to	(did, did not) ling and the building's major energy using systems, I recommend that
	Based upon my observation of the physical characteristics of this building Should not be the subject of a maxi-audit. (should should not) I realize that this is not a final judgement, that the State reserves the right to and other criteria.	(did, did not) ling and the building's major energy using systems, I recommend that to make the maxi-audit funding determination based on this mini-audit re
	Based upon my observation of the physical characteristics of this building Should not be the subject of a maxi-audit. (should, should not) I realize that this is not a final judgement, that the State reserves the right to and other criteria. Based upon the information in section E and the information referred to in undergo further solar conversion analysis, and/or Should not	(did, did not) ting and the building's major energy using systems. I recommend that to make the maxi-audit funding determination based on this mini-audit re n section F, I recommend that this building Should not (should, should not)
	Based upon my observation of the physical characteristics of this building Should not be the subject of a maxi-audit. (should should not) I realize that this is not a final judgement, that the State reserves the right to and other criteria.	(did, did not) ting and the building's major energy using systems. I recommend that to make the maxi-audit funding determination based on this mini-audit re n section F, I recommend that this building Should not (should, should not)
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	Based upon my observation of the physical characteristics of this build Should NOT be the subject of a maxi-audit. (should, should not) I realize that this is not a final judgement, that the State reserves the right to and other criteria. Based upon the information in section E and the information referred to in undergo further solar conversion analysis, and/or Should Nowind, wood. (Circle proper resources) (should, should in my judgement, as a mini-auditor, all of the above statements are true. Randy Smith	(did, did not) ling and the building's major energy using systems. I recommend that so make the maxi-audit funding determination based on this mini-audit re n section F, I recommend that this building Should not (should, should not) t undergo further analysis of the renewable resources without and correct. Witnessed by: Assistant Maintenance Supervisor
	Based upon my observation of the physical characteristics of this build Should not be the subject of a maxi-audit. (should, should not) I realize that this is not a final judgement, that the State reserves the right to and other criteria. Based upon the information in section E and the information referred to in undergo further solar conversion analysis, and/or Should nowind, wood. (Circle proper resources) (should, should in my judgement, as a mini-auditor, all of the above statements are true. Randy Smith Mini-Auditor's Name (Print or Type)	(did. did. not) ling and the building's major energy using systems. I recommend that so make the maxi-audit funding determination based on this mini-audit re n section F, I recommend that this building Should not (should, should not) undergo further analysis of the renewable resources will not) the and correct. Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type)
	Based upon my observation of the physical characteristics of this build Should NOT be the subject of a maxi-audit. (should, should not) I realize that this is not a final judgement, that the State reserves the right to and other criteria. Based upon the information in section E and the information referred to in undergo further solar conversion analysis, and/or Should Nowind, wood. (Circle proper resources) (should, should in my judgement, as a mini-auditor, all of the above statements are true. Randy Smith	(did. did. not) ling and the building's major energy using systems. I recommend that so make the maxi-audit funding determination based on this mini-audit re n section F, I recommend that this building Should not (should, should not) undergo further analysis of the renewable resources where and correct. Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Attuly Warner Signature
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	Based upon my observation of the physical characteristics of this build Should Not (should should not) I realize that this is not a final judgement, that the State reserves the right to and other criteria. Based upon the information in section E and the information referred to in undergo further solar conversion analysis, and/orShould_nowind, wood. (Circle proper resources) (should, should in my judgement, as a mini-auditor, all of the above statements are true. Randy Smith Mini-Auditor's Name (Print or Type) Signatury Rieke Carroll Muller Assoc. Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address	(did. did. not) ling and the building's major energy using systems. I recommend that so make the maxi-audit funding determination based on this mini-audit re n section F. I recommend that this building Should not (should, should not) t undergo further analysis of the renewable resources with the second correct. Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature March 18, 1981
	Based upon my observation of the physical characteristics of this build Should not (should should not) I realize that this is not a final judgement, that the State reserves the right to and other criteria. Based upon the information in section E and the information referred to in undergo further solar conversion analysis, and/orShould_nowind, wood. (Circle proper resources) (should, should in my judgement, as a mini-auditor, all of the above statements are true. Randy Smith Mini-Auditor's Name (Print or Type) Rieke Carroll Muller Assoc. Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343	(did. did. not) ling and the building's major energy using systems. I recommend that so make the maxi-audit funding determination based on this mini-audit re n section F. I recommend that this building Should not (should, should not) t undergo further analysis of the renewable resources with the second correct. Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature March 18, 1981
	Based upon my observation of the physical characteristics of this build Should not (should, should not) I realize that this is not a final judgement, that the State reserves the right to and other criteria. Based upon the information in section E and the information referred to in undergo further solar conversion analysis, and/orShould_nowind, wood. (Circle proper resources) In my judgement, as a mini-auditor, all of the above statements are true Randy Smith Mini-Auditor's Name (Print or Type) Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone March 18, 1981	(did. did. not) ling and the building's major energy using systems. I recommend that so make the maxi-audit funding determination based on this mini-audit re n section F. I recommend that this building Should not (should, should not) t undergo further analysis of the renewable resources with the not) lie and correct. Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Attual Warch 18, 1981
	Based upon my observation of the physical characteristics of this building Should Not be the subject of a maxi-audit. (should, should not) I realize that this is not a final judgement, that the State reserves the right to and other criteria. Based upon the information in section E and the information referred to in undergo further solar conversion analysis, and/or Should nowind, wood. (Circle proper resources) In my judgement, as a mini-auditor, all of the above statements are true. Randy Smith Mini-Auditor's Name (Print or Type) Amay Smith Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone	(did. did. not) ling and the building's major energy using systems. I recommend that so make the maxi-audit funding determination based on this mini-audit re n section F. I recommend that this building Should not (should, should not) t undergo further analysis of the renewable resources with the second correct. Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature March 18, 1981

MINI-AUDIT STATEMENTS

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Augustinistis Commission Commission

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Instructions: Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor.

OPTIONAL: OPTIONAL: CLASSIFICATION **ENERGY** NO. **ENERGY** ITEM DATE OF IMPLEMENTATION PAST ENERGY CONSERVATION ACTIONS COST MAJOR **SAVINGS** SUB CLASS CLASS 1 5 2 Routine Maintenance Schedule.

Note Reproduce this page as necessary

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

CLASSIFICATION				OPTIONAL ENERGY	DATE OF IMPLEMENTATION	
MAJOR SUB CLASS CLASS		NEW MINI-AUDIT OPPORTUNITIES	SAVINGS	SAVINGS		
1	1	Keep all controls free of dust.				
		Look for loose connections and bad				
1	2	contacts on a regular basis.			,	
1	2	Eliminate excessive vibration.				
		Tubricate motors to reduce wear and	, .			
1	2	excessive torque.				
1	2	Pontago wown hongings				
 		Replace worn bearings.				
1	2	Keep motors clean to make cooling easier.				
		Replace worn or defective motors with	1			
1	2	motors that are sized as close to the load as possible and use the highest				
		it is impractical to replace motors				
;		use capacitors at motor terminals to correct the power factor to 90%.	5,			
1	3	Instantaneous power factor reading was .76.				
		Shado outdoon transformer banks from				
1	4	solar radiation.	·			
2	2	Weatherstrip all exterior doors.				
2	2	Replace an existing door with one of a higher R-valve.				
	1 1 1 1 1 1 1 2	NO NO SUB CLASS CLAS	NO. NEW MINI-AUDIT OPPORTUNITIES 1	No. NEW MINI-AUDIT OPPORTUNITIES SAVINGS NAJOR SUB CLASS CLASS CLASS	No. NEW MINI-AUDIT OPPORTUNITIES NEW MINI-AUDIT OPPORTUNITIES SAVINGS	

EW PORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

1754	CLASSIF			OPTIONAL:	ENERGY		
NO.	MAJOR CLASS	SUB CLASS	NEW MINI-AUDIT OPPORTUNITIES	ENERGY SAVINGS	COST	DATE OF IMPLEMENTATION	
12	2	8	Caulk all cracks that allow air and moisture into the building.				
			morscare they the partaing.				
13	2	8	Insulate walls and ceiling with rigion insulation on inside surfaces.	ł			
14	3	1	Check the calibration of all con- trollers and devices for proper set-				
,			tings and operations.				
15	3	1	65°F maximum occupied, 60°F maximum unoccupied during the heating season				
16	3	3	Make sure that all fans, frequently inoperative in unit heaters, fan				
			coil units, and unit ventilators are running normally to increase the				
·			heat transfer rate from heating coils				
17	3	3	Inspect bearings and drive belts for wear and binding. Adjust, repair or replace as necessary.				
18	3	3	Inspect damper blades and linkages.				
10	-	3	Clean, oil and adjust.	<u> </u>			
19	5	1	Keep records of the operating sheedule, monthly energy consumption				
			and purchase of any new equipment that affects energy consumption of efficiency of the building. These				
			records will indicate the impact of energy conservation measures.				
20	5	1	Review the record books on a regular basis.				
21	7	4	Inspect electrical contacts and work parts of relays and maintain in good working order.				
		-	Check heater elements for cleanlines				
22	7	4	Replace as necessary.	١.	-		
One Spine Lagrange (S)		1					

IEW DPPORTUNITIES Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

20	·		to the mini-audit report should be completed by the mini-audit	OPTIONAL:	OPTIONAL		
ITEN	CLASSIFICATION NO.		NEW MINI-AUDIT OPPORTUNITIES	ENERGY	ENERGY COST	DATE OF IMPLEMENTATION	
NO.	MAJOR SUB CLASS CLASS			SAVINGS	SAVINGS		
23	7	4	Check controls for proper operation. Adjust as necessary.				
			Periodically tighten all electrical-			,	
24	7	4	Periodically tighten all electrical- mechanical connections to prevent arcing and burning due to metal flow or loosening of terminal bolts or				
			or loosening of terminal bolts or lugs.				
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		1					

A	BUILDING NAME Lift Station - Sanitary Sewa	age	NAME OF ORGANIZATION City of Bloomington DATE 2/18/81				
	BUILDING ADDRESS 212 Mission Road		ADDRESS 2215 West Old Shakopee Road				
ACT	CITY Bloomington	ZIP CODE 55431	CITY Bloomington	ZIP CODE 55431			
CONTACT	PERSON COMPLETING FORM Randy Smith	TELEPHONE 935-6901	CONTACT PERSON Arthur Jensen	TELEPHONE 881-5811			

3		structions: For blocks 1 and 2 of scribes the building type and							our categories
	1	OWNERSHIP TYPE XXPublic (F UNon-Profit Association	PUB) (NAP)	3a.	SCHOOLS □ Elementary □ Secondary □ Coll. or Univ.	(SCHL-ELM) (SCHL-SECD) (SCHL-POST)	C.	LOCAL GOVERNMENT Office Storage Service	(LOCG-OFFC (LOCG-STRG (LOCG-SERV
ODE	2.	ULTIMATE OWNER County XXCity	(CNTY) (CITY)		□Vocational □Education Agency □Administration □OTHER	(SCHL-VOCL) (SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR)		□Library □Police □Fire □OTHER	(LOCG-LBRY (LOCG-PLCE) (LOCG-FIRE) (LOCG-OTHR
ELIGIBILITY C		☐ Township ☐ State ☐ Public School ☐ Private School ☐ Non-Profit Association ☐ Indian Tribe	(TOWN) (STAT) (PUSC) (PRSC) (NPAP) (INDN)	b.	PUBLIC CARE □ Nursing Home □ Long Term Care □ Rehab. Facility □ Public Health Ctr. □ Res. Child Care Ctr.	(PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-HCTR) (PBCR-RCCC)	d.	HOSPITALS General Tuberculosis OTHER	(HOSP-GENL (HOSP-TUBR (HOSP-OTHR

	□Indian Tribe (INDN) □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
C	Instructions: With reference to page 23 entitled Funding Information, determine if the facilities are eligible for both Federal and State funding or just Federal funding, then answer the questions correctly for the situation. This section must be signed and dated by the head of the organization
	If eligible for both Federal and State Funding: Have you received a mini-audit grant before?
	Signature
MINI-AUDIT FUNDING REQUEST	Date
MINI-AUD FUNDING	NameSignature

יטן	Check the type of energy report which was completed and submitted pr	ior to this mini-audit report.
EPORT	☐ Elementary School Energy Report (Form No. ED-00444-02) ☐ Secondary School Energy Report (Form No. ED-00445-02) XX Existing Building Energy Report (Form No. EN-00041-01)	
EMERGY REPORT	If an energy report has not been completed previous to this mini-audit revocational schools should use form ED-00444-02 or form ED-00445-02, debuilding energy report, form EN-00041-01.	pending on building complexity. All other buildings should use the existing
LL	·	
E	Instructions: This section is to be completed and signed by a registered completed the State of Minnesota's Mini-Audit Procedures Course, This searce completed. All blanks must be filled in.	professional engineer or by a certified mini-auditor who has successfully ection should be completed after this mini-audit report and an energy report
	I have reviewed the energy report and/or the energy report results for this corrected any misinformation on the energy report which will be resubtil am not directly responsible for the day to day operations of this build	
	I have fully disclosed my financial interests relating to this mini-audit ar	nd any energy conservation measures considered by this audit.
	I have walked through this building and have found the recommendati maintenance changes, and low cost energy conservation measures, whi	ons listed in section I of this mini-audit report to be the operations and including in the consumption in this building.
	listed in section I. I am not responsible if the actual equipme regulting fr	h may result from the implementation of all of the mini-audit opportunities om this mini-audit do not fall within the estimated range.
	Based on actual records, the energy conservation operating and mainter 20% of the building's energy consumption as specified in section I.	nance procedures listed in section K <u>Q1Q not</u> save at least (did. did not)
	SNOULD NOT be the subject of a maxi-audit. (should should not)	ing and the building's major energy using systems. I recommend that this o make the maxi-audit funding determination based on this mini-audit report
	and other criteria.	
	Based upon the information in section E and the information referred to it	(Should, Should not)
	undergo further solar conversion analysis, and/or <u>Should not</u> wind, wood. (Circle proper resources) (should, should	not) undergo further analysis of the renewable resources waste
	In my judgement, as a mini-auditor, all of the above statements are tru	e and correct.
		Witnessed by:
	Randy Smith	Assistant Maintenance Supervisor
	Mini-Auditor's Name (Print or Type)	Building Organizational Authority (Print or Type)
	Kandy Snot 206 Signature/	Signature W Junin
	Rieke Carroll Muller Assoc., Inc.	March 48, 1981
		Date
	P.O. Box 130 Hopkins, MN 55343	
	612/935-6901	
	Phone March 18, 1981	
	Date	
S		
MINI-AUDIT STATEMENTS		
ATER	·	
= -		

F	NAME	POSITION		ORGANIZATION		
	Randy Smith	Certified Mini-A	uditor	Rieke Carroll	Muller	Assoc. Ir
	Scott Hutchins	Certified Electrical	Technician	Rieke Carroll	Muller	Assoc. Inc
AUDIT TEAM	Art Parvey			City of Div		
	Art Parvey			City of Bloom	ington	
G	Good, underground	ERAL BUILDING CONDITION (i.e. type, and lift station VITHIN NEXT 15 YEARS (i.e. demolition, re	·		- to opethor	
7	None	VITHIN NEXT 15 YEARS (i.e. demolition, re	enabilitation, convers	sion from one building typ	e to another)	
Į.		OF ROOF (i.e. metal beams, wooden rafters	s, concrete)			
DING	Concrete with meta	1 hatch				
BUILDING	Metal hatch	nd graver, sningles, tile)				
	necar nacen					
H	INSTRUCTIONS: Correctly answ	wer the following questions for the building	being mini-audited.			
	Is there open land adjacent to the DI Yes No	ne building?	and the state of t			
		ed in an unshaded area. Is the roof of the build	ding and the south fac	cing wall unshaded betwee	n the hours of	9a.m and
	If the roof or wall are partly sha % of roof unshaded % of south facing wall unshad	ded, what percentage of the surface is unsided	haded?			
	What is the overall shape of the ☐ square ☐ rectangle ☐	building? H-shaped □ E-shaped □ other (specify	v) Round			
	Is the roof of the building flat o □ Dat flat □ pitched					
	If pitched, what is the compass	orientation of the ridgeline?				
	If pitched, what is the angle tha	t the roof makes with horizontal?	•			
	Are there large obstructions on ☐ Yes ☐ No	the roof such as chimneys, rooms for med	hanical equipment, v	ventilating units, water tov	vers, etc?	
	What is the exterior facing mate	erial for the south facing wall? None				
	What percentage of the south f	acing wall is glass? %				
	Is the building's space heating Yes No None	equipment located within or on the building	g? (A no answer ind	icates the equipment is in	a separate b	uilding.)
	☐ Ground Floor ☐ Basem	is inside the building, where is it located? ent □ Roof □ Other (specify)				
SOLAR POTENTIAL	Is the building's water heating Yes No None	equipment located within the building? (A				i i
R POTE	If the water heating equipment Ground Floor Basem	is inside the building, where is it located? ent □ Other (specify)				
SOLA	Is the water heating system a c	entral system, does it consist of multiple u Combination	nits, or is it a combin	nation of the central and i	nultiple units	?

	which the data applies. Refer to	pages 7 and	1 15 for a c	complete	explanation of	convert energy this section.	usage	e into Btu's	Be sure to	o enter the	fiscal years of
	ENERGY TYPE		ENERGY		ASE PERIOD Y	CONVERSION	N FAC	CTOR	Fiscal	BTU U	SAGE
	Electricity			***************************************							
-	Fuel 1										-
•	Fuel 2					,					
	TOTAL									,	
	-			20	% SAVINGS Y	EAR			Fiscal	Year	
_	ENERGY TYPE		ENERGY	USAGE		CONVERSIO	N FA	CTOR		вти с	JSAGE
	Electricity		\								
_	Fuel 1										
	Fuel 2										
	TOTAL										
_	Instructions: This section is to be state the roughly estimated rang of the new mini-audit opportur percentages by the annual electric control of the contro	e of the perc nities listed trical and fu	ent of total in section	electrica	il and fuel consi ndiv. calculate	imption which with the range of er	vould	be saved res	sulting from	m the imple	ementation of all
	state the roughly estimated rang of the new mini-audit opportur percentages by the annual elec Check two boxes in each category	e of the perc nities listed trical and fu 	ent of total in section el consum	l electrica L. Secor aption da	al and fuel consundly, calculate ta on the energ	umption which with a range of ergy report.	vould	be saved rea	sulting from	m the imple multiplyin	ementation of all g the estimated
	state the roughly estimated rang of the new mini-audit opportur percentages by the annual elec Check two boxes in each categor Range of Electrical Savings —	e of the percenties listed trical and furnament ory —	ent of total in section el consum	electrica L. Secon option da	al and fuel consumbly, calculate ta on the energ	umption which withe range of ergy report.	vould	be saved reand cost s	sulting from	m the imple multiplyin er (specify)	ementation of all g the estimated
	state the roughly estimated rang of the new mini-audit opportur percentages by the annual elec Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings —	e of the perchities listed trical and functions and functions are selected by the selected by	ent of total in section el consum S 5%	l electrica L. Secor aption da	al and fuel consumbly, calculate ta on the energ	umption which withe range of ergy report.	vould	be saved rea	sulting from	m the imple multiplyin er (specify)	ementation of all g the estimated
	state the roughly estimated rang of the new mini-audit opportur percentages by the annual elec Check two boxes in each categor Range of Electrical Savings —	e of the perchities listed trical and functions and functions are selected by the selected by	ent of total in section el consum S 5%	l electrica L. Secon phion da	al and fuel consumbly, calculate ta on the energ	umption which wither range of ergy report. 20%	vould	be saved reand cost s	sulting from	m the imple multiplyin er (specify)	ementation of all g the estimated
_	state the roughly estimated rang of the new mini-audit opportur percentages by the annual elec Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings —	e of the perchities listed trical and functions and functions are selected by the selected by	ent of total in section el consum 3-5% 5% 5%	lelectrics L. Secon ption da	al and fuel consulting to the	umption which wither range of errors y report. 20% 20% Savings	vould	be saved reand cost s	oulting from	m the imple multiplyin er (specify er (specify	ementation of all g the estimated
	state the roughly estimated rang of the new mini-audit opportur percentages by the annual elec Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and	e of the percities listed trical and furions and furions and furions on the control of the cost saving Annual E	ent of total in section el consum 5% 5% 5% s —	lelectrics L. Secon ption da	and fuel consumity, calculate ta on the energy 150	umption which wither range of ergy report. 20% 20% Savings Range	vould	be saved reand cost s	othe other	m the imple multiplyin er (specify er (specify	ementation of all g the estimated
_	state the roughly estimated rang of the new mini-audit opportur percentages by the annual elec Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and	e of the percities listed trical and further ory — Some Owner of the Cost saving Annual E Consul	ent of total in section el consum 5% 5% 5% s —	lelectrics L. Secon ption da	al and fuel consulate ta on the energy of th	umption which wither range of ergy report. 20% 20% Savings Range	vould	be saved reand cost s	othe other	m the imple multiplyin er (specify er (specify	ementation of all g the estimated)) ige of Electrical ollars Savings
_	state the roughly estimated rang of the new mini-audit opportur percentages by the annual electorical Savings — Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and — % Range	e of the percities listed trical and furiors and furiors and furiors and furiors are cost saving and a cost saving	ent of total in section el consum 5% 5% 5% s — Electrical mption kwh	l electrica L. Secon iption da 10 10 Ran R =	and fuel consumity, calculate ta on the energy of the ener	with the range of ergy report. 20% 20% Savings Range to	vould	be saved reand cost s	other	m the imple multiplying a series (specify) ar (specify) Ann Do	mentation of all g the estimated)
	state the roughly estimated rang of the new mini-audit opportur percentages by the annual electorical savings — Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and — **Range** **Range** lower bound — 0 % x to E	e of the percities listed trical and furiors and furiors and furiors and furiors are cost saving and a cost saving	ent of total in section el consum 5% 5% 5% s — Electrical mption kwh	Ran R = -	and fuel consumity, calculate ta on the energy of the ener	mption which wither range of ergy report. 20% Second Sec	x x	Language Service Servi	other	m the imple multiplying a series (specify) ar (specify) Ann Do	ementation of all g the estimated inge of Electrical collars Savings to
	state the roughly estimated rang of the new mini-audit opportur percentages by the annual electorical Savings — Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and — **Range** Wange** Nange**	e of the percities listed trical and furions and furions and furions and furions are selected. 22334 22334 use any Annual Research	ent of total in section el consum 5% 5% 5% s — Electrical mption kwh	Ran R = -	and fuel consumity, calculate ta on the energy of the ener	I Savings White Hange of ergy report. White Pange of ergy report.	x	Language Service Servi	ectrical Spent \$87	m the imple multiplying er (specify) er (specify) ====================================	ementation of all g the estimated inge of Electrical collars Savings to
	state the roughly estimated rang of the new mini-audit opportur percentages by the annual electorical savings. Check two boxes in each categoral savings. Range of Electrical Savings. Calculate ranges of energy and savings. When the savings with the savings of the savings with the savings with the savings. Building does not savings.	e of the percities listed trical and furiors and furiors and furiors and furiors are cost saving and a cost saving	ent of total in section el consum S 5% 5% 5 — Electrical inption kwh fuel al Fuel	Ran R = -	al and fuel consumity, calculate ta on the energy of the e	mption which wither range of ergy report. 20% Savings to Savings	x	Dollars 798	ectrical Spent \$87	m the imple multiplying er (specify) er (specify) ====================================	to Range of Fuel
	state the roughly estimated rang of the new mini-audit opportur percentages by the annual electorical savings — Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and — **Range* lower bound — **D % x to upper bound — **Building does not **Range*	e of the percities listed trical and furiors and furiors and furiors and furiors are cost saving and a cost saving	ent of total in section el consum 5% 5% 5% s — Electrical inption kwh fuel al Fuel inption	Ran Ran	al and fuel consumity, calculate ta on the energy of the e	mption which verther range of errors. 20% 20% Savings Range to Range Range Range Range	x x	Dollars 798	ectrical Spent \$87	Ran	ementation of all g the estimated inge of Electrical collars Savings to 39.94

Instructions. Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor. OPTIONAL: OPTIONAL: CLASSIFICATION **ENERGY** NO. ITEM **ENERGY** PAST ENERGY CONSERVATION ACTIONS DATE OF IMPLEMENTATION COST SAVINGS NO. MAJOR SUB **SAVINGS** CLASS CLASS 1 5 2 Routine Maintenance Schedule.

Note Reproduce this page as necessary

EW PPORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

	CLASSIF			OPTIONAL:	ENERGY	
NO.	MAJOR CLASS	SUB CLASS	NEW MINI-AUDIT OPPORTUNITIES	SAVINGS	COST SAVINGS	DATE OF IMPLEMENTATION
1	1	1	Keep all controls free of dust.			
2	1	2	Look for loose connections and bad contacts on a regular basis.			
				-		
3	1	2	<u>Lubricate</u> motors to reduce wear and excessive torque.			
V-1						·
4	1	2	<u>Check</u> alignment of motors to driven equipment, align and tighten as necessary.			
5	11	2	Replace worn or defective motors with motors that are sized as close to the			
	ļ		load as possible and use the highest efficiency motors available. Where			
			it is impractical to replace motors which have low loads and power factor	rs		
		ļ	use capacitors at motor terminals to correct the power factor to 90%.			
			Instantaneous power factor reading			
6	1	3	was .86.		 	
7	3	3	Check for packing wear which can cause excessive water wastage and			
	1		shaft erosion.			
8	3	3	Inspect bearings and drive belts for wear and binding. Adjust, repair or replace as necessary.			
			replace as necessary.			
9	5	1	Keep records of the operating sched- ule, monthly energy consumption and			
			purchase on any new equipment that affects energy comsumption of the building. These records will indic-			
	-	-	ate the impact of energy conservation measures.	rl		
	-	-	Review the record books on a regular		1	
10	5	1	basis.	-		

A	BUILDING NAME Lift Station - Sanitary Sewa	ge	NAME OF ORGANIZATION City of Bloomington DATE March 19, 1						
	BUILDING ADDRESS 8915 Newton Avenue South		ADDRESS 2215 West Old Shakopee Road						
ACT	сıтү	ZIP CODE	CITY	ZIP CODE					
	Bloomington	55431	Bloomington	55431					
CONTACT	PERSON COMPLETING FORM Randy Smith	TELEPHONE	CONTACT PERSON	TELEPHONE					
DATA		935-6901	Arthur Jensen	881-5811					

B	Instructions: For blocks 1 and 2 check the box describes the building type and then within the						the four categories
BUILDING ELIGIBILITY CODE	1. OWNERSHIP TYPE OPPublic (PUB) ONOn-Profit Association (NAP) 2. ULTIMATE OWNER County (CITY) Township (TOWN) State (STAT) Public School (PUSC) Private School (PRSC) Non-Profit Association (NPAP) Indian Tribe (INDN)	3a. b.	SCHOOLS □ Elementary □ Secondary □ Coll. or Univ. □ Vocational □ Education Agency □ Administration □ OTHER PUBLIC CARE □ Nursing Home □ Long Term Care □ Rehab. Facility □ Public Health Ctr. □ Res. Child Care Ctr.	(SCHL-ELM) (SCHL-SECD) (SCHL-POST) (SCHL-VOCL) (SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR) (PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-RHAB) (PBCR-RCCC)	d.	LOCAL GOVERNME Office Storage Service Library Police Fire OTHER HOSPITALS General Tuberculosis	(LOCG-OFFC) (LOCG-STRG) (LOCG-SERV) (LOCG-LBRY) (LOCG-PLCE) (LOCG-FIRE) (LOCG-OTHR) (HOSP-GENL) (HOSP-TUBR) (HOSP-OTHR)
C	Instructions: With reference to page 23 entitle just Federal funding, then answer the question	ed Fundir	ng Information, determine tly for the situation. This s	if the facilities are	eligii ned a	ble for both Federal an	d State funding or f the organization.
MINI-AUDIT FUNDING REQUEST	If eligible for both Federal and State Funding: Have you received a mini-audit grant before Have you previously applied for mini-audit for poly you wish to apply for mini-audit funding Date: March 18, 1981 Name: Arthur Jensen Signature: Ulfully fully. If eligible for Federal funding only: Have you received a mini-audit grant before Have you previously applied for mini-audit funding The 50% match for Federal funds will come Date: Name: Signature: Signature:	e?	es No No	cessary.)			

Elementary School Energy Report (Form No. ED-00444-02)	
Secondary School Energy Report (Form No. ED-00445-02) Existing Building Energy Report (Form No. EN-00041-01)	
an energy report has not been completed previous to this mir ocational schools should use form ED-00444-02 or form ED-004- uilding energy report, form EN-00041-01.	ni-audit report, one must be included with this report. Elementary, secondary, ar 45-02, depending on building complexity. All other buildings should use the existing
structions: This section is to be completed and signed by a re completed the State of Minnesota's Mini-Audit Procedures Cours re completed. All blanks must be filled in.	egistered professional engineer or by a certified mini-auditor who has successful se. This section should be completed after this mini-audit report and an energy repo
	Its for this building. I found all information contained therein to be correct <i>OR</i> I have be resubmitted with this mini-audit report to the Minnesota Energy Agency.
am not directly responsible for the day to day operations of th	his building being audited.
have fully disclosed my financial interests relating to this mini	i-audit and any energy conservation measures considered by this audit.
	nmendations listed in section I of this mini-audit report to be the operations an ures, which would reduce energy consumption in this building.
	ngs which may result from the implementation of all of the mini-audit opportunitions sulting from this mini-audit do not fall within the estimated range.
ased on actual records, the energy conservation operating and 0% of the building's energy consumption as specified in section	
SNOULG NOT be the subject of a maxi-audit. (should, should not)	this building and the building's major energy using systems, I recommend that the state of the right to make the maxi-audit funding determination based on this mini-audit repo
	should not
assed upon the information in section E and the information reference indergo further solar conversion analysis, and/or Should (should yind, wood. (Circle proper resources) (should	(should should not)
n my judgement, as a mini-auditor, all of the above statement	
	Witnessed by:
Randy Smith	Assistant Maintenance Supervisor
Mini-Auditor's Name (Print or Type) 206	Building Organizational Authority (Print or Type)
Signature 200	Signature Signature
Rieke Carroll Muller Associates, In Firm Name (if none, enter none)	nc. March 18, 1981
	Date
P.O. Box 130 Address	
512-935-6901 Phone	· ·
March 18, 1981	
Date	

F	NAME	POSITION	and the second s	ORGANIZATION	1
	Randy Smith	Certified Mini-Audi	tor	Rieke Carroll	Muller Assoc. Inc.
	Scott Hutchins	Certified Technical	Engineer	Rieke Carroll	Muller Assoc. Inc.
	Art Parvey			City of Bloom	ington
TEAM					
(H)					
3	BRIEF DESCRIPTION OF GENER Good, underground	RAL BUILDING CONDITION (i.e. typed lift station	, and function)		
Z		ITHIN NEXT 15 YEARS (i.e. demolitio	n, rehabilitation, c	onversion from one buildi	ng type to another)
MATIO	STRUCTURAL COMPONENTS O CONCrete	F ROOF (i.e. metal beams, wooden ra	ifters, concrete)		
INFORMATION	ROOFING MATERIAL (i.e. tar and Metal Hatch	d gravel, shingles, tile)	West		
	INSTRUCTIONS: Correctly answer	er the following questions for the buil	ding being mini-a	udited.	
	Is there open land adjacent to the	**************************************			
	Solar collectors need to be located	in an unshaded area. Is the roof of the	building and the so	outh facing wall unshaded b	etween the hours of 9 a.m. and
	3 p.m.? Roof: ☑ Yes ☐ No South facing Wall: ☐ Yes ☐	4	-	•	
	If the roof or wall are partly shade % of roof unshaded % of south facing wall unshade	ed, what percentage of the surface is	unshaded?		
	What is the overall shape of the b ☑ square ☐ rectangle ☐ H	ouilding? I-shaped □ E-shaped □ other (sp	ecify)		
	Is the roof of the building flat or p 岡 flat 口 pitched	pitched?			
	If pitched, what is the compass o	rientation of the ridgeline?			
	If pitched, what is the angle that	the roof makes with horizontal?	0		
	Are there large obstructions on the Property of the Property o	he roof such as chimneys, rooms for	mechanical equipi	ment, ventilating units, wa	ter towers, etc?
	What is the exterior facing mater	ial for the south facing wall?	None		
	What percentage of the south fac	sing wall is glass?0%			
	Is the building's space heating ed Pres No None	quipment located within or on the bui	lding? (A no answ	er indicates the equipmen	t is in a separate building.)
	If the space heating equipment is Ground Floor Basemen	s inside the building, where is it locate at \$\square\$ Roof \$\square\$ Other (specify)	ed?		
N I A		quipment located within the building?			
OLAR POTENTIAL	If the water heating equipment is Ground Floor Basemen	s inside the building, where is it locate in the building of the locate in the building of the building in the	ad?		
10 P	Is the water heating system a cer	ntral system, does it consist of multip	le units, or is it a	combination of the central	and multiple units?

				BASE PE	RIOD YEAR	3		Fiscal Y	ear
	ENERGY TYPE		ENERGY I	JSAGE	co	ONVERSION F	ACTOR		BTU USAGE
	Electricity								
	Fuel 1								
	Fuel 2								
Γ	TOTAL								
				20% SAV	INGS YEAR			Fiscal Y	/ear
ľ	ENERGY TYPE	T	ENERGY I	JSAGE	C	ONVERSION F	ACTOR		BTU USAGE
	Electricity								
	Fuel 1								
	Fuel 2								
-				·····				+	
	TOTAL Instructions: This section is to be state the roughly estimated range.	completed	t by the mini	i-auditor after the	ne walk-thru	portion of the n	nini-audit. Firs	st, check the	appropriate boxes which
		e of the perdities listed rical and fo	cent of total	electrical and fu L. Secondly, ca	el consump	tion which wou range of energ	ld be saved re	sulting from	the implementation of a
	Instructions: This section is to be state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect	e of the perdities listed rical and fo	cent of total	electrical and fu L. Secondly, ca	el consump	tion which wou range of energ	ld be saved re	sulting from avings by m	the implementation of a
	Instructions: This section is to be state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect Check two boxes in each categor Range of Electrical Savings —	e of the perdities listed rical and function of the perdities and function of the perdities are also as a second of the perdities are also as a se	cent of total in section I uel consump	electrical and fu L. Secondly, ca ption data on the	el consump liculate the ne energy re	tion which wou range of energe eport.	ld be saved re	sulting from avings by m	the implementation of a nultiplying the estimate
	Instructions: This section is to be state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect Check two boxes in each categor Range of Electrical Savings —	e of the perdities listed rical and function of the perdities and function of the perdities are also as a second of the perdities are also as a se	cent of total in section I uel consump	electrical and functions of the secondly, caption data on the second sec	el consump liculate the ne energy re	tion which would range of energaport.	Id be saved regy and cost s	sulting from avings by m	the implementation of a nultiplying the estimate (specify)
	Instructions: This section is to be state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect Check two boxes in each categor Range of Electrical Savings —	e of the percities listed crical and function of the percities and function of the percentage and function	cent of total in section I uel consum 5% 5% 5%	electrical and functions of the secondly, caption data on the second sec	el consump liculate the ne energy re 15% 15%	tion which would range of energaport.	Id be saved re by and cost s 25% 25%	sulting from avings by m	the implementation of a nultiplying the estimate (specify)
	Instructions: This section is to be state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect Check two boxes in each categor Range of Electrical Savings —	e of the perdities listed crical and function of the perdities and function of the perdities of the perditie	cent of total in section I uel consump	electrical and functions and function data on the second se	let consump liculate the ne energy re 15% 15%	ition which would range of energaport.	Id be saved regy and cost s ☐ 25% ☐ 25% ☐ 25% Annual E	sulting from avings by m other other	the implementation of a nultiplying the estimate (specify) (specify) Range of Electric Dollars Savings
	Instructions: This section is to be state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and	e of the percities listed rical and function of the percities and function of the percentage and functin	cent of total in section I uel consum 5% 5% 5% 5%	electrical and functions of the secondly, caption data on the second sec	let consump liculate the ne energy re 15% 15%	tion which would range of energaport.	Id be saved regy and cost s □ 25% □ 25% □ 25% Annual E Dollars 9/4	sulting from avings by m other other	the implementation of a nultiplying the estimate (specify) (specify) Range of Electric
	Instructions: This section is to be state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and % Range	e of the perdities listed crical and function of the perdities and function of the perdities of the perditie	cent of totals in section I usel consumption Electrical imption kwh	electrical and fu Secondly, caption data on the second	let consump liculate the ne energy re 15% 15% Electrical Saff Energy ings kwh,	tion which would range of energaport. 20% 20% 20% Vings Range	25% 25% Annual E Dollars 94	other other clectrical Spent	the implementation of a nultiplying the estimate (specify) (specify) Range of Electric Dollars Savings
	Instructions: This section is to be state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and ## Range lower bound — ## X to	e of the perdities listed crical and for the perdities listed crical and for the perdities and for the perditi	cent of total in section I uel consum 25 5% 5% 5% kwh kwh	electrical and functions are secondly, caption data on the second	let consump liculate the ne energy re 15% 15% 15% Electrical Sa f Energy ings kwh,	tion which would range of energiaport. 20% 20% 20% vings Range 0 % x	□ 25% □ 25% □ 25% ■ 25%	other other clectrical Spent	the implementation of a nultiplying the estimate (specify) (specify) Range of Electric Dollars Savings
	Instructions: This section is to be state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect Check two boxes in each categorange of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and ———————————————————————————————————	e of the perdities listed crical and functions and functions are saving a series at the series at th	cent of total in section I uel consum 25 5% 5% 5% kwh kwh	electrical and functions and function data on the secondly, caption data on the second	15% 15% 15% Electrical Saff Energyings	tion which would range of energiaport. 20% 20% 20% vings Range 0 % x	□ 25% □ 25% □ 25% ■ 25%	other other spent states of the states of th	the implementation of a nultiplying the estimate (specify) (specify) Range of Electric Dollars Savings
	Instructions: This section is to be state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and	e of the perdities listed crical and for the perdities listed crical and for the perdities and for the perditi	Cont of totals in section I used consumption 5% Section I section	electrical and functions and function data on the secondly, caption data on the second	15% 15% 15% 15% kwh, of Fuel Savi	tion which wourange of energaport. 20% 20% 20% 40 20% 40 5 %	Id be saved regy and cost s 25% 25% Annual E Dollars 94 \$ 94	other other spent states of the states of th	the implementation of a nultiplying the estimate (specify) (specify) Range of Electric Dollars Savings \$ 0
ENTIMATION	Instructions: This section is to be state the roughly estimated rang of the new mini-audit opportun percentages by the annual elect Check two boxes in each categorange of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and ———————————————————————————————————	e of the perdities listed crical and for the perdities listed crical and for the perdities and for the perditi	cent of total in section I uel consumption Electrical imption kwh kwh y fuel .	electrical and functions and functions are secondly, caption data on the second	15% 15% 15% 15% kwh, of Fuel Savi	tion which wourange of energaport. 20% 20% 20% to 5 % Range 0 % x to 5 % Range	Id be saved regy and cost s 25% 25% Annual E Dollars 94 \$ 94	other other spent states of the states of th	the implementation of a nultiplying the estimate (specify) (specify) Range of Electric Dollars Savings \$ 0 to \$ 4.71 Range of Fuel Dollars Savings

Instructions: Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor.

OPTIONAL: OPTIONAL: CLASSIFICATION **ENERGY** ITEM **ENERGY** NO. DATE OF IMPLEMENTATION PAST ENERGY CONSERVATION ACTIONS COST SAVINGS SAVINGS NO. MAJOR SUB CLASS CLASS Routine Maintenance Schedule 5 2 1

Note Reproduce this page as necessary

EW PPORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

	CLASSIF	ICATION	tion of the mini-audit report should be completed by the mini-audit	OPTIONAL:		
NO.	MAJOR CLASS	O. SUB CLASS	NEW MINI-AUDIT OPPORTUNITIES	ENERGY SAVINGS	COST	DATE OF IMPLEMENTATION
1	1	1	Keep all controls free of dust.		Din Variation of the Control of the	
2	1	2	Look for loose connections and bad contacts on a regular basis.			
3	1	2	Lubricate motors to reduce wear and excessive torque.	- Account of the Control of the Cont	and the second	
4	1	2	Check alignment of motors to drive equipment, align and tighten as nec.			
5	1_1_	2	Replace worn or defective motors with motors that are sized as close to the load as possible and use the			
6	1	2	highest efficiency motors available. Where it is impractical to replace motors which have low loads and power factors, use capacitators			
			at motor terminals to correct the power factor at 90%.			
7	1	3	An instantaneous power factor reading was .63			
8	3	3	Check for packing wear which can cause excessive leakage. Repack to avoid excessive water wastage and shaft erosion.			
9	3	3	Inspect bearings and drive belts for wear and binding. Adjust, repair or			
·	ļ		replace as necessary.			
10	5	1	Keep records of the operating schedu monthly energy consumption and purch of any new equipment that affects energy consumption of efficiency of the building. These records will indicate the impact of energy conservation measures.	ase		
11	5	1	Review the record books on a regular basis.			

A	BUILDING NAME Lift Station - Sanitary Se	wage	NAME OF ORGANIZATION City of Bloomington Date March 17, 19						
	BUILDING ADDRESS		ADDRESS						
	516 Overlook Drive		2215 West Old Shakopee Road						
-	CITY	ZIP CODE	CITY	ZIP CODE					
ACT	Bloomington	55431	Bloomington	55431					
MA	PERSON COMPLETING FORM	TELEPHONE	CONTACT PERSON	TELEPHONE					
őã	PERSON COMPLETING FORM Randy Smith	935-6901	Arthur Jensen	881-5811					

1	scribes the building type and t	men within ti		SCHOOLS	gory benting the			
'	OWNERSHIP TYPE	LID)	3a.	DElementary	(SCHL-ELM)	C.	LOCAL GOVERNMENT	(LOCG-OFF
	Non-Profit Association	UB) (NAP)	1	□ Secondary	(SCHL-SECD)		∏Storage	(LOCG-STF
	- Non From Association	(IAVL)	1	Coll. or Univ.	(SCHL-POST)		M Service	(LOCG-SEF
			4	□Vocational	(SCHL-VOCL)		Library	(LOCG-LBF
2.	ULTIMATE OWNER		1	DEducation Agency	(SCHL-ADMN)		☐ Police	(LOCG-PLC
	□ County	(CNTY)	1	□ Administration	(SCHL-ADMN)		□Fire	(LOCG-FIRE
	X City	(CITY)		DOTHER	(SCHL-OTHR)		DOTHER	(LOCG-OTH
	☐ Township ☐ State ☐ Public School ☐ Private School ☐ Non-Profit Association ☐ Indian Tribe	(TOWN) (STAT) (PUSC) (PRSC) (NPAP) (INDN)	b.	PUBLIC CARE Nursing Home Long Term Care Rehab. Facility Public Health Ctr. Res. Child Care Ctr.	(PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-HCTR) (PBCR-RCCC)	d.	HOSPITALS General Tuberculosis OTHER	(HOSP-GEN (HOSP TUE (HOSP-OTI

-	idian Tribe	(INDN)	□ Public Health Ctr. □ Res. Child Care Ctr.	(PBCR-HCTR) (PBCR-RCCC)		
		· · · · · · · · · · · · · · · · · · ·				A STATE OF THE STA
Instruction	ns: With reference to al funding, then ans	page 23 entitled Fu wer the questions co	nding Information, determine rectly for the situation. This s	if the facilities are eliquection must be signed	gible for both Federa and dated by the he	il and State funding or ad of the organization
Have yo Have yo Do you	for both Federal and ou received a mini-ac ou previously applied wish to apply for mi March 18, 19	udit grant before? If for mini-audit fundi ini-audit funding?	□ Yes (ŽÍNo ing? CŽ Yes □ No □ Yes (ŽÍNo			
Uate	Arthur Jense					
Signature	1111		eler			
If eligible	for Federal funding	only:	D			
Have you	ou previously applied wish to apply for m	nini-audit funding?	ing? Yes No	cessary.)		
Have you	ou previously applied wish to apply for m	d for mini-audit fundi nini-audit funding?	ing? Dyes DNo	cessary.)		
Have you	ou previously applied wish to apply for m	d for mini-audit fundi nini-audit funding?	ing? Yes No	cessary.)		
Have you	ou previously applied wish to apply for m	d for mini-audit fundi nini-audit funding?	ing? Yes No	cessary.)		
Have you	ou previously applied wish to apply for m	d for mini-audit fundi nini-audit funding?	ing? Yes No	cessary.)		
Have you	ou previously applied wish to apply for m	d for mini-audit fundi nini-audit funding?	ing? Yes No	Cussary.}		
Have you	ou previously applied wish to apply for m	d for mini-audit fundi nini-audit funding?	ing? Yes No	Cussary.)		
Have you	ou previously applied wish to apply for m	d for mini-audit fundi nini-audit funding?	ing? Yes No	Cussary.)		
Have you Do you The 50%	ou previously applied wish to apply for m match for Federal	d for mini-audit fundi nini-audit funding?	ing? □ Yes □ No □ Yes □ No n: (Use additional sheets if ne	Cussary.}		
Have you Do you The 50%	Du previously applied wish to apply for match for Federal	d for mini-audit fundi nini-audit funding? funds will come fron	ing? □ Yes □ No □ Yes □ No n: (Use additional sheets if ne	cessary.)		

D	Check the type of energy report which was completed and submitted price	or to this mini-audit report.
T H	☐ Elementary School Energy Report (Form No. ED-00444-02) ☐ Secondary School Energy Report (Form No. ED-00445-02)	
REPC	☑ Existing Building Energy Report (Form No. EN-00041-01)	
ENERGY REPORT	If an energy report has not been completed previous to this mini-audit re vocational schools should use form ED-00444-02 or form ED-00445-02, dep	port, one must be included with this report. Elementary, secondary, and ending on building complexity. All other buildings should use the existing
CHE	building energy report, form EN-00041-01.	1
	Instructions: This section is to be completed and signed by a registered prompleted the State of Minnesota's Mini-Audit Procedures Course. This seare completed. All blanks must be filled in.	professional engineer or by a certified mini-auditor who has successfully ction should be completed after this mini-audit report and an energy report
	I have reviewed the energy report and/or the energy report results for this corrected any misinformation on the energy report which will be resubm. I am not directly responsible for the day to day operations of this building.	itted with this mini-audit report to the Minnesota Energy Agency ng being audited.
	I have fully disclosed my financial interests relating to this mini-audit an	
	I have walked through this building and have found the recommendation maintenance changes, and low cost energy conservation measures, which	ons listed in section I of this mini-audit report to be the operations and ch would reduce energy consumption in this building.
	I have made a rough estimate, in section G, of the range of savings which listed in section I. I am not responsible if the actual savings resulting from	may result from the implementation of all of the mini-audit opportunities om this mini-audit do not fall within the estimated range.
	Based on actual records, the energy conservation operating and mainten 20% of the building's energy consumption as specified in section I.	ance procedures listed in section K did not save at least (did, did not)
	Based upper my observation of the physical characteristics of this buildi	ng and the building's major energy using systems, I recommend that this
	(should, should not)	make the maxi-audit funding determination based on this mini-audit report
	and other criteria.	-
	Based upon the information in section E and the information referred to in	(SHOULD, BROWN HOL)
	undergo further solar conversion analysis, and/or <u>Should not</u> wind, wood. (Circle proper resources) (should, should	not) undergo further analysis of the renewable resources waste
	In my judgement, as a mini-auditor, all of the above statements are true	and correct.
		Witnessed by:
	_Randy_Smith	Assistant Maintenance Supervisor
	Mini-Auditor's Name (Print or Type)	Building Oganizational Authority (Print or Type)
	Sighature 206	Signature Kinger
	Rieke Carroll Muller Firm Name (if none, enter none)	
		Date
	P.O. Box 130 Address	
	612 935-6901	
	March 18, 1981	
	Date	
,,	·	
MINI-AUDIT		
- AC		
MIN		

F	NAME POSITION ORGANIZATION
	Randy Smith Certified Mini-Auditor RCM
	,
-	
	Scott Hutchins Elec. Technician RCM
AUDIT	
₹F	Art Parvey City of Bloomington
	BRIEF DESCRIPTION OF GENERAL BUILDING CONDITION (i.e. type, and function)
G	Good, lift station built into hill
Ì	MAJOR CHANGES PLANNED WITHIN NEXT 15 YEARS (i.e. demolition, rehabilitation, conversion from one building type to another)
N O	NONE STRUCTURAL COMPONENTS OF ROOF (i.e. metal beams, wooden rafters, concrete)
MAT	Contrete plank
BUILDING	ROOFING MATERIAL (i.e. tar and gravel, shingles, tile)
<u>a</u> ≥	Earth
	INCTRUCTIONS. Consider a service to Alleria and Alleri
H	INSTRUCTIONS: Correctly answer the following questions for the building being mini-audited. Is there open land adjacent to the building?
	15 Wes - No
	Solar collectors need to be located in an unshaded area. Is the roof of the building and the south facing wall unshaded between the hours of 9 a.m. and 3 p.m.?
	Roof: IC Yes □ No South facing Wall: IC Yes □ No
	If the roof or wall are partly shaded, what percentage of the surface is unshaded?
į	% of roof unshaded% % of south facing wall unshaded%
	·
	What is the overall shape of the building? ☐ square ☐ rectangle ☐ H-shaped ☐ E-shaped ☐ other (specify)
	Is the roof of the building flat or pitched? Ø flat □ pitched
	If pitched, what is the compass orientation of the ridgeline?
	If pitched, what is the angle that the roof makes with horizontal?
	Are there large obstructions on the roof such as chimneys, rooms for mechanical equipment, ventilating units, water towers, etc? □ Yes □ No
	What is the exterior facing material for the south facing wall? Face brick
	What percentage of the south facing wall is glass?%
	Is the building's space heating equipment located within or on the building? (A no answer indicates the equipment is in a separate building.)
	If the space heating equipment is inside the building, where is it located? A Ground Floor Basement Roof Other (specify)
SOLAR POTENTIAL	Is the building's water heating equipment located within the building? (A no answer indicates the equipment is in a separate building.) □ Yes □ No NONE
R POTE	If the water heating equipment is inside the building, where is it located? ☐ Ground Floor ☐ Basement ☐ Other (specify)
SOLAI	Is the water heating system a central system, does it consist of multiple units, or is it a combination of the central and multiple units? □ Central □ Multiple □ Combination

Range of Fuel Savings 0% 5% 10% 15% 20% 25% other Calculate ranges of energy and cost savings Range of Electrical Savings Annual Electrical Range of Energy Annual Electrical Savings % Range Dollars Spent	BTU USAGE							
Fuel 1 Fuel 2 TOTAL 20% SAVINGS YEAR Fiscal ENERGY TYPE ENERGY USAGE CONVERSION FACTOR Electricity Fuel 1 Fuel 2 TOTAL Instructions: This section is to be completed by the mini-auditor after the walk-thru portion of the mini-audit. First, check the state the roughly estimated range of the percent of total electrical and fuel consumption which would be saved resulting from of the new mini-audit opportunities listed in section L. Secondly, calculate the range of energy and cost savings by recentages by the annual electrical and fuel consumption data on the energy report. Check two boxes in each category — Range of Electrical Savings — Ø 0% Ø 5%								
Fuel 2 TOTAL 20% SAVINGS YEAR Fiscal ENERGY TYPE ENERGY USAGE CONVERSION FACTOR Electricity Fuel 1 Fuel 2 TOTAL Instructions: This section is to be completed by the mini-auditor after the walk-thru portion of the mini-audit. First, check the state the roughly estimated range of the percent of total electrical and fuel consumption which would be saved resulting from of the new mini-audit opportunities listed in section L. Secondly, calculate the range of energy and cost savings by repercentages by the annual electrical and fuel consumption data on the energy report. Check two boxes in each category — Range of Electrical Savings — \$\infty 0\% \text{ \$\infty 5\% } \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \								
TOTAL 20% SAVINGS YEAR Fiscal ENERGY TYPE ENERGY USAGE CONVERSION FACTOR Electricity Fuel 1 Fuel 2 TOTAL Instructions: This section is to be completed by the mini-auditor after the walk-thru portion of the mini-audit. First, check the state the roughly estimated range of the percent of total electrical and fuel consumption which would be saved resulting from of the new mini-audit opportunities listed in section L. Secondly, calculate the range of energy and cost savings by repercentages by the annual electrical and fuel consumption data on the energy report. Check two boxes in each category — Range of Electrical Savings — 0 % Ø 5% 0 10% 0 15% 0 20% 0 25% 0 other Calculate ranges of energy and cost savings — Range of Electrical Savings Annual Electrical Range of Energy Annual Electrical Range of Energy Annual Electrical Consumption Range of Energy Annual Electrical Dollars Spent								
ENERGY TYPE ENERGY USAGE CONVERSION FACTOR Electricity Fuel 1 Fuel 2 TOTAL Instructions: This section is to be completed by the mini-auditor after the walk-thru portion of the mini-audit. First, check the state the roughly estimated range of the percent of total electrical and fuel consumption which would be saved resulting from of the new mini-audit opportunities listed in section L. Secondly, calculate the range of energy and cost savings by repercentages by the annual electrical and fuel consumption data on the energy report. Check two boxes in each category — Range of Electrical Savings — 0% 5% 10% 15% 20% 25% other Range of Fuel Savings — 0% 5% 10% 15% 20% 25% other Calculate ranges of energy and cost savings — Range of Electrical Savings Annual Electrical Range of Electrical Savings Annual Electrical Savings Annual Electrical Savings Annual Electrical Savings Dollars Spent								
ENERGY TYPE ENERGY USAGE CONVERSION FACTOR Electricity Fuel 1 Fuel 2 TOTAL Instructions: This section is to be completed by the mini-auditor after the walk-thru portion of the mini-audit. First, check the state the roughly estimated range of the percent of total electrical and fuel consumption which would be saved resulting from of the new mini-audit opportunities listed in section L. Secondly, calculate the range of energy and cost savings by repercentages by the annual electrical and fuel consumption data on the energy report. Check two boxes in each category — Range of Electrical Savings — 0% 0% 5% 0 10% 0 15% 0 20% 0 25% 0 other Calculate ranges of energy and cost savings — Range of Electrical Savings Annual Electrical Range of Energy Annual Electrical Dollars Spent								
Electricity Fuel 1 Fuel 2 TOTAL Instructions: This section is to be completed by the mini-auditor after the walk-thru portion of the mini-audit. First, check the state the roughly estimated range of the percent of total electrical and fuel consumption which would be saved resulting from of the new mini-audit opportunities listed in section L. Secondly, calculate the range of energy and cost savings by repercentages by the annual electrical and fuel consumption data on the energy report. Check two boxes in each category — Range of Electrical Savings — Range of Fuel Savings — O% S% 10% 15% 20% 25% other Calculate ranges of energy and cost savings — Range of Electrical Savings Annual Electrical Range of Energy Annual Electrical Savings Range Obliars Spent	/ear							
Fuel 2 TOTAL Instructions: This section is to be completed by the mini-auditor after the walk-thru portion of the mini-audit. First, check the state the roughly estimated range of the percent of total electrical and fuel consumption which would be saved resulting from of the new mini-audit opportunities listed in section L. Secondly, calculate the range of energy and cost savings by repercentages by the annual electrical and fuel consumption data on the energy report. Check two boxes in each category — Range of Electrical Savings — 0 0% \$\omega\$ 5%	BTU USAGE							
Instructions: This section is to be completed by the mini-auditor after the walk-thru portion of the mini-audit. First, check the state the roughly estimated range of the percent of total electrical and fuel consumption which would be saved resulting from of the new mini-audit opportunities listed in section L. Secondly, calculate the range of energy and cost savings by repercentages by the annual electrical and fuel consumption data on the energy report. Check two boxes in each category — Range of Electrical Savings — 0% 0% 5% 01% 01% 015% 020% 025% 0their Range of Fuel Savings — 0% 05% 010% 015% 020% 025% 0their Calculate ranges of energy and cost savings — Range of Electrical Savings Annual Electrical Consumption Range of Energy Range Annual Electrical Dollars Spent								
Instructions: This section is to be completed by the mini-auditor after the walk-thru portion of the mini-audit. First, check the state the roughly estimated range of the percent of total electrical and fuel consumption which would be saved resulting from of the new mini-audit opportunities listed in section L. Secondly, calculate the range of energy and cost savings by repercentages by the annual electrical and fuel consumption data on the energy report. Check two boxes in each category — Range of Electrical Savings — Ø 0% Ø 5% ☐ 10% ☐ 15% ☐ 20% ☐ 25% ☐ other Range of Fuel Savings — ☐ 0% ☐ 5% ☐ 10% ☐ 15% ☐ 20% ☐ 25% ☐ other Calculate ranges of energy and cost savings — Range of Electrical Savings Annual Electrical Range of Energy Annual Electrical Consumption Savings % Range Dollars Spent								
Instructions: This section is to be completed by the mini-auditor after the walk-thru portion of the mini-audit. First, check the state the roughly estimated range of the percent of total electrical and fuel consumption which would be saved resulting from of the new mini-audit opportunities listed in section L. Secondly, calculate the range of energy and cost savings by repercentages by the annual electrical and fuel consumption data on the energy report. Check two boxes in each category — Range of Electrical Savings — Ø 0% Ø 5% ☐ 10% ☐ 15% ☐ 20% ☐ 25% ☐ other Range of Fuel Savings — ☐ 0% ☐ 5% ☐ 10% ☐ 15% ☐ 20% ☐ 25% ☐ other Calculate ranges of energy and cost savings — Range of Electrical Savings Annual Electrical Savings % Range Dollars Spent	The same and the s							
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Calculate ranges of energy and cost savings — Range of Electrical Savings Annual Electrical Range of Energy Annual Electrical Range Consumption Savings % Range Dollars Spent	(specify)							
Range of Electrical Savings Annual Electrical Range of Energy Annual Electrical Range Consumption Savings % Range Dollars Spent	(specify)							
Annual Electrical Range of Energy Annual Electrical % Range Consumption Savings % Range Dollars Spent	Calculate ranges of energy and cost savings —							
% Range Consumption Savings % Range Dollars Spent								
17100 0 629 40	Range of Electric Dollars Saving							
lower bound $\frac{0}{0}$ % x $\frac{17120}{17120}$ kwh = $\frac{0}{0}$ kwh, $\frac{0}{0}$ % x \$ 628.40	<u> </u>							
to to to	to							
upper bound 5 % x 17120 kwh = 856 kwh, 5 % x \$628.40	<u> \$ 31.42</u>							
Range of Fuel Savings								
Annual Fuel Range of Fuel Annual Fuel % Range Consumption Savings % Range Dollars Spent								
lower bound% xBtu =Btu,% x \$								
to to to upper bound% xBtu =Btu,% x \$ The mini-auditor is not responsible if actual savings resulting from the implementation of the energy conservation opportunot fall between the roughly estimated ranges which are specified.	Range of Fue Dollars Saving							

Instructions. Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor.

				OPTIONAL: OPTIONAL:				
MAJOR	NO PAST ENERGY CONSERVATION ACTIONS		ENERGY SAVINGS	ENERGY COST SAVINGS	DATE OF IMPLEMENTATION			
	1	Insulated ceilling						
					·			
		,		_				
		-						
-								
			-					
				,				
			-					
	+							
				1				
-	+							
	N	MAJOR SUB CLASS CLASS	CLASSIFICATION MAJOR SUB CLASS 2 1 Insulated ceilling	CLASSIFICATION MAJOR SUBCLASS 2 1 Insulated ceiling Insulated ceiling	Class class Class			

EW PPORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

ITEM			NEW MINI-AUDIT OPPORTUNITIES		OPTIONAL ENERGY	
NO.					COST SAVINGS	DATE OF IMPLEMENTATION
1	1	1	Keep all controls free of dust.			
			nesp and sensors in Go or Guy,			
2			Look for loose connections and bad			
			contacts on a regular pasis.			
3	1		Check alignment of motors to driven equipment, align and tighten as neces			
<u> </u>	<u> </u>		sary.			
4	1	2	Replace worn or defective motors with motors that are sized as close			
			to the load as possible and use the highest efficiency motors available.			
5	1	2	Where it is impractical to replace motors which have low loads and			
			power factors, use capacitors at motor terminals to correct the power			
			factor to 90%.			
_6	2	2	Weatherstrip all exterior doors.			
7	2 2		Replace an existing door with one of higher R-value.			
					_	
8	2	8	Caulk all cracks that allow air and moisture into the building.			
9	3	1	65 ⁰ F maximum occupied, 60 ⁰ F maximum unocupied during ghe heating season.			
10	3	3	Inspect bearings and drive belts for wear and binding. Adjust, repair or replace as necessary.			
					 	
11	5	1	Keep records of the operating schedu monthly energy consumption and purcha			

	TIES
	NOL
Z E	OPPOR

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification achieme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

ITEM	CLASSIFICATION NO.		NEW MINI-AUDIT OPPORTUNITIES		ENERGY COST	DATE OF IMPLEMENTATION
NO.	MAJOR CLASS	SUB CLASS			SAVINGS	
			of any new equipment that affects			
			energy consumption of efficiency of			
			the building. These records will in-			·
			dicate the impact of energy conser-			
			vation measures.			·
				·		
12	5	1	Review the record books on a regular			
			basis.			
	ļ		Inspect electrical contacts and work-			
13	7	4	ling parts of relays and maintain in			
			good working order.			
			Check heater elements for cleanliness		 	
14	7	4	Replace as necessary.			
			Check controls for proper operation.			
15	7	4	Adjust as necessary.			
-	<u> </u>		Periodically tighten all electrical-			
16	7	4	mechanical connections to prevent arcing and burning due to metal flow			
			or loosening of terminal bolts or lugs.			
· ·	 					
				1		
				<u> </u>		

A	BUILDING NAME Lift Station - Sanitary Sew	age	NAME OF ORGANIZATION City of Bloomington	3-19-81	
	BUILDING ADDRESS 4801 Nine Mile Creek Parkwa	у	ADDRESS 2215 West 01d Shakopee Road		
ACT	сıтү Bloomington	ZIP CODE 55431	стү Bloomington	ZIP CODE 05431	
L .	PERSON COMPLETING FORM Randy Smith	TELEPHONE 935-6901	CONTACT PERSON Arthur Jensen	TELEPHONE 881-5811	

B	Instructions: For blocks 1 and 2 check the box describes the building type and then within the						our categories
	1. QWNERSHIP TYPE Â☐ Public (PUB) ☐ Non-Profit Association (NAP)	3a.	SCHOOLS Elementary Secondary Coll. or Univ.	(SCHL-ELM) (SCHL-SECD) (SCHL-POST)	C.	LOCAL GOVERNMENT Office Storage Service	(LOCG-OFFC) (LOCG-STRG) (LOCG-SERV)
CODE	2. ULTIMATE OWNER □ County (CNTY) □ City (CITY) □ Township (TOWN)		□ Vocational □ Education Agency □ Administration □ OTHER	(SCHL-VOCL) (SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR)		□Library □Police □Fire □OTHER	(LOCG-LBRY) (LOCG-PLCE) (LOCG-FIRE) (LOCG-OTHR)
BUILDING ELIGIBILITY CODE	☐ State (STAT) ☐ Public School (PUSC) ☐ Private School (PRSC) ☐ Non-Profit Association (NPAP) ☐ Indian Tribe (INDN)	b .	PUBLIC CARE Nursing Home Long Term Care Rehab. Facility Public Health Ctr. Res. Child Care Ctr.	(PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-HCTR) (PBCR-RCCC)	d.	HOSPITALS General Tuberculosis OTHER	(HOSP-GENL) (HOSP-TUBR) (HOSP-OTHR)
C	Instructions: With reference to page 23 entitle just Federal funding, then answer the question	d Fundi	ng Information, determine	if the facilities are section must be sig	eligit Ined a	ole for both Federal and St nd dated by the head of the	ate funding or organization.
	If eligible for both Federal and State Funding: Have you received a mini-audit grant before Have you previously applied for mini-audit f Do you wish to apply for mini-audit funding	unding?	⊠ Yes □ No				
	Date: March 18, 1981						
	Name: Arthur Jensen						
	Signature: Willia W	(2216	<u> </u>				
	If eligible for Federal funding only: Have you received a mini-audit grant before Have you previously applied for mini-audit f Do you wish to apply for mini-audit funding	?	es□ No □ Yes □ No Yes □ No				
	The 50% match for Federal funds will come	from: (l	Jse additional sheets if ne	cessary.)			
				•			
JEST							
REOL	Date:						
AUD	Name:						
MINI-AUDIT FUNDING REQUEST	Signature:						

U	Check the type of energy report which was completed and submitted pri	or to this mini-audit report.
EPORT F	☐ Elementary School Energy Report (Form No. ED-00444-02) ☐ Secondary School Energy Report (Form No. ED-00445-02) ☑ Existing Building Energy Report (Form No. EN-00041-01)	
ENERGY REPORT CHECK-OFF	If an energy report has not been completed previous to this mini-audit re vocational schools should use form ED-00444-02 or form ED-00445-02, dep building energy report, form EN-00041-01.	
Ē	Instructions: This section is to be completed and signed by a registered completed the State of Minnesota's Mini-Audit Procedures Course. This se are completed. All blanks must be filled in.	
	I have reviewed the energy report and/or the energy report results for this corrected any misinformation on the energy report which will be resubm	itted with this mini-audit report to the Minnesota Energy Agency.
	I am not directly responsible for the day to day operations of this building	ng being audited.
	I have fully disclosed my financial interests relating to this mini-audit an	d any energy conservation measures considered by this audit.
	I have walked through this building and have found the recommendation maintenance changes, and low cost energy conservation measures, which	ons listed in section I of this mini-audit report to be the operations and ch would reduce energy consumption in this building.
	I have made a rough estimate, in section G, of the range of savings which listed in section I. i am not responsible if the actual savings resulting fro	
	Based on actual records, the energy conservation operating and mainten 20% of the building's energy consumption as specified in section I.	ance procedures listed in section K <u>did not</u> save at least (did, did not)
	SNOUIG NOT be the subject of a maxi-audit. (should, should not)	ng and the building's major energy using systems, I recommend that this
	I realize that this is not a final judgement, that the State reserves the right to and other criteria.	make the maxi-audit funding determination based on this mini-audit report
	Based upon the information in section E and the information referred to in	section F, I recommend that this buildingShould_not
	undergo further solar conversion analysis, and/orshould_not	(should, should not) undergo further analysis of the renewable resources — waste,
	wind, wood. (Circle proper resources) (should, should	not)
	In my judgement, as a mini-auditor, all of the above statements are true	and correct.
	,	
		With a cond by
		Witnessed by:
	Randy Smith	Assistant Maintenance Supervisor
	Mini-Auditor's Name (Print or Type)	Building Organizational Authority (Print or Type)
	Signature 206	Signature Signature
	Rieke Carroll Muller Associates, Inc.	March 18, 1 9 81
	Firm Name (if none, enter none)	Date
	P.O. Box 130	
	612/935-6901	
	Phone	
	March 18, 1981	
	Date	
100		
PINT		

F	NAME	POSITION	ORGANIZATION	
	Randy Smith	Certified Mini-Auditor	Rieke Carroll Muller Associates,	_ nc
	Scott Hutchins	Certified Technical Engr	r. Rieke Carroll Muller Associates.	nc
	Art Parvey		City of Bloomington	4
AUDIT TEAM				-
A				
G	Good, undergrou	NERAL BUILDING CONDITION (i.e. type, and f		
7	MAJOR CHANGES PLANNED None	WITHIN NEXT 15 YEARS (i.e. demolition, reha	bilitation, conversion from one building type to another)	
BUILDING	STRUCTURAL COMPONENTS	S OF ROOF (i.e. metal beams, wooden rafters, o	concrete)	
ILDIN MRO	Concrete ROOFING MATERIAL (i.e. tar	and gravel, shingles, tile)		\dashv
8 X	Metal Hatch			
Н	INSTRUCTIONS: Correctly an	nswer the following questions for the building be	eing mini-audited.	\neg
	Is there open land adjacent to			1
	· ·		g and the south facing wall unshaded between the hours of 9 a.m. and	
		naded, what percentage of the surface is unshad	ded?	
	What is the overall shape of the			
	Is the roof of the building flat ☑ flat ☐ pitched			
	If pitched, what is the compas	ss orientation of the ridgeline?		
		hat the roof makes with horizontal?		
	Are there large obstructions o ☐ Yes ☑ No	on the roof such as chimneys, rooms for mechan	nical equipment, ventilating units, water towers, etc?	
	What is the exterior facing ma	aterial for the south facing wall? None		
	What percentage of the south	tacing wall is glass? %		
	Is the building's space heatin ☐ Yes ☐ No	g equipment located within or on the building?	(A no answer indicates the equipment is in a separate building.)	
	If the space heating equipme ☐ Ground Floor ☐ Base	nt is inside the building, where is it located? ment		
ENTIAL	Is the building's water heating ☐ Yes ☐ No NONE	g equipment located within the building? (A no	answer indicates the equipment is in a separate building.)	
SOLAR POTENTIAL	If the water heating equipment Ground Floor Base	nt is inside the building, where is it located? ment Other (specify)	TO THE CONTROL OF THE	
SOLA	Is the water heating system a	central system, does it consist of multiple united Combination	s, or is it a combination of the central and multiple units?	

BASE PERIOD YEAR								· Fiscal Year		
	ENERGY TYPE		ENERGY (JSAGE		CONVERSION	FACTOR		BTU USAGE	
	Electricity									
	Fuel 1									
	Fuel 2									
	TOTAL							1		
				20% S	AVINGS YEA	NR		Fiscal	Year	
	ENERGY TYPE		ENERGY (JSAGE		CONVERSION	FACTOR		BTU USAGE	
	Electricity									
	Fuel 1			-						
	Fuel 2					and Theodories of a Theodories of the American				
	TOTAL									
	Instructions: This section is to be	completed	by the mini	-auditor afte	r the walk-thr	u portion of the	mini-audit. Firs	st, check the	appropriate boxes whi	
	Instructions: This section is to be a state the roughly estimated range of the new mini-audit opportunit percentages by the annual electr	of the perc lies listed i	ent of total e in section L	electrical and Secondly.	fuel consum	ption which wo	uld be saved re	sulting from	the implementation of	
	state the roughly estimated range of the new mini-audit opportunit	of the perc ties listed i ical and fu	ent of total e in section L	electrical and Secondly.	fuel consum	ption which wo	uld be saved re	sulting from	the implementation of	
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electr Check two boxes in each categor	of the perc ties listed i ical and fu	ent of total e in section L	electrical and Secondly.	fuel consum	ption which wo	uld be saved re	sulting from avings by m	the implementation of nultiplying the estimate	
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electr. Check two boxes in each categor Range of Electrical Savings —	of the perc ties listed i ical and fu 	ent of total e in section L el consump	electrical and Secondly, otion data or	I fuel consum calculate the the energy	nption which wo e range of ener report.	uld be saved re rgy and cost s	sulting from avings by m	the implementation of nultiplying the estimal	
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electr. Check two boxes in each categor. Range of Electrical Savings —	of the percities listed it ical and fury —	ent of total en section Let consump	electrical and Secondly, otion data of	I fuel consum calculate the the energy	e range of ener report.	uld be saved re	sulting from avings by m	the implementation of nultiplying the estimate (specify)	
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electr. Check two boxes in each categor. Range of Electrical Savings — Range of Fuel Savings —	of the percities listed it ical and fury —	ent of total en section Let consump	electrical and Secondly, otion data or 10%	I fuel consum calculate the the energy	pption which wo e range of ener report.	uld be saved re	sulting from avings by m	the implementation of	
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electr. Check two boxes in each categor. Range of Electrical Savings — Range of Fuel Savings —	of the percities listed it ical and fury —	ent of total ein section Lel consump [X] 5% 5% 5% s	electrical and Secondly, otion data or 10% 10% Range o	I fuel consum calculate the the energy	pption which wo e range of ener report.	uld be saved re	sulting from avings by m	the implementation of nultiplying the estimate (specify)	
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electr. Check two boxes in each categor. Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and continuous electrical Savings —	of the percities listed it ical and fury — 0% 0% cost saving	ent of total a in section Let consump [3] 5% [3] 5% [5] 5% s — lectrical aption	electrical and Secondly, otion data or 10% 10% Range o	I fuel consum calculate the the energy 15% 15% 15% 15% 15 Electrical \$ of Energy	potion which wo e range of ener report. 20% 20% Savings Range	uld be saved re rgy and cost s 25% 25% Annual E Dollars	sulting from avings by m	the implementation of nultiplying the estimate (specify) (specify) Range of Electric	
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electr. Check two boxes in each categor. Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and of the same of the savings — % Range	of the percities listed it ical and fury — 0% 0% cost saving	ent of total and a section Let consump A 5% 5% chapter 5% s — lectrical mption	electrical and Secondly, otion data or 10% 10% Range o	I fuel consum calculate the other energy 15% 15% 15% I Electrical Se of Energy avings	potion which wo e range of ener report. 20% 20% 20% Range 0 %	uld be saved re rgy and cost s 25% 25% Dollars	sulting from avings by m other other	(specify) Range of Electric Dollars Savings	
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electr. Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and company to the sample of the savings — Range of Fuel Savings —	of the percities listed it ical and fury — 0% 0% cost saving	ent of total and a section Let consump [2] 5% [3] 5% [5] 5% s — [] lectrical mption [] kwh	Range c	I fuel consum calculate the other energy 15% 15% 15% I Electrical Section of Energy avings 0 kwh,	potion which wo e range of energe report. 20% 20% 20% Range 0 %	uld be saved rergy and cost s 25% 25% Description 25% Annual E Dollars x \$ 812	sulting from avings by m other other	the implementation of nultiplying the estimate (specify) (specify) Range of Electric Dollars Savings	
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and compared to the savings — % Range	of the percenties listed in ical and fury — 100 0% cost saving Annual E Consur 22763	ent of total a in section Let consump [X] 5% 5% 5% s	Range of S	I fuel consum calculate the name of the energy of the energy of the energy of the energy avings to to 1.38	potion which wo e range of energe report. 20% 20% 20% Range 0 % to 5 %	uld be saved re rgy and cost s 25% 25% Delta 25% Annual E Dollars x \$ 812	sulting from avings by m other other lectrical Spent	the implementation of nultiplying the estimate (specify) (specify) Range of Electric Dollars Savings \$ 0 to	
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electr. Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and compared to the sample of the savings in the	of the percities listed it ical and fury — 0% 0% cost saving Annual E Consur 22763	ent of total and a section Let consump (A) 5% 5% 5% s	Range o	I fuel consum calculate the the energy 15% 15% 15% 15% 15% 15% 16 Electrical 5 e of Energy avings 0 kwh, to 138 kwh,	potion which wo e range of energe report. 20% 20% 20% Range 0 % to 5 %	uld be saved re rgy and cost s 25% 25% Delta 25% Annual E Dollars x \$ 812	sulting from avings by m other other lectrical Spent 2.36	the implementation of nultiplying the estimate (specify) (specify) Range of Electric Dollars Savings \$ 0 to 40.62	
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electr. Check two boxes in each categor. Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and compared to the same of the savings in the same of the savings in the same of the savings in the s	of the percises listed it ical and fury — 0% 0% cost saving 22763	ent of total and a section Let consump [X] 5% 5% 5% s	Range o	difuel consum calculate the the energy 15% 15% 15% 15% 15% 15% 16 Electrical Section of Energy avings 0 kwh, 100 of Fuel Section of Fuel Sections 15% 15% 15% 15% 15% 15% 15% 15% 15% 15%	potion which wo e range of energe of	uld be saved rergy and cost's 25% 25% Delta 25% Annual E Dollars x \$ 812 x \$ Annual	sulting from avings by m other other lectrical Spent 2.36	the implementation of nultiplying the estimate (specify) (specify) Range of Electric Dollars Savings \$ 0 to 40.62	
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electr. Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and composed bound — % Range lower bound — % x Building does not use Range	of the percises listed it ical and fury — 0% 0% cost saving 22763	ent of total and a section Lel consump (A) 5% 5% 5% s	Range of Ran	difuel consum calculate the the energy 15% 15% 15% 15% 15% 15% 16 Electrical Section of Energy avings 0 kwh, 100 of Fuel Section of Fuel Sections 15% 15% 15% 15% 15% 15% 15% 15% 15% 15%	potion which wo e range of energe report. 20% 20% 20% 5avings Range 0 % vings % Range	uld be saved rergy and cost's 25% 25% Delta 25% Annual E Dollars x \$ 812 x \$ Annual	sulting from avings by m other other lectrical Spent 2.36	the implementation of nultiplying the estimate (specify) (specify) Range of Electric Dollars Savings \$ 0 to	

Instructions: Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor.

OPTIONAL: OPTIONAL: CLASSIFICATION **ENERGY** NO. **ENERGY** ITEM DATE OF IMPLEMENTATION PAST ENERGY CONSERVATION ACTIONS COST SAVINGS SAVINGS NO. MAJOR SUB CLASS CLASS 5 Routine maintenance schedule

L	UNITIES
	E
3	2
Ž	8

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

ITEM					OPTIONAL ENERGY	DATE OF IMPLEMENTATION	
NO.	MAJOR CLASS	SUB CLASS	NEW MINI-AUDIT OPPORTUNITIES	ENERGY SAVINGS	COST SAVINGS		
1	1	1	 Keep all controls free of dust				
w			Look for loose connections and bad				
2	1	2	contacts on a regular basis.				
		_	Lubricate motors to reduce wear and				
3	1 1	2	excessive torque.				
Λ			Check alignment of motors to driven				
4	- -1	2	equipment.				
5	1	2	Replace worn or defective motors with	1			
<u> </u>	┤-ᆣ		motors that are sized as close to the load as possible. Use the high-	<u> </u>	 		
			est efficiency motors available.	, '			
			Where it is impractical to replace				
6	_	2	motors which have low loads and				
			power factors, use capacitators at				
			motor terminals to correct the powe	r			
			factor at 90%.				
		<u> </u>					
7	1	2	An instantaneous power factor readi	ng			
_	_		was .84.				
_8	3	3	Check for packing wear chich can				
			cause excessive leakage. Repack to				
			avoid excessive water wastage and				
			shaft erosion.				
9	3	3	Inspect bearings and drive belts for				
	+	 	wear and binding. Adjust, repair or		<u> </u>		
			replace as necessary.				
10	5	1	Keep records of the operating schedu	l le			
		†	monthly energy consumption and purch	ase			
			of any new equipment that affects				
			energy consumption of efficiency of				
			the building. These records will	ļ	ļ		
			indicate the impact of energy conser	` †			
	- 	 	vation measures.	 	 		
11	5	1	Review the record books on a regular				
			basis.				
	-						
		 		-	_		
		ļ					

A	BUILDING NAME Lift Station - Sanitary Sew	age	NAME OF ORGANIZATION City of Bloomington	2/18/81			
	BUILDING ADDRESS 5050 West Old Shakopee Road		ADDRESS 2215 West Shakopee Road				
ACT	CITY Bloomington	ZIP CODE 55431	CITY ZIP CODE 55431				
CONT	PERSON COMPLETING FORM Randy Smith	TELEPHONE 935-6901	CONTACT PERSON Arthur Jensen	TELEPHONE 881-5811			

B		structions: For blocks 1 and 2 scribes the building type and							our categories
	1	OWNERSHIP TYPE ÖPublic (f □Non-Profit Association	PUB) (NAP)	За.	SCHOOLS □Elementary □Secondary □Coll. or Univ.	(SCHL-ELM) (SCHL-SECD) (SCHL-POST)	C.	LOCAL GOVERNMENT Offlice Storage Service	(LOCG-OFFC) (LOCG-STRG) (LOCG-SERV)
ODE	2.	ULTIMATE OWNER □ County ☑ City	(CNTY) (CITY)		□Vocational □Education Agency □Administration □OTHER	(SCHL-VOCL) (SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR)		□Library □Police □Fire □OTHER	(LOCG-LBRY) (LOCG-PLCE) (LOCG-FIRE) (LOCG-OTHR)
BUILDING ELIGIBILITY C		☐ Township☐ State☐ Public School☐ Private School☐ Non-Profit Association☐ Indian Tribe	(TOWN) (STAT) (PUSC) (PRSC) (NPAP) (INDN)	b.	PUBLIC CARE Nursing Home Long Term Care Rehab. Facility Public Health Ctr. Res. Child Care Ctr.	(PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-HCTR) (PBCR-RCCC)	d.	HOSPITALS General Tuberculosis OTHER	(HOSP-GENL) (HOSP-TUBR) (HOSP-OTHR)

If eligible for both Federal and State Funding: Have you received a mini-audit funding?	just Feder	ns: With reference to page 23 entitled Funding Information, determine if the facilities are eligible for both Federal and State ful all funding, then answer the questions correctly for the situation. This section must be signed and dated by the head of the orga	nding or inization
Name Arthur Jensen Signature Arthur Jensen Il eligible for Federal funding only: Have you received a mini-audit grant before? Yes No Have you previously applied for mini-audit funding? Yes No Do you wish to apply for mini-audit funding? Yes No The 50% match for Federal funds will come from: (Use additional sheets if necessary.)	Have yo	u received a mini-audit grant before? □ Yes □ No u previously applied for mini-audit funding? ☑ Yes □ No	
If eligible for Federal funding only: Have you received a mini-audit grant before? Yes No Have you previously applied for mini-audit funding? Yes No Do you wish to apply for mini-audit come from: (Use additional sheets if necessary.) The 50% match for Federal funds will come from: (Use additional sheets if necessary.)			
If eligible for Federal funding only: Have you received a mini-audit grant before?	Name		
Have you received a mini-audit grant before?	Signature	- Muller W Jensen	
The 50% match for Federal funds will come from: (Use additional sheets if necessary.)	Have yo	u received a mini-audit grant before? □ Yes□ No u previously applied for mini-audit funding? □ Yes□ □ No	
	The 50	wish to apply for mini-audit funding? Li Yes Li No match for Federal funds will come from: (Use additional sheets if necessary)	
		(The state of the	
		(220 Equinoles of Good III (1000000 III))	
Name			
	Date		

D	Check the type of energy report which was completed and submit	tted prior to this mini-audit report.
=	☐ Elementary School Energy Report (Form No. ED-00444-02)	
E PO	☐ Secondary School Energy Report (Form No. ED-00445-02) XX Existing Building Energy Report (Form No. EN-00041-01)	
ENERGY REPORT CHECK-OFF	If an energy report has not been completed previous to this mini-vocational schools should use form ED-00444-02 or form ED-00445-building energy report, form EN-00041-01.	audit report, one must be included with this report. Elementary, secondary, and -02, depending on building complexity. All other buildings should use the existing
E	Instructions: This section is to be completed and signed by a regis completed the State of Minnesota's Mini-Audit Procedures Course, are completed. All blanks must be filled in.	stered professional engineer or by a certified mini-auditor who has successfully This section should be completed after this mini-audit report and an energy report
	I have reviewed the energy report and/or the energy report results corrected any misinformation on the energy report which will be	for this building. I found all information contained therein to be correct OR I have resubmitted with this mini-audit report to the Minnesota Energy Agency
	I am not directly responsible for the day to day operations of this	building being audited.
	I have fully disclosed my financial interests relating to this mini-a	udit and any energy conservation measures considered by this audit.
	I have walked through this building and have found the recomm maintenance changes, and low cost energy conservation measure	endations listed in section I of this mini-audit report to be the operations and es, which would reduce energy consumption in this building.
	· · · · · · · · · · · · · · · · · · ·	s which may result from the implementation of all of the mini-audit opportunities
	Based on actual records, the energy conservation operating and m 20% of the building's energy consumption as specified in section	naintenance procedures listed in section K did not save at least I. (did. did not)
	SNOULD NOT be the subject of a maxi-audit.	s building and the building's major energy using systems, I recommend that this
	(should, should not) I realize that this is not a final judgement, that the State reserves the	right to make the maxi-audit funding determination based on this mini-audit report
	and other criteria.	should not
	Based upon the information in section E and the information referre	ed to in section F, I recommend that this building (should, should not)
	undergo further solar conversion analysis, and/or <u>Should</u> wind, wood. (Circle proper resources) (should, s	MOL undergo further analysis of the renewable resources waste should not)
	In my judgement, as a mini-auditor, all of the above statements a	are true and correct.
		Witnessed by:
	Daniel Constitu	Assistant Maintenance Supervisor
	Randy Smith Mini-Auditor's Name (Print or Type)	Building Organizational Authority (Print or Type)
	Kandy Sixt 206	Cetrus W Jensen
	Signatur Rieke Carroll Muller Assoc., Inc.	Signature March 18, 1981
	Firm Name (if none, enter none)	Date
	P.O. Box 130 Hopkins, MN 55343 Address	
	612/935-6901	
	March 18, 1981	
	Date 10, 1901	
(0)		
MINI-AUDIT STATEMENTS		
II-AU		
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F	NAME	POSITION	ORGANIZATION	
	Randy Smith	Certified Mini-Auditor	Rieke Carroll Muller Assoc.,	Inc
	Art Parvey		City of Bloomington	
- 3	,			4
AUDIT	Scott Hutchins	Electrical Technician	Rieke Carroll Muller Assoc.,	Inc
G	BRIEF DESCRIPTION OF GENER	AL BUILDING CONDITION (i.e. type, and function)		7
	Good underground 1	ift station THIN NEXT 15 YEARS (i.e. demolition, rehabilitation, co	huilding tune to goother)	4
z	None	THIN NEXT 15 YEARS (i.e. demonition, renabilitation, of	biversion from one building type to another)	
AT10		ROOF (i.e. metal beams, wooden rafters, concrete)		7
BUILDING	Concrete with meta ROOFING MATERIAL (i.e. tar and	COVER gravel, shingles, tile)		-
N.	Metal cover	• • •		
H	INSTRUCTIONS: Correctly answe	the following questions for the building being mini-au	udited.	
	Is there open land adjacent to the	building?		
	Solar collectors need to be located 3 p.m.? Roof: XX Yes No South facing Wall: Yes		uth facing wall unshaded between the hours of 9 a.m. and	
	If the roof or wall are partly shade % of roof unshaded	d, what percentage of the surface is unshaded?		
	What is the overall shape of the bi XX square □ rectangle □ H	uilding? shaped □ E-shaped □ other (specify)		
	Is the roof of the building flat or p	itched?		
	If pitched, what is the compass or	ientation of the ridgeline?		
	If pitched, what is the angle that t	ne roof makes with horizontal?°	•	
	Are there large obstructions on th ☐ Yes XXNo	e roof such as chimneys, rooms for mechanical equipm	nent, ventilating units, water towers, etc?	
	What is the exterior facing materi	al for the south facing wall?None		
	What percentage of the south fac	ng wall is glass?%		
	Is the building's space heating eq	uipment located within or on the building? (A no answ	er indicates the equipment is in a separate building.)	
	If the space heating equipment is	inside the building, where is it located? □ Roof □ Other (specify)		
SOLAR POTENTIAL	Is the building's water heating eq	uipment located within the building? (A no answer indi	icates the equipment is in a separate building)	
POT MATI	If the water heating equipment is Ground Floor Basemen	inside the building, where is it located? t Other (specify)		
SOLAI	Is the water heating system a cer	tral system, does it consist of multiple units, or is it a combination	combination of the central and multiple units?	

			BASE PE	RIOD YEA	₹		Fiscal Yea	ar	
	ENERGY TYPE	ENERGY	USAGE	C	ONVERSION F	ACTOR		BTU USAGE	
_	Electricity					and the state of t		and the state of the	
-	Fuel 1	Thursday (Mill)			·	<u> </u>		and the second section of the second section of the second section of the second section section section section sec	
	Fuel 2								
	TOTAL							an ay an	
			20% SAV	INGS YEAF	1		Fiscal Ye	ar	
_	ENERGY TYPE	ENERGY	USAGE	C	ONVERSION F	ACTOR		BTU USAGE	
-	Electricity			1					
-	Fuel 1								
	Fuel 2		The second section of the second seco						
	TOTAL								
	state the roughly estimated range o of the new mini-audit opportunitie percentages by the annual electric Check two boxes in each category	es listed in section all and fuel consum	L. Secondly, ca	iculate the	range of energ	y and cost sa	avings by mu	te implementation o	
	Range of Electrical Savings —	_	□ 10%	□ 15%	□ _{20%}	□ 25%	Other (specify)	
	Range of Fuel Savings	l 0% 🔼 5%	[□] 10%	□ 15%	□ 20%	☐ 25%		specify)	
_	Calculate ranges of energy and cost savings —								
			Range of E	lectrical Sa	Ajuda				
		Annual Electrical Consumption	Range of Savi	•	% Range	Annual El Dollars		Range of Electr Dollars Saving	
	% Range	•				101	.08	s <u> </u>	
	% Hange lower bound 0 % x	5360 kwh	= 0	kwh, _	% ×	<u> 191</u>	.00		
	0	5360 kwh	= 0		<u>0</u> % x	\$ <u>191</u>	-	to	
	lower bound% x	5360 kwh	-	· · · · ·		\$ 191 \$ 191		0 55	
	lower bound 0 % x	_5360kwh	= 268	•	to x	V			
	lower bound 0 % x to upper bound 5 % x	_5360kwh	= 268 Range	o kwh,	to x	V	.08	\$ 9.55 Range of Fu	
	lower bound $0\% \times 100$ upper bound $5\% \times 100$ Building does not us	5360 kwh e any fuel	= 268 Range	o kwh, of Fuel Sav	to x	\$ 191 Annua Dollars	.08	Range of Fu	

Instructions: Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification on the list provided should also be included along with their appropriate classification number. This classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor.

				OPTIONAL: OPTIONAL:			
ITEM NO.	CLASSIFICATION NO. MAJOR SUB		NO. PAST ENERGY CONSERVATION ACTIONS		ENERGY COST SAVINGS	DATE OF IMPLEMENTATION	
	CLASS	CLASS		SAVINGS	SAVINGS		
1	5	2	Routine maintenance schedule.				
							
	-		,				
	 						
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Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

20			tion of the min-addit report should be completed by the imm-addit	OPTIONAL: OPTIONAL:				
ITEM	N	ICATION O.	NEW MINI-AUDIT OPPORTUNITIES	ENERGY	ENERGY COST	DATE OF IMPLEMENTATION		
NO.	MAJOR CLASS	SUB CLASS	NEW MINIT NOSAY CITY CHITCHING	SAVINGS	SAVINGS			
1	1	1	Keep all controls free of dust.					
2	1	2	Look for loose connections and bad contacts on a regular basis.			·		
3-40.								
3	1	2	Check alignment of motors to driven equipment, align and tighten as					
		ban Tananan	necessary.					
4	1	2	Replace worn or defective motors wit motors that are sized as close to th					
			load as possible and use the highest efficiency motors available.					
			· · · · · · · · · · · · · · · · · · ·					
5	1	2	Where it is impractical to replace motors which have low loads and powe	<u> </u>				
		_	factors, use capacitors at motor terminals to correct the power facto					
			to 90%.					
6	3	3	Check for packing wear which can					
	1		cause excessive leakage. Repack to avoid excessive water wastage and shaft erosion.					
territorio de la composición de la comp			31141 6 61 03 1011.					
7	3	3	Inspect bearings and drive belts for wear and binding. Adjust, repair or					
			replace as necessary.					
8	5	1	Keep records of the operating schedule, monthly energy consumption					
			and purchase of any new equipment that affects energy consumption of					
			effieiency of the building. These records will indicate the impact of					
			energy conservation measures.					
9	5	1	Review the record books on a regular basis.					
						·		

A	BUILDING NAME Lift Station - Sanitary Sewa	age	NAME OF ORGANIZATION City of Bloomington	DATE 2/18/81	
	BUILDING ADDRESS 9510 Riverview Avenue South		ADDRESS 2215 West Old Shakopee Road		
ACT	city Bloomington	ZIP CODE 55431	CITY Bloomington	ZIP CODE 55431	
CONT	PERSON COMPLETING FORM Randy Smith	TELEPHONE 935-6901	CONTACT PERSON Arthur Jensen	TELEPHONE 881-5811	

_	0444500445		T	2012010		-	LOCAL COVERNMENT	
,	OWNERSHIP TYPE XXPublic (P)		3a.	SCHOOLS Delementary	(SCHL-ELM)	C.	LOCAL GOVERNMENT	(LOCG-OF
	Non-Profit Association	UB) (NAP)	1	O Secondary	(SCHL-SECD)		□Storage	(LOCG-ST
	- Non-Front Association	(NAF)	l	Coll. or Univ.	(SCHL-POST)		Øservice	(LOCG-SE
			1	□Vocational	(SCHL-VOCL)		Library	(LOCG-LBI
2	ULTIMATE OWNER			DEducation Agency	(SCHL-ADMN)		□Police	(LOCG-PL
-	County	(CNTY)		□ Administration	(SCHL-ADMN)		□Fire	(LOCG-FIR
	XXCity	(CITY)		DOTHER	(SCHL-OTHR)		DOTHER	(LOCG-OT
	☐Township ☐State	(TOWN) (STAT)	b.	PUBLIC CARE	(PBCR-NURS)	d.	HOSPITALS	#1 0 00 05
	Public School	(PUSC)]	Long Term Care	(PBCR-TERM)		□General □	(HOSP-GE
	Private School	(PRSC)		☐Rehab. Facility	(PBCR-RHAB)		☐Tuberculosis ☐OTHER	(HOSP TU
	□Non-Profit Association □Indian Tribe	(NPAP)		Public Health Ctr.	(PBCR-HCTR)		DOTHER	(HOSP-OT
	Cindian Tribe	(INDN)	ì	☐Res. Child Care Ctr.	(PBCR-RCCC)			

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C	Instructions: With reference to page 23 entitled Funding Information, determine if the facilities are eligible for both Federal and State funding or just Federal funding, then answer the questions correctly for the situation. This section must be signed and dated by the head of the organization
	If eligible for both Federal and State Funding: Have you received a mini-audit grant before? □ Yes XX No Have you previously applied for mini-audit funding? XX Yes □ No Do you wish to apply for mini-audit funding? □ Yes XX No
	Date March 18, 1981
	Signature. Arthur Jensen
	If eligible for Federal funding only: Have you received a mini-audit grant before? Yes No Have you previously applied for mini-audit funding? Yes No Do you wish to apply for mini-audit funding? No The 50% match for Federal funds will come from: (Use additional sheets if necessary.)
150	
DUES	Oate
FEC.	
AUC	Name
MINI-AUDIT FUNDING REQUEST	Signature
<u> </u>	

D	Check the type of energy report which was completed and submitted pr	ior to this mini-audit report
ir	☐ Elementary School Energy Report (Form No. ED-00444-02) ☐ Secondary School Energy Report (Form No. ED-00445-02) ☑ Existing Building Energy Report (Form No. EN-00041-01)	
CHECK-OFF	If an energy report has not been completed previous to this mini-audit revocational schools should use form ED-00444-02 or form ED-00445-02, debuilding energy report, form EN-00041-01.	report, one must be included with this report. Elementary, secondary, and pending on building complexity. All other buildings should use the existing
	Instructions: This section is to be completed and signed by a registered completed the State of Minnesota's Mini-Audit Procedures Course, This so are completed. All blanks must be filled in.	professional engineer or by a certified mini-auditor who has successfully section should be completed after this mini-audit report and an energy report.
	I have reviewed the energy report and/or the energy report results for this corrected any misinformation on the energy report which will be results I am not directly responsible for the day to day operations of this build	
	I have fully disclosed my financial interests relating to this mini-audit a	
	I have walked through this building and have found the recommendat maintenance changes, and low cost energy conservation measures, wh	ions listed in section I of this mini-audit report to be the operations an ich would reduce energy consumption in this building.
	I have made a rough estimate, in section G, of the range of savings whic listed in section I. I am not responsible if the actual savings resulting fr	h may result from the implementation of all of the mini-audit opportunition this mini-audit do not fall within the estimated range
		nance procedures listed in section K did not save at lea
	and other criteria. Based upon the information in section E and the information referred to i	not undergo further analysis of the renewable resources was inot)
		Witnessed by:
	Randy Smith Mini-Auditor's Name (Print or Type)	Assistant Maintenance Supervisor
ļ	Randy Sut 206	Building Organizational Nuthority (Print or Type)
	Signatura	Signature // March 18, 1981'
	Rieke Carroll Muller Assoc., Inc.	Date
	P.O. Box 130 Hopkins, MN 55343	
	612/935-6901 Phone	
	March 18, 1981	
NTS		
MINI-AUDIT STATEMENTS		
7 4		

F	NAME	POSITION	·····	ORGANIZA	ATION		
							}
	Randy Smith	Certified I	Mini-Auditor	Rieke Ca	roll Mull	ler Assoc.,	Inc
	Soott Hutobino		Taaloodadaa	Diales Come 11	М. Т. Т Л	\	. [
}	Scott Hutchins	Electrical	recnnician	Rieke Carroll	Muller P	Associates.	<u>Inc</u>
	Art Parvey			City of Bloom	ninaton		l
			····	010) 01 5100	111190011		
- _							
AUDIT							
∢ ⊢							
G	BRIEF DESCRIPTION OF GENERAL BUIL						}
}	Good, underground lift a				building type to	another)	
2	None			,	g .,,	,	1
P	STRUCTURAL COMPONENTS OF ROOF	(i.e. metal beams, wo	oden rafters, concrete)			
BUILDING	None						
35	ROOFING MATERIAL (i.e. tar and gravel,	shingles, tile)					
ωZ	None		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				
			·				
H	INSTRUCTIONS: Correctly answer the fol	lowing questions for t	he building being mir	ni-audited.			
	Is there open land adjacent to the building Yes XXNo)?					
1	Solar collectors need to be located in an un	shaded area. Is the roo	of of the building and th	e south facing wall unsha	ided between the	hours of 9 a.m. and	}
	Roof: C Yes D No None						l
ŀ	South facing Wall: Yes No No	one					
	If the roof or wall are partly shaded, what	percentage of the sur	face is unshaded?				
	% of roof unshaded % % of south facing wall unshaded	%					
	What is the overall shape of the building?						İ
	☐ square ☐ rectangle ☐ H-shaped	☐ E-shaped ☐ o	ther (specify) <u>Non</u>	e			-
	Is the roof of the building flat or pitched?						
	If pitched, what is the compass orientation	n of the ridgeline?					
	If pitched, what is the angle that the roof	-	12 0				
	•						
	Are there large obstructions on the roof s O Yes No	uch as chimneys, roo	ms for mechanical eq	uipment, ventilating unit	s, water towers.	etc?	
	What is the exterior facing material for th	e south facing wall?_	None		-		
	What percentage of the south facing wall	is glass?0	%				
	Is the building's space heating equipment Yes No None	located within or on	the building? (A no a	nswer indicates the equ	pment is in a se	parate building.)	!
	If the space heating equipment is inside t	he building, where is not DOther (specif	it located? y)				
SOLAR POTENTIAL INFORMATION	Is the building's water heating equipment Yes No None	located within the bu	uilding? (A no answer	indicates the equipment	lis in a separate	building.)	
POTE	If the water heating equipment is inside t	he building, where is ther (specify)	it located?				_
SOLA	Is the water heating system a central sys	tem does it consist o					

1			RASE PE	RIOD YEAR		· Fiscal Ye	ar	
\mid	ENERGY TYPE	ENERG'	Y USAGE	1	CONVERSION FACTOR		BTU USAGE	
-	Electricity				annes de la company de la comp			
ŀ	Fuel 1							
Fuel 2			performen (C. Namer van verschieder von 1274 (C. Namer von 1275 (C. Namer van 1275 (C. Na					
-	TOTAL							
L			20% SAVI	INGS YEAR	FISCAL YE	Fiscal Year		
L	ENERGY TYPE	ENERG	Y USAGE	CONVERS	ION FACTOR		BTU USAGE	
L	Electricity							
L	Fuel 1							
١.	Fuel 2							
						i i		
	TOTAL Instructions: This section is to be	completed by the m	ini-auditor after th	e walk-thru portion	of the mini-audit. F	irst, check the a	ppropriate boxes which	
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electr	of the percent of tot ities listed in section rical and fuel consu	al electrical and fund fund fund fund fund fund fund fu	el consumption which	h would be saved	resulting from ti	ne implementation of a	
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each category.	of the percent of tot ities listed in section rical and fuel consu- ory —	al electrical and fund fund fund fund fund fund fund fu	el consumption which coulate the range on the energy report.	th would be saved energy and cost	resulting from to	he implementation of a iltiplying the estimate	
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electricheck two boxes in each catego Range of Electrical Savings	of the percent of tot ities listed in section rical and fuel consu- ory —	al electrical and fund fund. Secondly, camption data on the	el consumption which	th would be saved energy and cost	resulting from the savings by mu	ne implementation of a littiplying the estimate specify)	
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electricheck two boxes in each catego Range of Electrical Savings	of the percent of tot ities listed in section rical and fuel consu- ery — XXO% XXS% 0% 0 5%	al electrical and fund fund fund fund fund fund fund fu	el consumption which culate the range one energy report.	th would be saved energy and cost	resulting from the savings by mu	ne implementation of a littiplying the estimate specify)	
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings —	of the percent of tot ities listed in section rical and fuel consu- ery — XXO% XXS% 0% 0 5%	al electrical and fun L. Secondly, camption data on the	el consumption which culate the range one energy report.	th would be saved energy and cost	resulting from the savings by mu	ne implementation of a littiplying the estimate specify)	
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings —	of the percent of tot ities listed in section rical and fuel consu- ery — XXO% XXS% 0% 0 5%	al electrical and fun L. Secondly, calmption data on the 10% 10% Range of E	el consumption which culate the range one energy report. 15% 2 15% 2 Electrical Savings	Annual Dolla	other (Electrical rs Spent	ne implementation of a altiplying the estimate specify)	
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and the Range	of the percent of tot tites listed in section rical and fuel consumity— XX0% XX5% 0% 5% cost savings— Annual Electrical Consumption 1109 kwh	al electrical and fun L. Secondly, calmption data on the 10% 10% Range of E Range of Savi	el consumption which culate the range of the energy report. 15% 2 15% 2 15% 2 Electrical Savings Energy ngs % Rang kwh, 0 to	Annual Dolla	other (specify) Range of Electrica Dollars Savings	
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and the same of the savings of energy and the same of the savings of energy and the same of the savings of energy and the savings of	of the percent of tot tites listed in section rical and fuel consumity — XX5% XX5% S%	al electrical and fun L. Secondly, calmption data on the second s	el consumption which culate the range of the energy report. 15% 2 15% 2 15% 2 Electrical Savings Energy ngs % Rang kwh, 0 to	Annual Dolla	other (Electrical rs Spent	specify) Range of Electrica Dollars Savings	
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and the sample of the savings — % Range lower bound — % Range	and the percent of tot tites listed in section rical and fuel consumity — XXX0% XX5% — 0% — 5% cost savings — Annual Electrical Consumption — 1109 — kwh — 1109 — kwh	al electrical and fun L. Secondly, call mption data on the second	el consumption which culate the range one energy report. 15% 2 15% 2 15% 2 Electrical Savings Energy ngs % Rang kwh, 0 to 5 kwh, 5	Annual Dolla & \$\frac{76}{6}\$	ceuting from the savings by mu other (other (certical respent) 74	specify) Range of Electrica Dollars Savings	
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and the sample of the savings — to to upper bound — 5 % x Building does not use Range	of the percent of tot tites listed in section rical and fuel consumity — XX5% XX5% S%	al electrical and fun L. Secondly, call mption data on the second	el consumption which culate the range of the energy report. 15% 2 15% 2 15% 2 Electrical Savings Fenergy ngs % Rang kwh, 0 to 5 kwh, 5	Annual Dolla & \$ 76	other (specify) Range of Electrica Dollars Savings	
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Instructions: Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor.

OPTIONAL: OPTIONAL: CLASSIFICATION **ENERGY** ENERGY ITEM NO. DATE OF IMPLEMENTATION PAST ENERGY CONSERVATION ACTIONS COST NO. MAJOR SAVINGS SUB CLASS CLASS Routine Maintenance Schedule 1 5

IEW PPORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

ITEM	CLASSIFICATION NO.			OPTIONAL: ENERGY	ENERGY	DATE OF IMPLEMENTATION	
NO.	MAJOR CLASS	SUB CLASS	NEW MINI-AUDIT OPPORTUNITIES	SAVINGS	COST SAVINGS	DATE OF IMPLEMENTATION	
1	1	1	Keep all controls free of dust.				
2	1	2	Look for loose connections and bad contacts on a regular basis.			·	
			•				
3	1	2	Replace worn or defective motors with motors that are sized as close to the				
			load as possible and use the highest efficiency motors available. Where				
			it is impractical to replace motors which have low loads and power fac-				
-			tors, use capacitors at motor termin- als to correct the power factor to				
			90%.				
4	1	3	Instantaneous power factor reading was .97. Note: Capacitors are in-				
•	 		stalled.				
 5	1	4	Shade outdoor control panel from solar radiation.				
	-	-	Solar radiation.				
6	5	1	Keep records of the operating schedul	e			
	1 -	 	monthly energy consumption and pur- chase of any new equipment that aff-				
***			of the building. These records will				
	 		indicate the impact of energy con- servation measures.				
 7	5	 	Review the record books on a regu-				
	3	1 1	lar basis.				
							
	+	 			-	 	
	-	 		 	-		
					<u> </u>		
	-	 					
	 	+					

A	BUILDING NAME Lift Station - Sanitary Sew	age	NAME OF ORGANIZATION City of Bloomington Date 2/18/81			
	BUILDING ADDRESS 11661 Palmer Road		ADDRESS 2215 West Old Shakopee Road			
ACT	cıty Bloomington	ZIP CODE 55431	сıтү Bloomington	ZIP CODE 55431		
CONT	PERSON COMPLETING FORM Randy Smith	TELEPHONE 935-6901	CONTACT PERSON Arthur Jensen	TELEPHONE 881-5811		

B		structions: For blocks 1 and 2 secribes the building type and							our categories
,	1.	OWNERSHIP TYPE XXPublic (F Onon-Profit Association	PUB) (NAP)	3a.	SCHOOLS □Elementary □Secondary □Coll. or Univ.	(SCHL-ELM) (SCHL-SECD) (SCHL-POST)	C.	LOCAL GOVERNMENT Office Ostorage Service	(LOCG-OFFC) (LOCG-STRG) (LOCG-SERV)
ODE	2.	ULTIMATE OWNER County	(CNTY) (CITY)		□Vocational □Education Agency □Administration □OTHER	(SCHL-VOCL) (SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR)		OLibrary OPolice OFire OOTHER	(LOCG-LBRY) (LOCG-PLCE) (LOCG-FIRE) (LOCG-OTHR)
BUILDING ELIGIBILITY C		☐ Township ☐ State ☐ Public School ☐ Private School ☐ Non-Profit Association ☐ Indian Tribe	(TOWN) (STAT) (PUSC) (PRSC) (NPAP) (INDN)	b.	PUBLIC CARE Nursing Home Long Term Care Rehab. Facility Public Health Ctr. Res. Child Care Ctr.	(PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-HCTR) (PBCR-RCCC)	d.	HOSPITALS General Tuberculosis OTHER	(HOSP-GENL) (HOSP TUBR) (HOSP-OTHR)

3	Instructions: With reference to page 23 entitled Funding Information, determine if the facilities are eligible for both Federal and State funding or just Federal funding, then answer the questions correctly for the situation. This section must be signed and dated by the head of the organization
	If eligible for both Federal and State Funding: Have you received a mini-audit grant before? Pes XXNo Have you previously applied for mini-audit funding? XXYes No Do you wish to apply for mini-audit funding? Pes XXNo March 18, 1981 Date
	Signature Arthur Jensen
	If eligible for Federal funding only: Have you received a mini-audit grant before? Yes No Have you previously applied for mini-audit funding? Yes No Do you wish to apply for mini-audit funding? Yes No The 50% match for Federal funds will come from: (Use additional sheets if necessary.)
2	
200	Date
FUNDING REQUEST	Name

D	Check the type of energy report which was completed and submitted prior	r to this mini-audit report.
ENERGY REPORT CHECK-OFF	☐ Elementary School Energy Report (Form No. ED-00444-02) ☐ Secondary School Energy Report (Form No. ED-00445-02) ☐ Existing Building Energy Report (Form No. EN-00041-01)	
X O X	If an energy report has not been completed previous to this mini-audit rep vocational schools should use form ED-00444-02 or form ED-00445-02, depe	ort, one must be included with this report. Elementary, secondary, and
CHEC	building energy report, form EN-00041-01.	t
E	Instructions: This section is to be completed and signed by a registered procedured the State of Minnesota's Mini-Audit Procedures Course. This sectors completed. All blanks must be filled in.	rofessional engineer or by a certified mini-auditor who has successfully ition should be completed after this mini-audit report and an energy report
	I have reviewed the energy report and/or the energy report results for this to corrected any misinformation on the energy report which will be resubmit	ouilding. I found all information contained therein to be correct OR I have ted with this mini-audit report to the Minnesota Energy Agency
	I am not directly responsible for the day to day operations of this building	
	I have fully disclosed my financial interests relating to this mini-audit and	
	I have walked through this building and have found the recommendation maintenance changes, and low cost energy conservation measures, which	n would reduce energy consumption in this building.
	I have made a rough estimate, in section G, of the range of savings which listed in section I. I am not responsible if the actual savings resulting from	n this mini-audit do not fall within the estimated range.
	Based on actual records, the energy conservation operating and maintena 20% of the building's energy consumption as specified in section I.	nce procedures listed in section K did not save at least (did, did not)
	Based upon my observation of the physical characteristics of this buildin Should not be the subject of a maxi-audit.	g and the building's major energy using systems, I recommend that this
	(should, should not) I realize that this is not a final judgement, that the State reserves the right to	make the maxi-audit funding determination based on this mini-audit report
	and other criteria. Based upon the information in section E and the information referred to in a	section F. Lecommend that this building Should not
	undergo further solar conversion analysis, and/or should not	undergo further analysis of the renewable resources waste
	wind, wood. (Circle proper resources) (should, should in	•
	In my judgement, as a mini-auditor, all of the above statements are true	and correct.
		Witnessed by:
	Randy Smith Mini-Auditor's Name (Print or Type)	Assistant Maintenance Supervisor Building Organizational Authority (Print or Type)
	Rancy SMD 206	athera Semen
	Signature(/ Rieke Carroll Muller Associates Inc	Signature March 18, 1981
	Rieke Carroll Muller Associates, Inc. Firm Name (if none, enter none)	Date
	P.O. Box 130 Hopkins, MN 55343 Address	
	612/935-6901	
	March18, 1981	
	Date	
T		
A U D I		
MINI-AUDIT		

	NAME	POSITION	ORGANIZATION
F			-
	Randy Smith	Certified Mini-Auditor	Rieke Carroll Muller Assoc., 1
M	Art Parvey	·	City of Bloomington
TEAM	Scott Hutchins	Electrical Technician	Rieke Carroll Muller Assoc.,
7	BRIEF DESCRIPTION OF GENER Good, underground	AL BUILDING CONDITION (i.e. type, and function) lift station	
Z	major changes planned wi None	THIN NEXT 15 YEARS (i.e. demolition, rehabilitation, c	onversion from one building type to another)
NEONMATION	Concrete with meta		
NE O	ROOFING MATERIAL (i.e. tar and Metal cover	gravel, shingles, tile)	
	INSTRUCTIONS: Correctly answe	r the following questions for the building being mini-a	udited.
	Is there open land adjacent to the	building?	
	Solar collectors need to be located 3 p.m.? Roof: C Yes XXNo South facing Wall: Yes C	· · · · · · · · · · · · · · · · · · ·	outh facing wall unshaded between the hours of 9 a.m. and
	If the roof or wall are partly shade % of roof unshaded % of south facing wall unshaded	d, what percentage of the surface is unshaded?	
	What is the overall shape of the b XXxsquare □ rectangle □ H	uilding? -shaped	
	ls the roof of the building flat or p 宋太flat □ pitched	itched?	
	If pitched, what is the compass or	ientation of the ridgeline?	
	If pitched, what is the angle that t	he roof makes with horizontal?°	
	Are there large obstructions on th ☐ Yes XXNo	e roof such as chimneys, rooms for mechanical equip	ment, ventilating units, water towers, etc?
İ	What is the exterior facing materi	al for the south facing wall? None	
	What percentage of the south fac	ing wall is glass?%	
	Is the building's space heating ed Yes No None	uipment located within or on the building? (A no answ	ver indicates the equipment is in a separate building.)
	☐ Ground Floor ☐ Basemen	inside the building, where is it located? t □ Roof □ Other (specify)	
NFORMATION	Is the building's water heating eq	uipment located within the building? (A no answer ind	
MATIC	If the water heating equipment is Ground Floor Basemen	inside the building, where is it located?	
FOR	Is the water heating system a cer	ntral system, does it consist of multiple units, or is it a	combination of the central and multiple units?

BASE PERIOD YEAR								Fiscal Year	
ENERGY TYPE		ENEF	cc	CONVERSION FACTOR			BTU USAGE		
	Electricity								
	Fuel 1								
	Fuel 2								
	TOTAL				an new fire to the recovery the fire fire fire fire fire fire fire fir		·		
		<u> </u>	20% SA	VINGS YEAR	and the second distribution of the second second second second second second second second second second second		Fiscal Ye	ar	
	ENERGY TYPE	ENEF	RGY USAGE	cc	ONVERSION	FACTOR		BTU USAGE	
	Electricity								
	Fuel 1								
	Fuel 2							<u> </u>	
		 	·						
I	Instructions: This section is to be o	completed by the	mini-auditor after	the walk-thru	portion of the	mini-audit. Fire	st, check the ap	opropriate boxes which	
	Instructions: This section is to be o state the roughly estimated range of the new mini-audit opportunit percentages by the annual electri	of the percent of ies listed in sec ical and fuel cor	total electrical and tion L. Secondly.	fuel consumpt calculate the i	ion which wo	uld be saved re	sulting from th	e implementation of a	
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Instructions: Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor.

OPTIONAL: OPTIONAL: CLASSIFICATION **ENERGY** ENERGY ITEM DATE OF IMPLEMENTATION PAST ENERGY CONSERVATION ACTIONS COST NO. MAJOR SAVINGS SUB **SAVINGS** CLASS CLASS Routine maintenance schedule.

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

20	,		OPTIONAL: OPTIONAL:					
ITĖM	CLASSIF	0.	NEW MINI-AUDIT OPPORTUNITIES	ENERGY	ENERGY COST	DATE OF IMPLEMENTATION		
NO.	MAJOR CLASS	SUB CLASS		SAVINGS	SAVINGS			
11	1	1	Keep all controls free of dust.					
2	1	2	Look for loose connections and bad contacts on a regular basis.					
	1 -		contacts on a regular basis.					
3	†	2	Check alignment of motors to driven					
			equipment, align and tighten as necessary.					
			Replace worn or defective motors with	1				
4	1_1_	2	motors that are sized as close to the load as possible and use the highest		<u> </u>			
			efficiency motors available.					
-5	1	2	Where it is impractical to replace motors which have low loads and					
			power factors, use capacitors at motors terminals to correct the					
			power factor to 90%.					
6	1	3	Instantaneous power factor reading was .92.					
7	3	3	Check for packing wear which can cause excessive leakage. Repack to					
			avoid excessive water wastage and shaft erosion.					
8	3	3	Inspect bearings and drive belts for wear and binding. Adjust, repair or					
			replace as necessary.					
9	5	1	Keep records of the operating schedule, monthly energy consumption					
			and purchase of any new equipment that affects energy consumption of					
		†	efficiency of the building. These					
		 	records will indicate the impact of energy conservation measures.					
		-	Review the record books on a regular	1				
10	5	$\frac{1}{1}$	basis.					
	<u> </u>							

A	BUILDING NAME Lift Station - Storm Sewage		NAME OF ORGANIZATION City of Bloomington DATE 2/18/81		
	BUILDING ADDRESS 11220 France Avenue South		ADDRESS 2215 West Old Shakopee Road		
ACT	CITY Bloomington	ZIP CODE 55431	CITY Bloomington	ZIP CODE 55431	
CONTACT	PERSON COMPLETING FORM Randy Smith	TELEPHONE 935-6901	CONTACT PERSON Arthur Jensen	TELEPHONE 881-5811	

B	ins	structions: For blocks 1 and 2	check the hov	which h	est fits the building owners	hip conditions. Ea	r bloc	k 3 determine which of the f	our categories
ט		escribes the building type and							our categories
	1	OWNERSHIP TYPE DPublic (f	PUB) (NAP)	3a.	SCHOOLS □Elementary □Secondary □Coll. or Univ.	(SCHL-ELM) (SCHL-SECD) (SCHL-POST)	C.	LOCAL GOVERNMENT Office Storage Service	(LOCG-OFFC) (LOCG-STRG) (LOCG-SERV)
ODE	2.	ULTIMATE OWNER County	(CNTY) (CITY)		□Vocational □Education Agency □Administration □OTHER	(SCHL-VOCL) (SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR)		□Library □Police □Fire □OTHER	(LOCG-LBRY) (LOCG-PLCE) (LOCG-FIRE) (LOCG-OTHR)
BUILDING ELIGIBILITY C		☐ Township ☐ State ☐ Public School ☐ Private School ☐ Non-Profit Association ☐ Indian Tribe	(TOWN) (STAT) (PUSC) (PRSC) (NPAP) (INDN)	b.	PUBLIC CARE □Nursing Home □Long Term Care □Rehab. Facility □Public Health Ctr. □Res. Child Care Ctr.	(PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-HCTR) (PBCR-RCCC)	d.	HOSPITALS General Tuberculosis OTHER	(HOSP-GENL) (HOSP TUBR) (HOSP-OTHR)

6 w	□ Res. Child Care Ctr. (PBCR-RCCC)
C	Instructions: With reference to page 23 entitled Funding Information, determine if the facilities are eligible for both Federal and State funding or just Federal funding, then answer the questions correctly for the situation. This section must be signed and dated by the head of the organization
	If eligible for both Federal and State Funding: Have you received a mini-audit grant before? Yes XXNo Have you previously applied for mini-audit funding? Yes No Do you wish to apply for mini-audit funding? Yes XXNo March 18, 1981 Date
	Signature Why White
	If eligible for Federal funding only: Have you received a mini-audit grant before? Have you previously applied for mini-audit funding? Do you wish to apply for mini-audit funding? The 50% match for Federal funds will come from: (Use additional sheets if necessary.)
ST	
MINI-AUDIT FUNDING REQUEST	Date
NGO	Name
FUND!	Signature

D								
	Check the type of energy report which was completed and submitte Elementary School Energy Report (Form No. ED-00444-02)	a prior to this mini-addit report.						
1 K	☐ Secondary School Energy Report (Form No. ED-00445-02) ☑ Existing Building Energy Report (Form No. EN-00041-01)							
CHECK-OFF	If an energy report has not been completed previous to this mini-au vocational schools should use form ED-00444-02 or form ED-00445-0 building energy report, form EN-00041-01.	dit report, one must be included with this report. Elementary, secondary, and 2, depending on building complexity. All other buildings should use the existing 1						
E	Instructions: This section is to be completed and signed by a regist completed the State of Minnesota's Mini-Audit Procedures Course. To are completed. All blanks must be filled in.	ored professional engineer or by a certified mini-auditor who has successfully his section should be completed after this mini-audit report and an energy report						
	I have reviewed the energy report and/or the energy report results to corrected any misinformation on the energy report which will be re	r this building. I found all information contained therein to be correct OR I have submitted with this mini-audit report to the Minnesota Energy Agency						
	I am not directly responsible for the day to day operations of this b							
	I have fully disclosed my financial interests relating to this mini-aud	lit and any energy conservation measures considered by this audit. Idations listed in section I of this mini-audit report to be the operations and						
	maintenance changes, and low cost energy conservation measures	which would reduce energy consumption in this building.						
	I have made a rough estimate, in section G, of the range of savings t listed in section I. I am not responsible if the actual savings resulti	which may result from the implementation of all of the mini-audit opportunities ig from this mini-audit do not fall within the estimated range.						
	Based on actual records, the energy conservation operating and ma 20% of the building's energy consumption as specified in section I.	intenance procedures listed in section K did not save at least (did. did not)						
	Based upon my observation of the physical characteristics of this I	building and the building's major energy using systems, I recommend that this						
	SNOULD NOT. be the subject of a maxi-audit. (should, should not) Lealize that this is not a final judgment, that the State consume the significant in the state consumer than its property of the state cons	ght to make the maxi-audit funding determination based on this mini-audit report						
	and other criteria.	ynt to make the maxi-audit funding determination based on this mini-audit repor						
	Based upon the information in section E and the information referred	(Snould, Snould not)						
	undergo further solar conversion analysis, and/or Should wind, wood. (Circle proper resources) (should, sh	10 t undergo further analysis of the renewable resources waste						
- (1							
l	In my judgement, as a mini-auditor, all of the above statements are	·						
	In my judgement, as a mini-auditor, all of the above statements are							
	In my judgement, as a mini-auditor, all of the above statements and	·						
		witnessed by:						
	Randy Smith Mini-Auditor's Name (Print or Type)	Witnessed by: Assistant Maintenance Supervisor Building Organizational Adhority (Print or Type)						
	Randy Smith	witnessed by: Assistant Maintenance Supervisor						
	Randy Smith Mini-Auditor's Name (Print or Type) Audit 206 Signature Rieke Carroll Muller Assoc Inc.	Witnessed by: Assistant Maintenance Supervisor Building Organizational Abthority (Print or Type) William Communication of the Communi						
	Randy Smith Mini-Auditor's Name (Print or Type) 206 Signature Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none)	Witnessed by: Assistant Maintenance Supervisor Building Organizational Adhority (Print or Type) William Communication of Signature						
	Randy Smith Mini-Auditor's Name (Print or Type) 206 Signature Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address	Witnessed by: Assistant Maintenance Supervisor Building Organizational Abthority (Print or Type) William Communication of the Communi						
	Randy Smith Mini-Auditor's Name (Print or Type) 206 Signature Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343	Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) William Granture March 18, 1981						
	Randy Smith Mini-Auditor's Name (Print or Type) 206 Signature Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone March, 18, 1981	Witnessed by: Assistant Maintenance Supervisor Building Organizational Abthority (Print or Type) William Company Signature March 18, 1981						
	Randy Smith Mini-Auditor's Name (Print or Type) 206 Signature Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone	Witnessed by: Assistant Maintenance Supervisor Building Organizational Abthority (Print or Type) William Communication of the Communi						
	Randy Smith Mini-Auditor's Name (Print or Type) 206 Signature Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone March, 18, 1981	Witnessed by: Assistant Maintenance Supervisor Building Organizational Abthority (Print or Type) William Company Signature March 18, 1981						
	Randy Smith Mini-Auditor's Name (Print or Type) 206 Signature Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone March, 18, 1981	Witnessed by: Assistant Maintenance Supervisor Building Organizational Abthority (Print or Type) William Company Signature March 18, 1981						
	Randy Smith Mini-Auditor's Name (Print or Type) 206 Signature Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone March, 18, 1981	Witnessed by: Assistant Maintenance Supervisor Building Organizational Abthority (Print or Type) William Company Signature March 18, 1981						
TIT NTS	Randy Smith Mini-Auditor's Name (Print or Type) 206 Signature Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone March, 18, 1981 Date	Witnessed by: Assistant Maintenance Supervisor Building Organizational Abthority (Print or Type) William Company Signature March 18, 1981						
MINI-AUDIT STATEMENTS	Randy Smith Mini-Auditor's Name (Print or Type) 206 Signature Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none) P.O. Box 130 Hopkins, MN 55343 Address 612/935-6901 Phone March, 18, 1981 Date	Witnessed by: Assistant Maintenance Supervisor Building Organizational Abthority (Print or Type) William Company Signature March 18, 1981						

F	NAME	POSITION	ORGANIZATION
	Randy Smith	Certified Mini-Auditor	Rieke Carroll Muller Assoc., Ind
E	Art Parvey		City of Bloomington
AUDIT	Scott Hutchins	Electrical Technician	Rieke Carroll Muller Assoc., Inc
	BRIEF DESCRIPTION OF GENER	AL BUILDING CONDITION (i.e. type, and function)	
G	Good, underground	lift station	
	MAJOR CHANGES PLANNED WI	THIN NEXT 15 YEARS (i.e. demolition, rehabilitation, cor	nversion from one building type to another)
N O	None STRUCTURAL COMPONENTS OF	ROOF (i.e. metal beams, wooden rafters, concrete)	
BUILDING INFORMATION	Concrete with meta		
FOF	ROOFING MATERIAL (i.e. tar and	gravel, shingles, tile)	
m =	Metal cover		
Н	INSTRUCTIONS: Correctly answe	r the following questions for the building being mini-aud	lited.
	Is there open land adjacent to the	building?	
		in an unshaded area. Is the roof of the building and the sour $_{ m No}$ None	th facing wall unshaded between the hours of 9 a.m. and
	If the roof or wall are partly shade % of roof unshaded % of south facing wall unshade		
	What is the overall shape of the bi	uilding? shaped	
	Is the roof of the building flat or p 奴知	itched?	
	If pitched, what is the compass or	ientation of the ridgeline?	
	If pitched, what is the angle that t	he roof makes with horizontal?	
	Are there large obstructions on the Yes KINO	e roof such as chimneys, rooms for mechanical equipme	ent, ventilating units, water towers, etc?
	What is the exterior facing materi	al for the south facing wall?None	
	What percentage of the south fac	ing wall is glass?%	
	Is the building's space heating eq	uipment located within or on the building? (A no answer	r indicates the equipment is in a separate building.)
	If the space heating equipment is Ground Floor Basemen	inside the building, where is it located? t □ Roof □ Other (specify)	
SOLAR POTENTIAL	Is the building's water heating eq	uipment located within the building? (A no answer indic	ates the equipment is in a separate building)
R POTI	If the water heating equipment is Ground Floor Basemen	inside the building, where is it located? t □ Other (specify)	
SOLA	Is the water heating system a cer	ntral system, does it consist of multiple units, or is it a co ombination	ombination of the central and multiple units?

L				BASE PERIOD YEAR				Fiscal Year				
	ENERGY TYPE	EI	NERGY USA	GE	С	ONVERSION	FAC	TOR			BTU US	AGE
	Electricity											
	Fuel 1											
	Fuel 2											
	TOTAL									,		
		- 		20% SAVI	NGS YEAI	R			F	iscal Y	ear	
	ENERGY TYPE	E	NERGY USA	GE	c	ONVERSION	FAC	TOR			вти и	SAGE
	Electricity											
	Fuel 1		and the second s							And the State of t	general and a general section of the general	
	Fuel 2											
-	TOTAL				 							
	Instructions: This section is to be											
		of the percenties listed in strict and fuel	t of total elec section L. S	trical and fue econdly, cal	ol consump culate the	ption which we range of en	ould t	oe saved re	sulting	from	the imple	nentation of
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electr	of the percenities listed in strict and fuel	t of total elec section L. S consumption	trical and fue econdly, cal	ol consump culate the	ption which we range of en	ould b	oe saved re	savings	from to by m	the implei ultiplying	nentation of the estimat
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electricheck two boxes in each catego Range of Electrical Savings —	rof the percentities listed in strictly and fuel and fuel arry —	t of total elec section L. S consumption	trical and fue econdly, cal n data on th	el consump culate the e energy r	ption which we range of end report.	ould t	e saved reand cost s	esulting savings	other	the impler ultiplying (specify)	nentation of the estimat
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electricheck two boxes in each catego Range of Electrical Savings —	rof the percenties listed in a rical and fuel rry — DI 0% X	t of total election L. S consumption	trical and fue econdly, cal n data on th	culate the e energy r	ption which we range of endeport.	ould t	De saved reand cost s	esulting savings	other	the impler ultiplying (specify)	nentation of the estimat
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electricheck two boxes in each catego Range of Electrical Savings —	rof the percenties listed in a rical and fuel rry — DI 0% X	t of total election L. S consumption	trical and fue econdly, cal n data on th	culate the e energy r	20%	ould t	De saved reand cost s	esulting savings	other	the impler ultiplying (specify)	nentation of the estimat
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electricheck two boxes in each catego Range of Electrical Savings —	rof the percenties listed in a rical and fuel rry — DI 0% X	t of total elec section L. S consumption X 5% I 5%	trical and fue econdly, cal n data on th	culate the e energy r	20%	ould t	De saved reand cost s	savings	other	the impledultiplying (specify) (specify)	nentation of the estimat
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and of	rical and fuel ry — DI 0% Cost savings - Annual Elec	t of total elec section L. S consumption X 5% I 5%	trical and fue econdly, call n data on th 10% 10% Range of El Range of	culate the e energy r	ption which we range of endeport.	ould t	□ 25% □ 25%	esultings savings	other	the impledultiplying (specify) (specify)	nentation of the estimat
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and the Range	of the percenties listed in a rical and fuel ry — DI 0% Cost savings - Annual Electronsump	t of total elec section L. S consumption 2 5% 3 5% ctrical tion	rical and fue econdly, cal in data on th 10% Range of El Range of	l consumption coulate the elements of the elements of the coulant	ption which we range of endeport.	ould t	25% 25% Dollars	esultings savings	other	the impledultiplying (specify) (specify)	nentation of the estimat
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and the Range of Electrical Savings — Nange Savings — Calculate ranges of energy and the Range Savings — Nange Saving	of the percenties listed in a rical and fuel ry — DI 0% Cost savings - Annual Electronsump	t of total elec section L. S consumption 2 5% Ctrical tion kwh =	rical and fue econdly, call n data on the 10% 10% Range of El Range of Savir	l consumption coulate the elements of the elements of the coulant	ption which we range of endeport.	ould t	25% 25% Dollars	Electric	other	(specify) Rang Do	nentation of the estimat
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and of the Range of Electrical Savings — Mange lower bound — 0 % x	of the percenties listed in rical and fuel ry — 10 0% 10 0% Cost savings - Annual Electronsump 13836	t of total election L. Sconsumption 2 5% ctrical tion kwh = kwh =	Range of El Savir	15% 15% 15% Energy	ption which we range of endeport.	x	Desayed read cost s	Electric	other	(specify) Rang Do	ge of Electric
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and the same of the savings — Calculate ranges of energy and the same of the savings — to savi	of the percenties listed in rical and fuel ry — 10 0% 10 0% Cost savings - Annual Electronsump 13836	t of total election L. Sconsumption 2 5% 1 5% ctrical tion kwh = kwh =	Range of El Savir	iconsumption culate the element of the sector of the secto	ption which we range of endeport.	x	Desayed read of the second cost is a sec	Electric Spent	other other	(specify) Rang Do \$	ge of Electric llars Savings to 28.09
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electrical section of the categoral Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and of the categoral section of the section	cost savings - Annual Electronsump 13836 Se any f	t of total election L. Sconsumption 2 5% 3 5% ctrical tion kwh = kwh =	rical and fue econdly, cal n data on th 10% 10% Range of El Range of Savir 0 691	15% 15% 15% Energy ngs kwh,	ption which we range of endeport. 20% 20% 20% Avings % Range 0 % to 5 %	x	Desaved read cost s 25% 25% Annual E Dollars \$ 56	Electric Spent	other	(specify) Rang Do \$	ge of Electric
ESTIMATION	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and of the sample of the savings — When the sample savings — When the savings — When the sample savings — When the sample savings — When the sample savings — When the sample savings — When the sample savings — When the sample savings — When the sample savings — When the sample savings — When the sample savings — When the sample savings — When the sample savings — When the sample savings — When the sample savings — When the sample savings — When the sample savings — When the sample savings — When the sample savings — When the sample savings — When the savings — When t	cost savings - Annual Electorsump 13836 Se any f Annual F Consump	t of total election L. Sconsumption 2 5% 3 5% ctrical tion kwh = kwh =	rical and fue econdly, cal n data on th 10% 10% Range of El Range of Savir 0 691	iconsumption culate the elements of the centrical Scientifical Scienti	ption which we range of endeport. 20% 20% 20% 4 Range 5 % Fings Range	x	Desaved read cost s 25% 25% Annual E Dollars \$ 56	Electric Spent	other	(specify) Rang Do R R	ge of Electrillars Saving to 28.09

K

Instructions. Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor.

OPTIONAL: OPTIONAL: CLASSIFICATION ENERGY COST SAVINGS NO. **ENERGY** ITEM DATE OF IMPLEMENTATION PAST ENERGY CONSERVATION ACTIONS MAJOR SAVINGS SUB CLASS CLASS 2 5 Routine maintenance schedule

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

OPTIONAL: OPTIONAL:

				OPTIONAL: OPTIONAL:			
ITEM) .	NEW MINI-AUDIT OPPORTUNITIES	ENERGY	ENERGY COST	DATE OF IMPLEMENTATION	
NO.	MAJOR CLASS	SUB CLASS		SAVINGS	SAVINGS		
1	1	1	Keep all controls free of dust.				
2	1		Look for loose connections and bad contacts on a regular basis.			,	
			and the second s				
3	1		Check alignment of motors to driven equipment, align and tighten as				
			necessary.				
4	1	2	Replace worn or defective motors with motors that are sized as close to the				
			load as possible and use the highest efficiency motors available.				
			·				
5	1_1_	2	Where it is impractical to replace motors which have low loads and power factors, use capacitors at motor				
<u> </u>			terminals to correct the power factor to 90%.				
6	3	3	Check for packing wear which can cause excessive leakage. Repack to				
			avoid excessive water wastage and shaft erosion.				
			Inspect bearings and drive belts for				
7	3	3	wear and binding. Adjust, repair or replace as necessary.				
			Keep records of the operating schedul	e			
8	5	1	monthly energy consumption and pur- chase of any new equipment that affec	ţs.			
			energy consumption of efficiency of the building. These records will				
			indicate the impact of energy conservation measures.				
9	5	1	Review the record books on a regular basis.				
' 							

A	BUILDING NAME		NAME OF ORGANIZATION	DATE
	<u>Lift Station-Storm Sewage</u>		City of Bloomington	2/18/81
1	BUILDING ADDRESS		ADDRESS	
	5130 West Old Shakopee Road		2215 West Old Shakopee Road	
-	CITY	ZIP CODE	CITY	ZIP CODE
N N	Bloomington	55431	Bloomington	55431
ME	PERSON COMPLETING FORM	TELEPHONE	CONTACT PERSON	TELEPHONE
ŭà	Rloomington PERSON COMPLETING FORM Randy Smith	935-6901	Arthur Jensen	881-5811

B		structions: For blocks 1 and 2 of scribes the building type and							our categories
	1	OWNERSHIP TYPE ADPublic (F UNon-Profit Association	PUB) (NAP)	3a.	SCHOOLS □Elementary □Secondary □Coll. or Univ.	(SCHL-ELM) (SCHL-SECD) (SCHL-POST)	C.	LOCAL GOVERNMENT ☐ Office ☐ Storage Ø Service	(LOCG-OFFC) (LOCG-STRG) (LOCG-SERV)
CODE	2.	ULTIMATE OWNER County City	(CNTY) (CITY)		□Vocational □Education Agency □Administration □OTHER	(SCHL-VOCL) (SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR)		□Library □Police □Fire □OTHER	(LOCG-LBRY) (LOCG-PLCE) (LOCG-FIRE) (LOCG-OTHR)
BUILDING ELIGIBILITY C		☐ Township ☐ State ☐ Public School ☐ Private School ☐ Non-Profit Association ☐ Indian Tribe	(TOWN) (STAT) (PUSC) (PRSC) (NPAP) (INDN)	b.	PUBLIC CARE Nursing Home Long Term Care Rehab. Facility Public Health Ctr. Res. Child Care Ctr.	(PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-HCTR) (PBCR-RCCC)	d.	HOSPITALS General Tuberculosis OTHER	(HOSP-GENL) (HOSP TUBH) (HOSP-OTHR)

Instructions: With reference to page 23 entitled Funding Information, determine if the facilities are eligible for both Federal and State funding or just Federal funding, then answer the questions correctly for the situation. This section must be signed and dated by the head of the organization							
deligible for both Federal and State Funding: Have you received a mini-audit grant before? Yes You No Have you previously applied for mini-audit funding? Yes ONo Do you wish to apply for mini-audit funding? Yes ONo March 18, 1981 Date							
Signature _ UTu, W knum							
t eligible for Federal funding only: Have you received a mini-audit grant before? Yes No Have you previously applied for mini-audit funding? Yes No Do you wish to apply for mini-audit funding? Yes No The 50% match for Federal funds will come from: (Use additional sheets if necessary.)							
Date							
Name							

7 -			ior to this mini-audit report
	Check the type of energy report which was compl	leted and submitted pr	
	☐ Elementary School Energy Report (Form No. E ☐ Secondary School Energy Report (Form No. E		
	☐ Existing Building Energy Report (Form No. EN	N-00041-01)	
	If an energy report has not been completed previous vocational schools should use form ED-00444-02 or building energy report, form EN-00041-01.	ous to this mini-audit r r form ED-00445-02, de	eport, one must be included with this report. Elementary, secondary, and pending on building complexity. All other buildings should use the existing
L_			
	Instructions: This section is to be completed and completed the State of Minnesota's Mini-Audit Procare completed. All blanks must be filled in.	signed by a registered cedures Course. This so	professional engineer or by a certified mini-auditor who has successfully ection should be completed after this mini-audit report and an energy report
	I have reviewed the energy report and/or the energy	gy report results for this	s building. I found all information contained therein to be correct OR I have
-			mitted with this mini-audit report to the Minnesota Energy Agency
	I am not directly responsible for the day to day o		
			nd any energy conservation measures considered by this audit. ions listed in section I of this mini-audit report to be the operations and
	maintenance changes, and low cost energy consc	ervation measures, wh	ich would reduce energy consumption in this building.
	listed in section I. I am not responsible if the actu	ual savings resulting fr	h may result from the implementation of all of the mini-audit opportunities om this mini-audit do not fall within the estimated range.
	Based on actual records, the energy conservation 20% of the building's energy consumption as spe	ecified in section I.	(dia, dia not)
	Based upon my observation of the physical chara- SNOUIG NOT be the subject of	acteristics of this build	ling and the building's major energy using systems, I recommend that the
ĺ			
	(should, should not) I realize that this is not a final judgement, that the S	State reserves the right t	
	I realize that this is not a final judgement, that the S and other criteria.		o make the maxi-audit funding determination based on this mini-audit repo
	I realize that this is not a final judgement, that the S and other criteria.		o make the maxi-audit funding determination based on this mini-audit repo
	I realize that this is not a final judgement, that the S and other criteria. Based upon the information in section E and the in undergo further solar conversion analysis, and/o	nformation referred to i	n section F, I recommend that this building Should not (should, should not)
	I realize that this is not a final judgement, that the S and other criteria. Based upon the information in section E and the in undergo further solar conversion analysis, and/o wind, wood. (Circle proper resources)	nformation referred to i or <u>Should not</u> (should, should	n section F, I recommend that this building Should not (should, should not) undergo further analysis of the renewable resources waste
	I realize that this is not a final judgement, that the S and other criteria. Based upon the information in section E and the in undergo further solar conversion analysis, and/o	nformation referred to i or <u>Should not</u> (should, should	n section F, I recommend that this building Should not (should, should not) undergo further analysis of the renewable resources waste
	I realize that this is not a final judgement, that the S and other criteria. Based upon the information in section E and the in undergo further solar conversion analysis, and/o wind, wood. (Circle proper resources)	nformation referred to i or <u>Should not</u> (should, should	n section F, I recommend that this building Should not (should, should not) undergo further analysis of the renewable resources waste
	I realize that this is not a final judgement, that the S and other criteria. Based upon the information in section E and the in undergo further solar conversion analysis, and/o wind, wood. (Circle proper resources)	nformation referred to i or <u>Should not</u> (should, should	n section F, I recommend that this building Should not (should, should not) undergo further analysis of the renewable resources waste
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	I realize that this is not a final judgement, that the S and other criteria. Based upon the information in section E and the in undergo further solar conversion analysis, and/o wind, wood. (Circle proper resources) In my judgement, as a mini-auditor, all of the ab	nformation referred to i or <u>Should not</u> (should, should	o make the maxi-audit funding determination based on this mini-audit repo
	Randy Smith Mini-Auditor's Name (Print or Type)	nformation referred to it or <u>Should not</u> (should, should	o make the maxi-audit funding determination based on this mini-audit report section F, I recommend that this building Should not (should, should not) undergo further analysis of the renewable resources wasted and correct. Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type)
	Randy Smith Mini-Auditor's Name (Print or Type) Rieke Carroll Muller Firm Name (if none, enter none)	nformation referred to it or <u>Should not</u> (should, should	o make the maxi-audit funding determination based on this mini-audit repo
	Randy Smith Mini-Auditor's Name (Print or Type) Rieke Carroll Muller Ricke Carroll Muller Firm Name (if none, enter none) P.O. Box 130	nformation referred to it or <u>Should not</u> (should, should	o make the maxi-audit funding determination based on this mini-audit repo
	Randy Smith Mini-auditor's Name (Print or Type) Rieke Carroll Muller Ricke Carroll Muller Firm Name (if none, enter none) P.O. Box 130 Address	nformation referred to it or <u>Should not</u> (should, should	o make the maxi-audit funding determination based on this mini-audit repo
	Randy Smith Mini-Auditor's Name (Print or Type) Rieke Carroll Muller Firm Name (if none, enter none) P.O. Box 130 Address 612 935-6901 Phone	nformation referred to it or <u>Should not</u> (should, should	o make the maxi-audit funding determination based on this mini-audit repo
	Randy Smith Mini-Auditor's Name (Print or Type) Rieke Carroll Muller Firm Name (if none, enter none) P.O. Box 130 Address 612 935-6901 Phone March 18, 1981	nformation referred to it or <u>Should not</u> (should, should	o make the maxi-audit funding determination based on this mini-audit repo
	Randy Smith Mini-Auditor's Name (Print or Type) Rieke Carroll Muller Firm Name (if none, enter none) P.O. Box 130 Address 612 935-6901 Phone	nformation referred to it or <u>Should not</u> (should, should	o make the maxi-audit funding determination based on this mini-audit repo
	Randy Smith Mini-Auditor's Name (Print or Type) Rieke Carroll Muller Firm Name (if none, enter none) P.O. Box 130 Address 612 935-6901 Phone March 18, 1981	nformation referred to it or <u>Should not</u> (should, should	o make the maxi-audit funding determination based on this mini-audit repo
	Randy Smith Mini-Auditor's Name (Print or Type) Rieke Carroll Muller Firm Name (if none, enter none) P.O. Box 130 Address 612 935-6901 Phone March 18, 1981	nformation referred to it or <u>Should not</u> (should, should	o make the maxi-audit funding determination based on this mini-audit report nection F, I recommend that this building Should not (should, should not) undergo further analysis of the renewable resources waste and correct. Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Whith Waste March 18, 1981
	Randy Smith Mini-Auditor's Name (Print or Type) Rieke Carroll Muller Firm Name (if none, enter none) P.O. Box 130 Address 612 935-6901 Phone March 18, 1981	nformation referred to it or <u>Should not</u> (should, should	o make the maxi-audit funding determination based on this mini-audit repo
	Randy Smith Mini-Auditor's Name (Print or Type) Rieke Carroll Muller Firm Name (if none, enter none) P.O. Box 130 Address 612 935-6901 Phone March 18, 1981	nformation referred to it or <u>Should not</u> (should, should	o make the maxi-audit funding determination based on this mini-audit report nection F. I recommend that this building Should not (should, should not) undergo further analysis of the renewable resources waste and correct. Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature March 18, 1981
2.121	Randy Smith Mini-Auditor's Name (Print or Type) Rieke Carroll Muller Firm Name (if none, enter none) P.O. Box 130 Address 612 935-6901 Phone March 18, 1981	nformation referred to it or <u>Should not</u> (should, should	o make the maxi-audit funding determination based on this mini-audit report nection F. I recommend that this building Should not (should, should not) undergo further analysis of the renewable resources waste and correct. Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature March 18, 1981
STATEMENTS	Randy Smith Mini-Auditor's Name (Print or Type) Rieke Carroll Muller Firm Name (if none, enter none) P.O. Box 130 Address 612 935-6901 Phone March 18, 1981	nformation referred to it or <u>Should not</u> (should, should	o make the maxi-audit funding determination based on this mini-audit report in section F. I recommend that this building Should not (should, should not) undergo further analysis of the renewable resources wasted and correct. Witnessed by: Assistant Maintenance Supervisor Building Organizational Authority (Print or Type) Signature March 18, 1981

_			BASE PE	RIOD YEAR	4		Fiscal Y	/ear	
	ENERGY TYPE	ENERG	Y USAGE	CC	ONVERSION F	ACTOR		BTU US	AGE
	Electricity		de versi delega de grapo, porte del del delega de perfecto de período de período de grapo de del del del del d						
	Fuel 1					e engan en en en en en en en en en en en en en			
	Fuel 2								
	TOTAL	<u> </u>					·		
			20% SAV	INGS YEAR			Fiscal	Year	
	ENERGY TYPE	ENERG	Y USAGE	C	ONVERSION F	FACTOR		BTU U	SAGE
_	Electricity								
_	Fuel 1								
	Fuel 2		a various APP and the description of the second processing and processing and processing and processing and processing and the second processing and						
-	TOTAL								
	Instructions: This section is to be state the roughly estimated range	of the percent of to	tal electrical and fu	el consump	tion which wou	uld be saved re	sulting from	the impler	nentation of
	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electr Check two boxes in each catego	of the percent of to ties listed in section rical and fuel consi	tal electrical and fu on L. Secondly, ca umption data on th	iel consump ilculate the ne energy re	tion which wou range of energe port.	ald be saved regy and cost s	esulting from savings by n	n the impler nultiplying	nentation of the estimate
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	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and o	ry — \$\frac{1}{2} 0\% \$\frac{1}{2} 5\%\$ \text{Cost savings} - \text{Annual Electrica}	tal electrical and fund. Secondly, caumption data on the 10% 10% Range of E	el consump elculate the he energy re 15% 15% Electrical Sa f Energy	tion which wourange of energiport. 20% 20%	□ 25% Annual E	outling from avings by n	r (specify) r (specify) Rang	nentation of the estimate
	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and o	ry — \$\frac{1}{2} 0\% \$\frac{1}{2} 0\% \$\frac{1}{2} 5\%\$ \text{Cost savings} - Annual Electrica Consumption	tal electrical and fund. Secondly, caumption data on the 10% 10% Range of E Range o	lel consump liculate the the energy re 15% 15% 15%	20% 20% Range	25% Annual E Dollars	outling from avings by n	r (specify) r (specify) Rang	nentation of the estimate
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	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and o	ry — \$\frac{1}{2} 0\% \$\frac{1}{2} 0\% \$\frac{1}{2} 5\%\$ \text{Cost savings} - Annual Electrica Consumption	tal electrical and fund. Secondly, caumption data on the sumption data on the second s	lel consump liculate the the energy re 15% 15% 15%	tion which wourange of energiport. 20% 20% 20% vings Kange	25% 25% Annual E Dollars	outling from avings by n	r (specify) r (specify) Rang Do	nentation of the estimate
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	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and other series of energy and to the series of the savings — We have series of the savings — We have series of energy and the savings — We have series of the savings —	of the percent of to ties listed in secticical and fuel consumption 33608 kw ISE any fuel Annual Fuel	tal electrical and fund. Secondly, caumption data on the sumption data on the second s	In the consumption of Fuel Saviate that the cons	tion which wourange of energiport. 20% 20% 20% vings Kange 0 % to 5 % ngs Range	D 25% D 25% D 25% Annual E Dollars S 107	osulting from avings by no other other other officers of the sector of t	r (specify) r (specify) Rang Do \$ \$	nentation of the estimate ge of Electric llars Savings ()

Instructions: Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor.

				OPTIONAL:	OPTIONAL: OPTIONAL:			
ITEM NO.	CLASSIFICATION NO. MAJOR SUB		PAST ENERGY CONSERVATION ACTIONS	ENERGY SAVINGS	ENERGY COST	DATE OF IMPLEMENTATION		
	CLASS	CLASS			SAVINGS			
1	5	2	Routine maintenance schedule					
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Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

20			tion of the mini-addit report should be completed by the mini-addit	OPTIONAL: OPTIONAL:				
ITEM			NEW MINI-AUDIT OPPORTUNITIES		ENERGY COST	DATE OF IMPLEMENTATION		
NO.	MAJOR CLASS	SUB CLASS		SAVINGS	SAVINGS			
1	1	1	Keep all controls free of dust					
2	1	2	Look for loose connections and bad					
		-	contacts on a regular bases.					
			Check alignment of motors to driven					
3	- - 	2	equipment, align and tighten as neces	sary				
			Replace worn or defective motors with	`				
4	1	2	motors that are sized as close to the					
			load as possible and use the highest efficiency motors available.					
			,					
5	1	2	Where it is impractical to replace motors which have low loads and power					
			factors, use capacitors at motor ter-	-				
-1			minals to correct the power factor to 90%					
6	3	1	65 ⁰ F maximum occupied, 60 ⁰ F maximum.					
6	3	3	Check for packing wear which can causexcessive water wastage and shaft	е				
			erosion.					
7	3	3	Inspect bearings and drive belts for wear and binding. Adjust, repair or					
			replace as necessary.					
7								
8	5	1	Keep records of the operations sche- dule, monthly energy consumption and					
			purchase of any new equipment that affects energy consumption of efficients	нсу				
			of the building. These records will indicate the impact of energy conservation measures.	<u> </u>				
		_	per vacion measures.					

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

ITEM	CLASSIFICATION NO.			OPTIONAL:	ENERGY	DATE OF IMPLEMENTATION	
NO.	MAJOR CLASS	SUB CLASS	NEW MINI-AUDIT OPPORTUNITIES	SAVINGS	COST SAVINGS	DATE OF IMPLEMENTATION	
9	5	1	Review the record books on a regular basis.				
10	7	4	Inspect electrical contacts and work ing parts of relays and maintain in good working order.	_			
11	7	4	Check heater elements for cleanlines Replace as necessary.	S .			
12	7	4	Check controls for proper operation. Adjust as necessary.				
13	7	4	Periodically tighten all electrical- mechanical connections to prevent arcing and burning due to metal flow or loosening of terminal bolts or				
			lugs.				

A	Building NAME Metering Station - Water	المحمدة المحمد ا	NAME OF ORGANIZATION City of Bloomington	3-18-81
	BUILDING ADDRESS 6000 Knox Avenue South		ADDRESS 2215 West Old Shakopee Road	
ACT	cıty Bloomington	ZIP CODE 55431	CITY Bloomington	ZIP CODE 55431
CONTACT	PERSON COMPLETING FORM Randy Smith	TELEPHONE 935-6901	contact person Arthur Jensen	TELEPHONE 881-5811

		г				10011 001501115	
1.	OWNERSHIP TYPE Public (PUB) Non-Profit Association (NAP)	3a.	SCHOOLS □ Elementary □ Secondary □ Coll. or Univ. □ Vocational	(SCHL-ELM) (SCHL-SECD) (SCHL-POST)	C.	LOCAL GOVERNMENT □Office □Storage Service □Library	(LOCG-OFFO (LOCG-STRO (LOCG-SER) (LOCG-LBR)
2.	ULTIMATE OWNER County (CNTY) City (CITY)		☐ Vocational ☐ Education Agency ☐ Administration ☐ OTHER	(SCHL-VOCL) (SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR)		□Police □Fire □OTHER	(LOCG-PLCE (LOCG-FIRE (LOCG-OTH
	☐ Township (TOWN) ☐ State (STAT) ☐ Public School (PUSC) ☐ Private School (PRSC) ☐ Non-Profit Association (NPAP) ☐ Indian Tribe (INDN)	b.	PUBLIC CARE Nursing Home Long Term Care Rehab. Facility Public Health Ctr. Res. Child Care Ctr.	(PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-HCTR) (PBCR-RCCC)	d.	HOSPITALS General Tuberculosis OTHER	(HOSP-GEN (HOSP-TUBI (HOSP-OTH
l j	Instructions: With reference to page 23 entitle just Federal funding, then answer the question	d Fundir	ng Information, determine	if the facilities are ection must be sig	eligit ned a	ole for both Federal and S nd dated by the head of th	tate funding o
	If eligible for both Federal and State Funding. Have you received a mini-audit grant before	? 🗆 Y					
	Have you previously applied for mini-audit Do you wish to apply for mini-audit funding	unding?	⊠Yes □ No				
(Date:March 18, 1981		le d'ille en en anna de le annon e que premien e que qu'il le alleman e qu'ille				
1	Name:Arthur Jeasen						
	Signature: <u>Uthur Kroun</u>	-					
 	If eligible for Federal funding only: Have you received a mini-audit grant before Have you previously applied for mini-audit Do you wish to apply for mini-audit fundin The 50% match for Federal funds will come	funding? a? 🔲 \	Yes No	cessary.)			
	Date:						

D	Check the type of energy report which was completed and submitted pri	or to this mini-audit report.
EPORT	☐ Elementary School Energy Report (Form No. ED-00444-02)☐ Secondary School Energy Report (Form No. ED-00445-02)☐ Existing Building Energy Report (Form No. EN-00041-01)	
ENERGY REPORT CHECK-OFF	If an energy report has not been completed previous to this mini-audit revocational schools should use form ED-00444-02 or form ED-00445-02, deputiding energy report, form EN-00041-01.	eport, one must be included with this report. Elementary, secondary, and pending on building complexity. All other buildings should use the existing
	Instructions: This section is to be completed and signed by a registered completed the State of Minnesota's Mini-Audit Procedures Course. This se are completed. All blanks must be filled in.	professional engineer or by a certified mini-auditor who has successfully ction should be completed after this mini-audit report and an energy report
-	I have reviewed the energy report and/or the energy report results for this corrected any misinformation on the energy report which will be resubm	building. I found all information contained therein to be correct OR I have nitted with this mini-audit report to the Minnesota Energy Agency.
	I am not directly responsible for the day to day operations of this building	
	I have fully disclosed my financial interests relating to this mini-audit an	
	I have walked through this building and have found the recommendation maintenance changes, and low cost energy conservation measures, which	ons listed in section I of this mini-audit report to be the operations and
	listed in section I. i am not responsible if the actual savings resulting fro	
	Based on actual records, the energy conservation operating and mainten 20% of the building's energy consumption as specified in section I.	ance procedures listed in section K did not save at least (did, did not)
	(should, should not)	ing and the building's major energy using systems, I recommend that this
	and other criteria.	o make the maxi-audit funding determination based on this mini-audit report
	Based upon the information in section E and the information referred to in	section F, I recommend that this building should not
	undergo further solar conversion analysis, and/or should not wind, wood. (Circle proper resources) (should, should	(should, should not) undergo further analysis of the renewable resources — waste.
	In my judgement, as a mini-auditor, all of the above statements are true	e and correct.
		Witnessed by:
	D 1 0 111	Assistant Maintenance Supervisor
	Randy Smith Mini-Auditor's Name (Print or Type)	Building Organizational Authority Print or Type)
	Randy Swt 206	Cuthen W Jenney
	Signature	Signature
	Rieke Carroll Muller Associates, Inc. Firm Name (if none, enter none)	March 18, 1981 /
	P.O. Box 130, Hopkins, MN 55434	Date
	Address	
	612/935-6901	
	Phone	
	March 18, 1981	
2		,

F	NAME POSITION ORGANIZATION
	Randy Smith Certified Mini-Auditor Rieke Carroll Muller Associates, Ir
	Scott Hutchins Certified Technical Engineer Rieke Carroll Muller Associates, Ir
	Art Parvey City of Bloomington
<u> </u>	
AUDIT	
G	BRIEF DESCRIPTION OF GENERAL BUILDING CONDITION (i.e. type, and function) Good, underground metering station
_	MAJOR CHANGES PLANNED WITHIN NEXT 15 YEARS (i.e. demolition, rehabilitation, conversion from one building type to another) None
BUILDING INFORMATION	STRUCTURAL COMPONENTS OF ROOF (i.e. metal beams, wooden rafters, concrete)
ILDIN MRO	Concrete, Manhole Cover ROOFING MATERIAL (i.e. tar and gravel, shingles, tile)
SZ	Asphalt Road
H	INSTRUCTIONS: Correctly answer the following questions for the building being mini-audited.
	Is there open land adjacent to the building? ☐ Yes
	Solar collectors need to be located in an unshaded area. Is the roof of the building and the south facing wall unshaded between the hours of 9 a.m. and 3 p.m.? Roof: \$\mathbb{K}\$ Yes \$\Boxed\$ No South facing Wall: \$\Boxed\$ Yes \$\Boxed\$ No None
	If the roof or wall are partly shaded, what percentage of the surface is unshaded? % of roof unshaded
	What is the overall shape of the building? ☐ square ☑ rectangle ☐ H-shaped ☐ E-shaped ☐ other (specify)
	Is the roof of the building flat or pitched? I
	If pitched, what is the compass orientation of the ridgeline?
	If pitched, what is the angle that the roof makes with horizontal?
	Are there large obstructions on the roof such as chimneys, rooms for mechanical equipment, ventilating units, water towers, etc? ☐ Yes No
	What is the exterior facing material for the south facing wall? None
	What percentage of the south facing wall is glass?
	Is the building's space heating equipment located within or on the building? (A no answer indicates the equipment is in a separate building.) ☑ Yes □ No
	If the space heating equipment is inside the building, where is it located? Ground Floor Basement Roof B Other (specify)
AIFN	Is the building's water heating equipment located within the building? (A no answer indicates the equipment is in a separate building.) Yes INO NONE
SOLAR POTENTIAL	If the water heating equipment is inside the building, where is it located? ☐ Ground Floor ☐ Basement ☐ Other (specify)
SOLAF	Is the water heating system a central system, does it consist of multiple units, or is it a combination of the central and multiple units? □ Central □ Multiple □ Combination

L			BASE PE	RIOD YEAR	l		Fiscal Yea	ar
	ENERGY TYPE	ENER	GY USAGE	cc	NVERSION F	ACTOR		BTU USAGE
	Electricity				The second second second second second second second second second second second second second second second se			
	Fuel 1					······································		
	Fuel 2							
	TOTAL							
			20% SAVI	NGS YEAR	**************************************		Fiscal Ye	ar
	ENERGY TYPE	ENER	GY USAGE	co	ONVERSION F	ACTOR		BTU USAGE
	Electricity							
	Fuel 1							
	Fuel 2							- Adamsky kape - Spiriter versick in 1999 by alle Wille all Addition (1999) by the spiriter of
-	TOTAL			 			1	
	Instructions: This section is to be o	of the percent of to	otal electrical and fu	el consumpt	ion which wou	ld be saved re	sulting from th	e implementation of
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electri Check two boxes in each categor	of the percent of to ties listed in secti ical and fuel cons y —	otal electrical and fu on L. Secondly, ca sumption data on th	el consumpt lculate the r le energy re	tion which wou range of energ port.	ld be saved re	sulting from th avings by mu	e implementation of Itiplying the estimati
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings —	of the percent of to ties listed in secti ical and fuel cons	otal electrical and fur on L. Secondly, ca sumption data on the	el consumpt	ion which wou	ld be saved re	sulting from the avings by mu	ne implementation of litiplying the estimate state and the estimate specify)
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings —	of the percent of to ties listed in secti ical and fuel cons yy — \$20 0% \$20 5%	otal electrical and fuon L. Secondly, casumption data on the	el consumpt iculate the i e energy re	ion which wou range of energ port. 20%	Id be saved re by and cost s	sulting from the avings by mu	ne implementation of litiplying the estimate state and the
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and compared to the savings of the savings — Range of Electrical Savings — Calculate ranges of energy and compared to the savings — Range — % Range	of the percent of to ties listed in secti ical and fuel cons yy — \$20 0% \$20 5%	cotal electrical and fure on L. Secondly, calcumption data on the sumption data on the sum of	el consumpticulate the ree energy re 15% 15% 15% Energy ngs kwh	ion which wou range of energe port. 20% 20% 20% Range 0 % x	Id be saved re y and cost s □ 25% □ 25% □ 25% Annual E Dollars	sulting from the avings by mu other (: other (:	Range of Electric Dollars Savings
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and co	of the percent of to ties listed in section is and fuel consequence. Y — M 0%	cotal electrical and furon L. Secondly, cast sumption data on the second	el consumpticulate the ree energy re 15% 15% 15% Energy ngs kwh	ion which wou range of energ port. 20% 20% Range	Dollars	sulting from the avings by mu other (: other (:	specify) Range of Electric Dollars Savings
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and compared to the sample of the sampl	of the percent of toties listed in sectical and fuel consider of the consider of the consider of the consumption of the consump	reported electrical and fure on L. Secondly, cast the second seco	el consumpticulate the release energy re 15% 15% 15% Energy ngs kwh, kwh, of Fuel Savir	ion which wou range of energy port. 20% 20% 20% rings Range 0 % x to 5 % x	Dollars	sulting from the avings by mu other (some control of the control	Range of Electric Dollars Savings \$ \frac{0}{13.86}\$ Range of Fue
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and control of the savings of t	of the percent of to ties listed in section listed in section ical and fuel consider in section ical and fuel consider ical and fuel consider ical and fuel consumption 5737 kw 5737 kw see any fue Annual Fuel	reported electrical and fure on L. Secondly, cast the second seco	el consumpticulate the release energy re 15% 15% 15% Energy ngs kwh, kwh, of Fuel Savir	ion which wourange of energy port. 20% 20% 20% tings Kange 0 % x to 5 % x	Id be saved re ly and cost s 25% 25% Annual E Dollars \$2 Annual Dollars	sulting from the avings by mu other (some control of the control	Range of Electric Dollars Savings Range of Fuel Dollars Savings

Instructions. Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor. OPTIONAL: OPTIONAL: CLASSIFICATION **ENERGY** NO. ENERGY ITEM DATE OF IMPLEMENTATION PAST ENERGY CONSERVATION ACTIONS COST MAJOR SAVINGS NO. SUB SAVINGS CLASS **CLASS** 5 2 Routine Maintenance Schudule. 1

Note Reproduce this page as necessary

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

20	Implemented. This section of the mini-audit report should be completed by the mini-audit		OPTIONAL: OPTIONAL:				
ITEM			NEW MINI-AUDIT OPPORTUNITIES	ENERGY	ENERGY COST	DATE OF IMPLEMENTATION	
NO.	MAJOR CLASS	SUB CLASS		SAVINGS	SAVINGS		
1	1	1	Keep all controls free of dust.				
2	1	2	Look for loose connections and bad contacts on a regular basis.				
3	1	2	contacts on a regular basis. Lubricate motors to reduce wear and excessive torque.			·	
4	1	2	Check alignment of motors to driven				
			equipment, align and tighten as necessary.				
5	1	2	Replace worn or defective motors				
			with motors that are sized as close to the load as possible and use the				
			highest efficiency motors available				
6	1	2	Where it is impractical to replace				
			motors which have low loads and pow factors, use capacitators at motor	er			
			terminals to correct the power factor to 90%.				
7	5	1	Keep records of the operating sched energy consumption and purchase of	ule,			
		1	any new equipment that affects ener consumption of efficiency of the	ду			
			building. These records will indic the impact of energy conservation	ate			
			measures.				
8	5	1	Review the record books on a regula	Y			
			basis.				
9	7	4	Inspect electrical contacts and wor	<u>k</u>			
		ļ	ing parts of relays and maintain a good working order				
10	7	4	Check heater elements for cleanline Replace as necessary.	ss.			
			neprace as necessary.	<u> </u>			
1	1 7	4	Check controls for proper operation Adjust as necessary.	1.			
		-	najust as necessary.				
	2 7	4	Periodically tighten all electrical mechanical connections to prevent	+			
			arcing and burning due to metal flo	ow .			

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

ITEM	CLASSIFICATION NO.			OPTIONAL:		
NO.	MAJOR CLASS	SUB CLASS	NEW MINI-AUDIT OPPORTUNITIES	ENERGY SAVINGS	ENERGY COST SAVINGS	DATE OF IMPLEMENTATION
12	7	4	(contd) or loosening of terminal bolts or lugs.			
			bolts or lugs.			
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A	BUILDING NAME Metering Station - Water		NAME OF ORGANIZATION City of Bloomington	DATE 3-18-81
	BUILDING ADDRESS 6001 Oliver Avenue South		ADDRESS 2215 West Old Shakopee Road	
, , ,	CITY Bloomington	ZIP CODE 55431	CITY Bloomington	ZIP CODE 55431
CONTACT	PERSON COMPLETING FORM Randy Smith	TELEPHONE 935-6901	contact person Arthur Jensen	TELEPHONE 881-5811

В	Instructions: For blocks 1 and 2 check the box v describes the building type and then within the						our categories
	1. OWNERSHIP TYPE 「Public (PUB) □Non-Profit Association (NAP)	3a.	SCHOOLS Elementary Secondary Coll. or Univ.	(SCHL-ELM) (SCHL-SECD) (SCHL-POST)	C.	LOCAL GOVERNMENT Office Ostorage Service Ulibrary	(LOCG-OFFC) (LOCG-STRG) (LOCG-SERV)
CODE	2. ULTIMATE OWNER □County (CNTY) (CITY) □Township (TOWN)		□Vocational □Education Agency □Administration □OTHER	(SCHL-VOCL) (SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR)		Delibrary Delice Fire Dother	(LOCG-LBRY) (LOCG-PLCE) (LOCG-FIRE) (LOCG-OTHR)
BUILDING ELIGIBILITY CODE	☐ State (STAT) ☐ Public School (PUSC) ☐ Private School (PRSC) ☐ Non-Profit Association (NPAP) ☐ Indian Tribe (INDN)	b.	PUBLIC CARE Nursing Home Long Term Care Rehab. Facility Public Health Ctr. Res. Child Care Ctr.	(PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-HCTR) (PBCR-RCCC)	d.	HOSPITALS General Tuberculosis OTHER	(HOSP-GENL) (HOSP-TUBR) (HOSP-OTHR)
C	Instructions: With reference to page 23 entitled just Federal funding, then answer the questions	Fundi	ng Information, determine tly for the situation. This s	if the facilities are section must be sig	eligit Ined a	ole for both Federal and St and dated by the head of the	ate funding or organization.
	If eligible for both Federal and State Funding: Have you received a mini-audit grant before? Have you previously applied for mini-audit fu Do you wish to apply for mini-audit funding?	nding?	X Yes □ No				
	Date:March 18, 1981		55 — NO				
	Name: Arthur Jensen						
	Signature: (UT/U1) Cruin						
	If eligible for Federal funding only: Have you received a mini-audit grant before? Have you previously applied for mini-audit fu Do you wish to apply for mini-audit funding The 50% match for Federal funds will come f	inding?	Yes No	cessary.)			
			•				
EST							
REGU	Date:	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~					
MINI-AUDIT FUNDING REQUEST	Name:	-					
FUNC	Signature:						

-	U
	ENERGY REPORT CHECK-OFF
_	
	E

If an energy report has not been completed previous to this mini-audit vocational schools should use form ED-00444-02 or form ED-00445-02, d building energy report, form EN-00041-01.	report, one must be included with this report. Elementary, secondary, and depending on building complexity. All other buildings should use the existing
Instructions: This section is to be completed and signed by a registerer completed the State of Minnesota's Mini-Audit Procedures Course. This are completed. All blanks must be filled in.	d professional engineer or by a certified mini-auditor who has successfully section should be completed after this mini-audit report and an energy report
I have reviewed the energy report and/or the energy report results for the corrected any misinformation on the energy report which will be result	nis building. I found all information contained therein to be correct OR I have bmitted with this mini-audit report to the Minnesota Energy Agency.
I am not directly responsible for the day to day operations of this build	ding being audited.
I have fully disclosed my financial interests relating to this mini-audit a	and any energy conservation measures considered by this audit.
I have walked through this building and have found the recommenda maintenance changes, and low cost energy conservation measures, wi	ations listed in section I of this mini-audit report to be the operations and hich would reduce energy consumption in this building.
I have made a rough estimate, in section G, of the range of savings whit listed in section I. i am not responsible if the actual savings resulting f	
Based on actual records, the energy conservation operating and mainte 20% of the building's energy consumption as specified in section I.	enance procedures listed in section K <u>did not</u> save at leas (did, did not)
(should, should not)	lding and the building's major energy using systems, I recommend that this to make the maxi-audit funding determination based on this mini-audit repor
Based upon the information in section E and the information referred to	in section F, I recommend that this building should not (should, should not)
wind, wood. (Circle proper resources) (should, should in my judgement, as a mini-auditor, all of the above statements are tri	
	Witnessed by:
Randy Smith	Assistant Maintenance Supervisor
Mini-Auditor's Name (Print or Type) Ranold Swall 206	Building Organizational Authority (Print or Type)
Signature Constant Mullion Association Trans	Signature
Rieke Carroll Muller Associates, Inc. Firm Name (if none, enter none)	March 18, 1981
P.O. Box 130, Hopkins, MN 55343	
Address	•
612/935-6901 Phone	
Phone	•
	•
March 18, 1981 Date	
March 18, 1981	•
March 18, 1981	

Check the type of energy report which was completed and submitted prior to this mini-audit report.

☐ Elementary School Energy Report (Form No. ED-00444-02)
☐ Secondary School Energy Report (Form No. ED-00445-02)
☑ Existing Building Energy Report (Form No. EN-00041-01)

F	NAME	POSITION	ORGANIZATION
	Randy Smith	Certified Mini-Auditor	Rieke Carroll Muller Associates, In
	Scott Hutchins	Certified Engineering 1	ech. Rieke Carroll Muller Associates, In
	Art Parvey		City of Bloomington
± ₃			
TEAM			
G	BRIEF DESCRIPTION OF GE Good, undergro	NERAL BUILDING CONDITION (i.e. type, and und metering station	function)
z	None		abilitation, conversion from one building type to another)
BUILDING	concrete, manh		concrete)
BUILD	ROOFING MATERIAL (i.e. tar Asphalt Road	and gravel, shingles, tile)	
	INSTRUCTIONS: Correctly a	nswer the following questions for the building	
	Is there open land adjacent to □ Yes Ø No		reing mini-audited.
			ng and the south facing wall unshaded between the hours of 9 a.m. and
	If the roof or wall are partly s % of roof unshaded % of south facing wall unsh		aded?
	What is the overall shape of t ☐ square ☐ rectangle	he building? □ H-shaped □ E-shaped □ other (specify)	
	Is the roof of the building flat		
		ss orientation of the ridgeline?	
	If pitched, what is the angle t	hat the roof makes with horizontal?	
	Are there large obstructions o	on the roof such as chimneys, rooms for mech	anical equipment, ventilating units, water towers, etc?
	What is the exterior facing m	aterial for the south facing wall?	None
	What percentage of the south	i facing wall is glass? $\underline{}$ %	
	Is the building's space heatin ☑ Yes ☐ No	g equipment located within or on the building	(A no answer indicates the equipment is in a separate building.)
	If the space heating equipme ☐ Ground Floor ☐ Base	nt is inside the building, where is it located? ment □ Roof 図 Other (specify)	underground
ENTIAL	ls the building's water heatin □ Yes □ No NONE	g equipment located within the building? (A ne	o answer indicates the equipment is in a separate building.)
SOLAR POTENTIAL INFORMATION	If the water heating equipme	nt is inside the building, where is it located? ment Other (specify)	
SOLA		Central system, does it consist of multiple using	ts, or is it a combination of the central and multiple units?

_				BASE I	PERIOD YEA	AR .		Fiscal	Year		
	ENERGY TYPE		ENERGY USAGE			CONVERSION FACTOR			BTU USAGE		
	Electricity			•			a tid gang gaine filian and Sagagaman and a 1990 at a tid				
	Fuel 1								and an experience of the second second second second second second second second second second second second s		
	Fuel 2		e-man, garaga pananta panganan				ALL THE PARTY OF T				
	TOTAL										
-				20% SA	VINGS YEA	R		Fiscal	l Year		
	ENERGY TYPE		ENERGY U	SAGE	(CONVERSION	FACTOR		BTU USAGE		
	Electricity										
	Fuel 1										
	Fuel 2						The state of the s				
_	TOTAL										
Γ	Instructions: This section is to b	e completed	by the mini-	auditor after	the walk-thri	u portion of the	mini-audit. Firs	it, check th	ne appropriate boxes who		
	Instructions. This section is to be state the roughly estimated randof the new mini-audit opportupercentages by the annual electric chack two boxes in each cate.	ge of the perdunities listed ectrical and fu	cent of total e in section L	lectrical and . Secondly, o	fuel consum calculate the	ption which wo a range of ene	uld be saved re-	sulting from	m the implementation of		
	state the roughly estimated ranged the new mini-audit opportune percentages by the annual electhics. Check two boxes in each categories.	ge of the percunities listed ectrical and formal gory —	cent of total e in section L uel consump	lectrical and . Secondly, o tion data on	fuel consum calculate the the energy	ption which wo a range of ene report.	uld be saved re rgy and cost s	sulting from	m the implementation of multiplying the estimat		
	state the roughly estimated ran- of the new mini-audit opportu percentages by the annual ele	ge of the percunities listed ectrical and formal gory —	cent of total e in section L	lectrical and Secondly, a tion data on	fuel consum calculate the the energy	ption which wo a range of ene report.	uld be saved rergy and cost s	sulting from	er (specify)		
	state the roughly estimated range of the new mini-audit opportungercentages by the annual electrical two boxes in each category. Range of Electrical Savings —	ge of the percunities listed ctrical and fugory — Ø 0%	cent of total e in section L uel consump № 5%	lectrical and . Secondly, o tion data on	fuel consum calculate the the energy	ption which wo a range of ene report.	uld be saved re rgy and cost s	sulting from	m the implementation of multiplying the estimat		
	state the roughly estimated range of the new mini-audit opportungercentages by the annual electrical two boxes in each category. Range of Electrical Savings — Range of Fuel Savings —	ge of the percunities listed ctrical and fugory — Ø 0%	cent of total e in section L uel consump № 5%	lectrical and Secondly, tion data on	fuel consum calculate the the energy	ption which wo a range of ene report.	uld be saved rergy and cost s	sulting from	er (specify)		
	state the roughly estimated range of the new mini-audit opportungercentages by the annual electrical two boxes in each category. Range of Electrical Savings — Range of Fuel Savings —	ge of the percunities listed cerrical and fugory —	cent of total e in section L uel consump 5% 5% 5% makes	lectrical and Secondly, of the second of the	fuel consum calculate the the energy	ption which wo a range of ene report. 20% 20% 20% Avings	uld be saved rergy and cost s	sulting from	er (specify)		
	state the roughly estimated range of the new mini-audit opportunger percentages by the annual electrical savings — Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and % Range	ge of the percunities listed cerrical and fugory — 90% d cost saving Annual Consulting 6302	cent of total e in section L uel consump 5% 5% 5% makes	lectrical and Secondly, tion data on 10% Range of Range	fuel consum calculate the the energy 1 15% 15% 15% 15% 15% 15% 15 Electrical S	ption which wo a range of ene report. 20% 20% 20% Avings Range 0 % to	uld be saved rergy and cost s. 25% 25% Delta 25% Annual El Dollars 302	outing from avings by other other lectrical Spent	er (specify) Range of Electric Dollars Saving		
	state the roughly estimated range of the new mini-audit opportunger on the new mini-audit opportunger on the new mini-audit opportunger on the new mini-audit opportunger on the new mini-audit opportunger of Electrical Savings — Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and — % Range — lower bound — 10 — 40 — upper bound — 5 — 40 — 4	ge of the percunities listed ctrical and for gory —	Electrical mption kwh	lectrical and Secondly, tion data on 10% 10% Range of Range of Sa = 0	fuel consum calculate the the energy 1 15% 15% 15% 15% 15% 15% 15 Electrical \$ of Energy avings 1 kwh, kwh, to	ption which wo a range of ene report. 20% 20% 20% **Range 0 % to 5 %	uld be saved rergy and cost s. 25% 25% Dollars x \$302	outing from avings by other other lectrical Spent	er (specify) er (specify) Range of Electric Dollars Saving \$ 0 to 15, 15		
	state the roughly estimated range of the new mini-audit opportunger percentages by the annual electrical savings — Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and — % Range lower bound — % Range	ge of the percunities listed corrical and for gory —	Electrical mption kwh	ectrical and Secondly, tion data on 10% 10% Range of Range of Sa = 0 Range Range	fuel consum calculate the the energy 1 15% 15% 15% 15% 15% 15% 15% 15% 15% 1	ption which wo a range of ene report. 20% 20% 20% **Range 0 % to 5 %	uld be saved rergy and cost s. 25% 25% Dollars x \$302	other of the state	er (specify) er (specify) Range of Electric Dollars Saving \$ 0 to 15, 15		
	state the roughly estimated range of the new mini-audit opportunger centages by the annual electrical savings — Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and — % Range lower bound — to upper bound — Building does no % Range	ge of the percunities listed corrical and for gory —	Electrical mption kwh	ectrical and Secondly, tion data on 10% 10% Range of Range of Sa = 0 Range Range	del consum calculate the the energy of the e	ption which wo a range of ene report. 20% 20% 20% 4 range 5 % vings % Range % Range	uld be saved rergy and cost s. 25% 25% Annual El Dollars x \$302 x Annual	other of the state	er (specify) Range of Electric Dollars Saving \$ 0 to \$ 15.15		

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Instructions. Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor.

T CLASSIF	ICATION:		OPTIONAL:	PTIONAL: OPTIONAL:		
MAJOR	O. SUB	PAST ENERGY CONSERVATION ACTIONS	ENERGY SAVINGS	ENERGY COST SAVINGS	DATE OF IMPLEMENTATION	
5	2	Routine Maintenance Schedule.				
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			Patrician and all and an artist and an artist and an artist and artist artist and artist artist and artist artist and artist artist and artist artist and artist ar			
	<u> </u>			1		
				-		
	MAJOR CLASS	CLASS CLASS	CLASSIFICATION NO. MAJOR SUB CLASS 5 2 Routine Maintenance Schedule.	CLASS FICATION PAST ENERGY CONSERVATION ACTIONS ENERGY SAVINGS 5	CLASS FICATION NATION SUB CLASS CLAS	

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

				OPTIONAL:	OPTIONAL	:
ITEM NO.	CLASSIF NO MAJOR CLASS		NEW MINI-AUDIT OPPORTUNITIES	ENERGY SAVINGS	ENERGY COST SAVINGS	DATE OF IMPLEMENTATION
11	1	1	Keep all controls free of dust.			
2	1	2	Look for loose connections and bad contacts on a regular basis.			
3	1	2	Lubricate motors to reduce wear and excessive torque.			
4	1	2	Check alignment of motors to driven equipment, align and tighten as necessary			
5	1	2	Replace worn or defective motors with motors that are sized as close to the load as possible and use the highest efficiency motors available			
6	1	2	Where it is impractical to replace motors which have low loads and power factors, use capacitatros at motor terminals to correct the power factor to 90%.			
7	5	1	Keep records of the operating sched monthly energy consumption and purchase of any new equipment that afferency consumption of efficiency of the building. These records will indicate the impact of energy conservation measures.	ects n-		
8	5	1	Review the record books on a regula basis.	Y		
9	7	4	Inspect electrical contacts and working parts of relays and maintai in good working order.	n		
10	7	4	Check heater elements for cleanli- ness. Replace as necessary.			
11	7	4	Check controls for proper operation Adjust as necessary.	1		
L				4		

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

20	p.cc.	u. ///// 500	non of the mini-addit report should be completed by the mini-addit	OPTIONAL:	OPTIONAL	:
ITEM	N N	ICATION O.	NEW MINI-AUDIT OPPORTUNITIES	ENERGY	ENERGY COST	DATE OF IMPLEMENTATION
NO.	MAJOR CLASS	SUB CLASS		SAVINGS	SAVINGS	
12	7	4	Periodically tighten all electrical- mechanical connections to prevent			
			mechanical connections to prevent			
			arcing and burning due to metal flow or loosening of terminal bolts			
			or lugs.			*
			or rugs.			
						
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Λ	BUILDING NAME		NAME OF ORGANIZATION	DATE
A	Pump House - Well #1		City of Bloomington	3/18/81
	BUILDING ADDRESS		ADDRESS	
1 1	9302 Poplar Bridge Road		2215 West Old Shakopp Road	
_	CITY	ZIP CODE	CITY	ZIP CODE
ACT	Bloomington	55431	Bloomington	55431
CONT	PERSON COMPLETING FORM	TELEPHONE	CONTACT PERSON	TELEPHONE
28	Randy Smith	935-6901	Arthur Jensen	881-5811

	- Mariay Omron	1000 000	1 AT CHAI OCHSCH		
	·				
B	Instructions: For blocks 1 and 2 check the box describes the building type and then within th				our categories
ш	1. OWNERSHIP TYPE QIPublic (PUB) ONOn-Profit Association (NAP) 2. ULTIMATE OWNER OCOUNTY (CNTY)	3a. SCHOOLS □Elementary □Secondary □Coll. or Un □Vocational □Education a	(SCHL-SECD) iv. (SCHL-POST)	LOCAL GOVERNMENT Office Storage Service Chirary Police Fire	(LOCG-OFFC) (LOCG-STRG) (LOCG-SERV) (LOCG-LBRY) (LOCG-PLCE) (LOCG-FIRE)
BUILDING ELIGIBILITY CODE	□City (CITY) □Township (TOWN) □State (STAT) □Public School (PUSC) □Private School (PRSC) □Non-Profit Association (NPAP) □Indian Tribe (INDN)	DOTHER b. PUBLIC CAR DINUTSING HO COME TO THE DINUTSING HO DINUTSING H	me (PBCR-NURS) Care (PBCR-TERM) ility (PBCR-RHAB) Ith Ctr. (PBCR-HCTR)	OOTHER HOSPITALS UGeneral UTuberculosis UOTHER	(LOCG-OTHR) (HOSP-GENL) (HOSP-TUBR) (HOSP-OTHR)
C	Instructions: With reference to page 23 entitle just Federal funding, then answer the question				

Instructions: With refer just Federal funding, th	ence to page 23 entitled F en answer the questions c	unding Information, orrectly for the situa	determine if the faction. This section m	ilities are eligible ust be signed and	o for both Federa I dated by the he	l and State funding ad of the organizat
M - R - R - A - A - A - A - A - A - A - A						
Have you previously	ral and State Funding: mini-audit grant before? applied for mini-audit fund for mini-audit funding?	dina? 🛭 Yes 🗆 I	No			
Date: March 18	•					
Name: Arthur J	ensen					
Signature:	Tue le lend	n				
If eligible for Federal fu		_				
	mini-audit grant before?					
riave you previously	applied for mini-audit fun-	ding? Yes 1	No			
Do you wish to appl	applied for mini-audit fun- y for mini-audit funding? ederal funds will come fro	☐ Yes ☐ No				
Do you wish to appl	y for mini-audit funding?	☐ Yes ☐ No				
Do you wish to appl	y for mini-audit funding?	☐ Yes ☐ No				
Do you wish to appl	y for mini-audit funding?	☐ Yes ☐ No				
Do you wish to appl	y for mini-audit funding?	☐ Yes ☐ No				
Do you wish to appl	y for mini-audit funding?	☐ Yes ☐ No				
Do you wish to appl	y for mini-audit funding?	☐ Yes ☐ No				
Do you wish to appl	y for mini-audit funding?	☐ Yes ☐ No				
Do you wish to appl	y for mini-audit funding?	☐ Yes ☐ No				
Do you wish to appl The 50% match for F	y for mini-audit funding?	□Yes □ No nm: (Use additional s				
Do you wish to appl The 50% match for F	y for mini-audit funding? ederal funds will come fro	□Yes □ No nm: (Use additional s				

D	Check the type of energy report which was completed and submitted price	or to this mini-audit report.
EPORT	☐ Elementary School Energy Report (Form No. ED-00444-02)☐ Secondary School Energy Report (Form No. ED-00445-02) XX Existing Building Energy Report (Form No. EN-00041-01)	
ENERGY REPORT CHECK-OFF	If an energy report has not been completed previous to this mini-audit re vocational schools should use form ED-00444-02 or form ED-00445-02, dep building energy report, form EN-00041-01.	port, one must be included with this report. Elementary, secondary, and bending on building complexity. All other buildings should use the existing
E	Instructions: This section is to be completed and signed by a registered p completed the State of Minnesota's Mini-Audit Procedures Course. This sec are completed. All blanks must be filled in.	professional engineer or by a certified mini-auditor who has successfully ction should be completed after this mini-audit report and an energy report
	I have reviewed the energy report and/or the energy report results for this corrected any misinformation on the energy report which will be resubm	itted with this mini-audit report to the Minnesota Energy Agency.
ļ	I am not directly responsible for the day to day operations of this buildin	g being audited.
	I have fully disclosed my financial interests relating to this mini-audit and	
	I have walked through this building and have found the recommendatio maintenance changes, and low cost energy conservation measures, which	
	I have made a rough estimate, in section G, of the range of savings which listed in section I. i am not responsible if the actual savings resulting fro	m this mini-audit do not fall within the estimated range.
	Based on actual records, the energy conservation operating and maintena 20% of the building's energy consumption as specified in section I.	(did, did not)
	Based upon my observation of the physical characteristics of this buildir Should hot be the subject of a maxi-audit. (should, should not) I realize that this is not a final judgement, that the State reserves the right to	
	and other criteria.	
	Based upon the information in section E and the information referred to in undergo further solar conversion analysis, and/orShould_not	section F, I recommend that this buildingShould_not(should, should not)undergo further analysis of the renewable resources — waste,
	wind, wood. (Circle proper resources) (should, should n	oot)
	In my judgement, as a mini-auditor, all of the above statements are true	and correct.
		Witnessed by:
	Randy Smith Mini-Auditor's Name (Print or Type)	Assistant Maintenance Supervisor
		Building Organizational Authority (Print or Type)
	Stringture 206	Signature Signature
	• //	March 18, 1981
	Rieke Carroll Muller Associates, Inc. Firm Name (if none, enter none)	Date
	P.O. Box 130	
	11021011	
	612-935-6901 Phone	
	March 18, 1981 Date	
S		
ENT		

F	NAME	POSITION	ORGANIZATION	
	•			
	Randy Smith	Certified Mini-Audtior	Rieke Carroll Muller Assoc.	Inc.
	Scott Hutchins	CET	Rieke Carroll Muller Assoc,	Inc.
	Art Parvey		City of Bloomington	
AUDIT				
4 F				
	BRIEF DESCRIPTION OF GENERAL B	UILDING CONDITION (i.e. type, and function)		
G	Good, well house			
	••	NEXT 15 YEARS (i.e. demolition, rehabilitation, conv	version from one building type to another)	
BUILDING INFORMATION	None STRUCTURAL COMPONENTS OF RO	OF (i.e. metal beams, wooden rafters, concrete)		
RMA	Concrete			
NFOL	ROOFING MATERIAL (i.e. tar and grav	rel, shingles, tile)		
<u> </u>	Tar and gravel.			J
Н	INSTRUCTIONS: Correctly answer the	following questions for the building being mini-audit	ed.]
	Is there open land adjacent to the build Yes DNo	ding?		
	Solar collectors need to be located in an 3 p.m.? Roof: \$\mathbb{K}\$ Yes \$\mathbb{D}\$ No South facing Wall: \$\mathbb{K}\$\$ Yes \$\mathbb{D}\$ No	unshaded area. Is the roof of the building and the south	facing wall unshaded between the hours of 9 a.m. and	
	-	hat percentage of the surface is unshaded?		
	% of roof unshaded, % % of south facing wall unshaded	· · · · · · · · · · · · · · · · · · ·		
	What is the overall shape of the buildin ⊠ square □ rectangle □ H-shap	ng? ped		
	Is the roof of the building flat or pitche ☑ flat □ pitched	ed?		
	If pitched, what is the compass orienta	ation of the ridgeline?		
	If pitched, what is the angle that the ro	oof makes with horizontal?		
	∐ Yes WINo	of such as chimneys, rooms for mechanical equipmer	nt, ventilating units, water towers, etc?	
	What is the exterior facing material fo	the south facing wall? Face brick		
	What percentage of the south facing v	_		
	Is the building's space heating equipm	nent located within or on the building? (A no answer i	indicates the equipment is in a separate building.)	
	If the space heating equipment is insi Cround Floor Basement C	de the building, where is it located? I Roof		
SOLAR POTENTIAL	Is the building's water heating equipm Ves No None	nent located within the building? (A no answer indicat	tes the equipment is in a separate building.)	
R POT	If the water heating equipment is insidered Ground Floor Basement	de the building, where is it located? Other (specify)		
SOLA	Is the water heating system a central Dentral Dentral Dentral Dentral Dentral Dentral Dentral Dentral	system, does it consist of multiple units, or is it a comnation	nbination of the central and multiple units?	

			BASE PE	RIOD YEAR			Fiscal Y	/ear
	ENERGY TYPE	ENERGY I	JSAGE	co	NVERSION	FACTOR		BTU USAGE
	Electricity							
	Fuel 1							
	Fuel 2							
	TOTAL				<u>a a ga an di manggap</u> apahan an <u>anggap</u> akan an an di			
			20% SAVI	NGS YEAR		- Anna Anna Anna Anna Anna Anna Anna Ann	Fiscal	Year
	ENERGY TYPE	ENERGY	JSAGE	cc	ONVERSION	FACTOR		BTU USAGE
	Electricity							
	Fuel 1					i Mada makiti i Makanasa da mino w		
	Fuel 2				A CANADA CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CO			a yayan da <u>aran kan da aran da</u>
-	TOTAL							
T T	Instructions: This section is to be	completed by the mini	-auditor after the	e walk-thru s	portion of the	mini-audit. Fi	st, check the	appropriate boxes whic
		of the percent of total ties listed in section I	electrical and fue L. Secondly, cal	el consumpt culate the r	ion which wo ange of ene	ould be saved re	esulting from	the implementation of a
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni	of the percent of total ities listed in section I rical and fuel consum	electrical and fue L. Secondly, cal	el consumpt culate the r	ion which wo ange of ene	ould be saved re	esulting from	the implementation of i
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each category.	of the percent of total ities listed in section I rical and fuel consum	electrical and fue L. Secondly, cal	el consumpt culate the r	ion which wo ange of ene	ould be saved re	esulting from savings by n	nthe implementation of a multiplying the estimate
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each category.	of the percent of total ties listed in section I rical and fuel consum rry —	electrical and fue . Secondly, cal ption data on th	el consumpt culate the r e energy re	ion which wo range of ene port.	ould be saved ro rgy and cost	esulting from savings by n	nthe implementation of multiplying the estimate
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electrical Savings —	of the percent of total ties listed in section I rical and fuel consumptry — 0 0%	electrical and fue Secondly, calption data on th	al consumpt culate the r e energy re	on which wo ange of eneport.	□ 25%	esulting from savings by n	nthe implementation of a nultiplying the estimat
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each categor Range of Electrical Savings —	of the percent of total ties listed in section I rical and fuel consumptry — 0 0%	electrical and fue Secondly, calption data on th	ol consumpticulate the ree energy re	on which wo ange of eneport.	25% U 25% Water Annual I	esulting from savings by n	r (specify) r (specify) r The plant. Range of Electric
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and	of the percent of total ties listed in section I rical and fuel consuming y — □ 0% □ 5% □ 0% □ 5% □ 0% □ 5% □ Annual Electrical	electrical and fue. Secondly, calption data on the 10% 10% 11mg is Range of E	ol consumpticulate the ree energy re	on which wo ange of eneport. 20% 20% ded With rings Range	25% U 25% Water Annual I	osulting from savings by no other other treatme	r (specify) r (specify) r T plant. Range of Electric
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and Range	of the percent of total ties listed in section in rical and fuel consumptry — 0 %	electrical and fue. Secondly, calption data on the 10% 10% 11mg is Range of E	i consumpticulate the ree energy re 15% 15% 1nclud ectrical Sav Energy	on which wo ange of eneport. 20% 20% ded With rings Range	25% 25% Water Annual I	osulting from savings by no other other treatme	r (specify) r (specify) r T plant. Range of Electric
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electrical states of the categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and a state of the category and st	of the percent of total ties listed in section in rical and fuel consumptry — 0 %	electrical and fue Secondly, calption data on the 10% 10% 10% 10% 10% 10% 10% 10% 10% 10%	i consumpticulate the ree energy re 15% 15% 1nclud ectrical Sav Energy	on which wo ange of eneport. 20% 20% d with rings Range to	25% 25% Water Annual I	other controls spend	r (specify) r (specify) r (specify) nt plant. Range of Electric Dollars Savings
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electrical Savings — Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and a section of the same of the savings — Range of Fuel Savings — Calculate ranges of energy and a section of the savings — We have a section is to be stated in the savings — A section is to be section is to be stated in the savings — Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and a section is to be stated in the savings — We have a section is to be stated in the savings — The savings — A section is to be stated in the savings — Range of Electrical Savings — Range of Electrical Savings — Calculate ranges of energy and a section is to be stated in the savings — We have a section in the savings — The savings — A section is to be stated in the savings — Range of Electrical Savings — Calculate ranges of energy and a section is the savings — The	anof the percent of total ties listed in section in the section of	electrical and fue Secondly, calption data on the 10% 10% 10% 10% 10% 10% 10% 10% 10% 10%	includ	on which wo ange of eneport. 20% 20% 20% ed with rings Range to	25% 25% Daniel Water Annual I Dollars	other controls spend	r (specify) r (specify) r (specify) nt plant. Range of Electric Dollars Savings
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electrical Savings — Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and a section of the sample of the savings — When the sample is the sample is the sample of the savings — When the sample is the sa	anof the percent of total ties listed in section in the section of	electrical and fue Secondly, calption data on the 10% 10% 10% 10% 10% 10% 10% 10% 10% 10%	includ lectrical Savings kwh, t Fuel Savinof Fuel	on which wo ange of eneport. 20% 20% 20% ed with rings Range to	Dulid be saved rorgy and cost : 25% 25% 25% Nater Annual I Dollars x \$ Annual Annual I Annual I Annual I Annual I Annual I Annual I Annual I Annual I	other controls spend	r (specify) r (specify) r (specify) nt plant. Range of Electric Dollars Savings to Range of Fuel
	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electrical state of the categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and which is a state of the category and state of the categor	Annual Electrical Consumption Annual Electrical Consumption kwh Se fuel. Annual Fuel	electrical and fue Secondly, calption data on the large of the large of E Range of E Range of E Range of	includ lectrical Savenus kwh, kwh, fruel Savings	ed with	Dulid be saved rorgy and cost : 25% 25% 25% Nater Annual I Dollars x \$ Annual Annual I Annual I Annual I Annual I Annual I Annual I Annual I Annual I	osulting from savings by no other other treatme	r (specify) r (specify) r (specify) nt plant. Range of Electric Dollars Savings
ESTIMATION	Instructions: This section is to be state the roughly estimated range of the new mini-audit opportuni percentages by the annual electrical states of the categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and the states of the st	anofthe percent of total ties listed in section in the section of	electrical and fue Secondly, calption data on the 10% 10% 10% 10% 10% 10% 10% 10% 10% 10%	includ lectrical Savings kwh, kwh, fruel Savings btu, Btu, Btu, Btu,	ion which wo ange of ene port. 20% 20% 20% ed With rings Kange 40 80 80 80 80 80 80 80 80 80 80 80 80 80	25% 25% 25% Daniel 25% Dollars x \$ Annual I Dollars	osulting from savings by no other other treatme	r (specify) r (specify) r (specify) nt plant. Range of Electri Dollars Saving to Range of Fue

Instructions. Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor.

OPTIONAL: OPTIONAL:

OPTIONAL: OPTIONAL:

CLASSIFICATION

NO.

PAST ENERGY CONSERVATION ACTIONS

ENERGY
SAVINGS

DATE OF IMPLEMENTATION SAVINGS

MAJOR SUBS CLASS 17514	CLASSIFICATION PAST ENERGY CONSERVATION ACTIONS				ENERGY	2475 05 14491 5145117471011		
	NO.	MAJOR	SUB	PAST ENERGY CONSERVATION ACTIONS	ENERGY SAVINGS	COST	DATE OF IMPLEMENTATION	
	1	5	2	Routine maintenance schedule.				
				·				
					+			
								
						-		
						<u> </u>		
			-					
		-						
		 	-		-			
			 	,				

PPORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

OPTIONAL:

OPTIONAL:

				OPTIONAL:	OPTIONAL	:
ITEM NO.	CLASSIF NO MAJOR CLASS	CATION O. SUB CLASS	NEW MINI-AUDIT OPPORTUNITIES	ENERGY SAVINGS	ENERGY COST SAVINGS	DATE OF IMPLEMENTATION
1	1	1	Keep all controls free of dust.			
			·			
2	1	2	Look for llose connections and bad contacts on a regular basis.			
3	1	2	Lubricate motors to reduce wear and excessive torque.			
			Check alignment of motors to driven			
4	1	2	equipment, align tighten as necessary	/		
 5	1	2	Replace worn or defective motors with motors that are sized as close to the			
			load as possible and use the highest efficiency motors available.			
6	1	2	Where it is impractical to replace motors which have low loads and power factors, use capacitors at motor	ļ.	-	
			to 90%.	<u></u>		
7	2	1	Add insulation to ceiling and hatch.			
8	2	2	Weatherstrip all exterior doors.			
9	2	8	Insulate walls with rigid insulation on inside.			
10	3	1	Check the calibration on all control and devices for proper settings and operations.	lers		
11		1	Check for packing wear which cna cau	se		
11	3	3	excessive leakage. Repack to avoid excessive water wastage and shaft erosion.			

EW PPORTUNITIES Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

20				OPTIONAL:			
ITEM	4	ICATION IO.	NEW MINI-AUDIT OPPORTUNITIES	ENERGY	ENERGY COST	DATE OF IMPLEMENTATION	
NO.	MAJOR CLASS	SUB CLASS		SAVINGS	SAVINGS		
1	2 3	3	Inspect bearings and drive belts for				
		+ -	wear and binding. Adjust, repair or replace as necessary.				
			Inspect damper blades and linkages.				
1	3 3	3	Clean, oil and adjust.				
		<u> </u>	Keep records of the operating sched	ıle.			
1	4 5	1	monthly energy consumption and pur-				
		ļ	chase of any new equipment that afferency of	,			
			the building. These records will indicate the impact of energy conserva-				
			tion meausres.	-			
_1	5 5	1	Review the record books on a regular basis.				
1	6 7	4	Inspect electrical contacts and working parts of relays and maintain in				
			good working order.				
1	7 7	4	Check heater elements for cleanlines Replace as necessary.	s .			
1	8 7	4	Check controls for proper operation. Adjust as necessary.				
	9 7	4	Periodically tighten all electrical-				
	-	+ +	mechanical connections to prevent arcing and burning due to metal flow or loosening of terminal bolts or lu	dis.			

A	BUILDING NAME		NAME OF ORGANIZATION	DATE
A	Pump House - Well #2		City of Bloomington	3-18-81
	BUILDING ADDRESS		ADDRESS	
1	9320 Poplar Bridge Road		2215 West Old Shakopee Road	
_	CITY	ZIP CODE	CITY	ZIP CODE
ACT	Bloomington	55431	Bloomington	55431
CONT	PERSON COMPLETING FORM	TELEPHONE	CONTACT PERSON	TELEPHONE
SQ	Randy Smith	935-6901	Arthur Jensen	881-5811

B		tructions: For blocks 1 and 2 scribes the building type and							our categories
	1.	OWNERSHIP TYPE XI Public (F ☐ Non-Profit Association	PUB) (NAP)	За.	SCHOOLS □Elementary □Secondary □Coll. or Univ.	(SCHL-ELM) (SCHL-SECD) (SCHL-POST)	C.	LOCAL GOVERNMENT Office Ostorage Service	(LOCG-OFFC) (LOCG-STRG) (LOCG-SERV)
CODE	2.	ULTIMATE OWNER UCounty Ucity	(CNTY) (CITY)	·	□Vocational □Education Agency □Administration □OTHER	(SCHL-VOCL) (SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR)		□Library □Police □Fire □OTHER	(LOCG-LBRY) (LOCG-PLCE) (LOCG-FIRE) (LOCG-OTHR)
BUILDING ELIGIBILITY C		☐ Township ☐ State ☐ Public School ☐ Private School ☐ Non-Profit Association ☐ Indian Tribe	(TOWN) (STAT) (PUSC) (PRSC) (NPAP) (INDN)	b.	PUBLIC CARE Nursing Home Long Term Care Rehab. Facility Public Health Ctr. Res. Child Care Ctr.	(PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-HCTR) (PBCR-RCCC)	d.	HOSPITALS General Tuberculosis OTHER	(HOSP-GENL) (HOSP-TUBR) (HOSP-OTHR)

Instructions: With referer just Federal funding, ther	ce to page 23 entitled answer the questions	Funding Informati correctly for the si	on, determine if the fa ituation. This section r	icilities are eligible nust be signed and	for both Federa I dated by the he	I and State funding ad of the organizati
If eligible for both Federa Have you received a m Have you previously ap Do you wish to apply f	ni-audit grant before? plied for mini-audit fu	ndina? 🔼 Yes 🗆	□ No			
Date: 3-18-81						
Name: Arthur Jer						
Signature:	u W Jens	br	The American Assessment Control			
If eligible for Federal fun Have you received a m	ding only: ni-audit grant before? plied for mini-audit fu	☐ Yes☐ No	□ No			
Have you previously ap						
Do you wish to apply The 50% match for Fed	or mini-audit funding?	? 🗆 Yes 🗆 No)		
Do you wish to apply	or mini-audit funding?	? 🗆 Yes 🗆 No)		
Do you wish to apply	or mini-audit funding?	? 🗆 Yes 🗆 No)		
Do you wish to apply	or mini-audit funding?	? 🗆 Yes 🗆 No)		
Do you wish to apply	or mini-audit funding?	? 🗆 Yes 🗆 No)		
Do you wish to apply	or mini-audit funding?	? 🗆 Yes 🗆 No)		
Do you wish to apply	or mini-audit funding?	? 🗆 Yes 🗆 No)		
Do you wish to apply	or mini-audit funding?	? 🗆 Yes 🗆 No)		
Do you wish to apply	or mini-audit funding?	? 🗆 Yes 🗆 No)		
Do you wish to apply	or mini-audit funding?	? 🗆 Yes 🗆 No		,		
Do you wish to apply The 50% match for Fed	or mini-audit funding? eral funds will come fi	? ☐ Yes ☐ No rom: (Use addition	al sheets if necessary)		
Do you wish to apply The 50% match for Fed	or mini-audit funding?	? ☐ Yes ☐ No rom: (Use addition	al sheets if necessary)		

D	Check the type of energy report which was completed and submitted p	rior to this mini-audit report.
CHECK-OFF	☐ Elementary School Energy Report (Form No. ED-00444-02) ☐ Secondary School Energy Report (Form No. ED-00445-02) ☐ Existing Building Energy Report (Form No. EN-00041-01)	report, one must be included with this report. Elementary, secondary, and
CHECK		spending on building complexity. All other buildings should use the existing
1		
		I professional engineer or by a certified mini-auditor who has successfully ection should be completed after this mini-audit report and an energy report
	I have reviewed the energy report and/or the energy report results for this corrected any misinformation on the energy report which will be results	s building. I found all information contained therein to be correct <i>OR</i> I have mitted with this mini-audit report to the Minnesota Energy Agency.
	I am not directly responsible for the day to day operations of this build	ing being audited.
	I have fully disclosed my financial interests relating to this mini-audit a	nd any energy conservation measures considered by this audit.
	I have walked through this building and have found the recommendat maintenance changes, and low cost energy conservation measures, wh	ions listed in section I of this mini-audit report to be the operations and ich would reduce energy consumption in this building.
	I have made a rough estimate, in section G, of the range of savings whic listed in section I. i am not responsible if the actual savings resulting fr	· · · · · · · · · · · · · · · · · · ·
	Based on actual records, the energy conservation operating and mainter 20% of the building's energy consumption as specified in section I.	nance procedures listed in section K did not save at least (did, did not)
	(should, should not)	ling and the building's major energy using systems, I recommend that this
	and other criteria.	o make the maxi-audit funding determination based on this mini-audit report
	Based upon the information in section E and the information referred to in	(chould chould not)
	undergo further solar conversion analysis, and/or should not wind, wood. (Circle proper resources) (should, should	undergo junner analysis of the renewable resources — waste,
	In my judgement, as a mini-auditor, all of the above statements are tru	·
	, an or the above statements are tru	e and correct.
		Witnessed by:
	Randy Smith	Asst Maintenance Supervisor
	Mini-Auditor's Name (Print or Type)	Building Organizational Authority (Print or Type)
	Signature 206	Signature Signature
1		<u>3-18-81</u>
	Rieke Carroll Muller Firm Name (if none, enter none)	Date
	P.O. Box 130	
	612 935-6901	
	Phone	
	3-18-81	
	Date	
TIS		
MINI-AUDIT STATEMENTS		
MEN		

F	NAME POSITION ORGANIZATION
	Randy Smith Certified Mini-Auditor RCM
	Scott Hutchins CET RCM
TEAM	Art Parvey City of Bloomington
G	BRIEF DESCRIPTION OF GENERAL BUILDING CONDITION (i.e. type, and function)
J	Good, well house
	MAJOR CHANGES PLANNED WITHIN NEXT 15 YEARS (i.e. demolition, rehabilitation, conversion from one building type to another)
BUILDING	NONE STRUCTURAL COMPONENTS OF ROOF (i.e. metal beams, wooden rafters, concrete)
MA	concrete
25.0	ROOFING MATERIAL (i.e. tar and gravel, shingles, tile)
= 1	tar and gravel
Н	INSTRUCTIONS: Correctly answer the following questions for the building being mini-audited.
	Is there open land adjacent to the building?
	Solar collectors need to be located in an unshaded area. Is the roof of the building and the south facing wall unshaded between the hours of 9 a.m. and
	3 p.m.? Roof: □ Yes X□ No South facing Wall: □ Yes □ No
	If the roof or wall are partly shaded, what percentage of the surface is unshaded? % of roof unshaded
	What is the overall shape of the building? ☐ square ☐ rectangle ☐ H-shaped ☐ E-shaped ☐ other (specify)
	Is the roof of the building flat or pitched?
	If pitched, what is the compass orientation of the ridgeline?
	If pitched, what is the angle that the roof makes with horizontal?
	Are there large obstructions on the roof such as chimneys, rooms for mechanical equipment, ventilating units, water towers, etc? — Yes — TA No
	What is the exterior facing material for the south facing wall? <u>face brick</u>
	What percentage of the south facing wall is glass?%
	Is the building's space heating equipment located within or on the building? (A no answer indicates the equipment is in a separate building.) D Yes No
	If the space heating equipment is inside the building, where is it located? ☐ Ground Floor ☐ Basement ☐ Roof ☐ Other (specify)
NTIAL	Is the building's water heating equipment located within the building? (A no answer indicates the equipment is in a separate building.) Yes \(\sum \text{No NONE} \)
SOLAR POTENTIAL NFORMATION	If the water heating equipment is inside the building, where is it located? Ground Floor Basement Other (specify)
NFOR	Is the water heating system a central system, does it consist of multiple units, or is it a combination of the central and multiple units?

				BASE P	ERIOD YEA	R			Fiscal	Year	
	ENERGY TYPE		ENERGY	USAGE	С	ONVERSION	FAC	TOR		вто и	SAGE
	Electricity										
	Fuel 1										
	Fuel 2										
	TOTAL										
		-		20% SA	VINGS YEAR	3			Fisca	l Year	
_	ENERGY TYPE		ENERGY	USAGE	c	ONVERSION	N FAC	CTOR		вти і	JSAGE
	Electricity										
	Fuel 1									**************************************	
	Fuel 2										
	TOTAL								1		
	Instructions: This section is to be state the roughly estimated range										
	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electi	of the perd ities listed rical and fu	ent of total in section	electrical and f L. Secondly, c	uel consump alculate the	otion which w range of en	ould	be saved re	sulting fro	m the impli	ementation of
	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each category	of the perd ities listed rical and fu	ent of total in section	electrical and f L. Secondly, c	uel consump alculate the	otion which w range of en	ould	be saved re	sulting fro avings by	m the implo multiplyin	ementation of g the estima
	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each catego Range of Electrical Savings —	of the perdities listed rical and fu	ent of total in section el consum	electrical and f L. Secondly, c ption data on	uel consump alculate the the energy r	otion which w range of en eport.	ould	be saved rea	sulting from avings by	m the impli multiplyin er (specify	ementation of
	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each categor Range of Electrical Savings —	of the percities listed rical and function of the percities listed function of the percities and function of the percentage an	ent of total in section el consum Di 5%	electrical and f L. Secondly, o ption data on	uel consump alculate the the energy r	otion which we range of engeport.	ould	be saved reand cost s	sulting from avings by	m the impli multiplyin er (specify	ementation of g the estimal
	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings —	of the percities listed rical and function of the percities listed function of the percities and function of the percentage an	ent of total in section el consum Di 5%	electrical and f L. Secondly, o ption data on 10%	uel consump alculate the the energy r	20%	ould	be saved reand cost s	sulting from avings by	m the impli multiplyin er (specify	ementation of g the estimal
	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings —	of the percities listed rical and function of the percities listed function of the percities and function of the percentage an	ent of total in section el consum 21 5% 5% 5% s —	electrical and fi L. Secondly, of ption data on 10% 10% Range of Range	uel consump alculate the the energy r	20%	ould	be saved reand cost s	oth	mthe imple multiplyin er (specify er (specify Rar	ementation of g the estimal) —————————————————————————————————
	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and o	of the percities listed rical and function of the percities listed function of the percities of the percitae	ent of total in section el consum 5% 5% 5% s —	electrical and fi L. Secondly, of ption data on 10% 10% Range of Range	uel consump alculate the the energy r 15% 15% Electrical Sa of Energy	20%	ould	Desaved reand cost s 25% 25% Annual E	ulting from avings by	mthe imple multiplyin er (specify er (specify Rar	ementation of g the estimal) —————————————————————————————————
	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and o	of the percities listed rical and fury — in 0% cost saving Annual E	ent of total in section el consum 5% 5% 5% s —	electrical and fi L. Secondly, of ption data on 10% 10% Range of Range = 0	uel consump alculate the the energy r 15% 15% Electrical Sa of Energy vings	20%	ergy	Dollars	ulting from avings by	mthe imple multiplyin er (specify er (specify Rar	ementation of g the estimal))
	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and of the Range of Electric Range of Energy and of the Range of Electric Range of Energy and of the Range Ilower bound 0 % x	of the percities listed rical and fury — in 0% cost saving Annual E	ent of total in section el consum 2 5% 5% 5% s — Electrical mption 1 kwh	electrical and file. Secondly, of ption data on 10% 10% Range of Range = 0	uel consump alculate the the energy r 15% 15% Electrical Sa of Energy rings	20% 20% 20% Range to	ergy	Dollars	oth oth sectrical Spent 1.68	er (specify er (specify	to
	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and of the Range of Electric Range of Energy and of the Range of Electric Range of Energy and of the Range of Electric Range of Energy and of the Range of Electric Range of E	of the percenties listed rical and fury — 120 0% Cost saving Annual E Consult 103471	ent of total in section el consum 2 5% 5% 5% s — Electrical mption 1 kwh	electrical and file. Secondly, of ption data on 10% Range of Range sa =	uel consump alculate the the energy r 15% 15% Electrical Sa of Energy vings kwh,	20% 20% 20% Range to 5	ergy x	Desaved reand cost s 25% 25% Annual E Dollars \$2532	oth oth sectrical Spent 1.68	er (specify er (specify	to
	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and of the Range of Electric Range of Electrical Savings —	of the percenties listed rical and fury — 120 0%	ent of total in section el consum 2 5% 5% 5% s — Electrical mption 1 kwh	electrical and file. Secondly, option data on 10% 10% Range of Range of Sai = 0. = 5173 Range Range	uel consump alculate the the energy r 15% 15% Electrical Sa of Energy vings kwh, _	20% 20% 20% Range to 5	ergy x	Desaved reand cost s 25% 25% Annual E Dollars \$2532	oth coth c	mthe implemultiplyin er (specify er (specify	to Range of Fue
	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each categoral Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and of the Range of Electrical Savings — When the Range of Electrical Savings — Calculate ranges of energy and of the Range of Electrical Savings — When the Range of Electrical Savings	of the percenties listed rical and fury — 120 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	ent of total in section lel consum 2 5% 55% 5 - Electrical mption 1 kwh	electrical and file. Secondly, option data on 10% 10% Range of Range of Sai = 0. = 5173 Range Range	uel consump alculate the the energy r 15% 15% 15% Electrical Second Energy rings kwh, to 6 Fuel Sav e of Fuel in the consumption of the consum	avings % Range 0 % to 5 % Ings	ergy x	Desaved reand cost s 25% 25% Annual E Dollars 2532 Annua	oth coth c	mthe implemultiplyin er (specify er (specify	the estimate of the estimate o
	state the roughly estimated range of the new mini-audit opportuni percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and of the category of the savings — When the category of the sav	of the percenties listed rical and fury — 120 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	ent of total in section el consum 2 5% 55% 5 Electrical mption 1 kwh 1 kwh	electrical and file. Secondly, of ption data on 10% 10% Range of Range sa = 0. = 5173 Range Range Sa Sa Sa Sa Sa Sa Sa Sa Sa Sa Sa Sa Sa	uel consump alculate the the energy r 15% 15% 15% Electrical Second Energy rings kwh, to 6 Fuel Sav e of Fuel in the consumption of the consum	avings % Range to 5 % Range When to Market Mar	x x	Desaved reand cost s 25% 25% Annual E Dollars 2532 Annua	oth coth c	er (specify er (specify	to Range of Fue

Instructions: Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the minimulative port should be completed by building personnel prior to the well-through by the minimulation. section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor. OPTIONAL: OPTIONAL: CLASSIFICATION **ENERGY ENERGY** ITEM NO. DATE OF IMPLEMENTATION PAST ENERGY CONSERVATION ACTIONS COST NO. MAJOR SAVINGS SUB CLASS CLASS 5 Routine maintenance schedule.

Note Reproduce this page as necessary

IEW PORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

	CLASSIFICATION NO.			OPTIONAL:	ENERGY		
NO.	MAJOR CLASS	SUB CLASS	NEW MINI-AUDIT OPPORTUNITIES	ENERGY SAVINGS	COST SAVINGS	DATE OF IMPLEMENTATION	
1	1	1	Keep all controls free of dust.				
2	1	2	Look for loose connections and bad contacts on a regular basis.				
3	1	2	Lubricate motors to reduce wear and excessive torque.				
4	1	3	Check alignment of motors to driven equipment, align tighten as necessary	y			
5	1	2	Replace worn or defective motors with motors that are sized as close to the load as possible and use the highest efficiency motors available.				
6	1	2	Where it is impractical to replace motors which have low loads and power factors, use capacitors at motor terminals to correct the power factor to 90%.				
7	2	1	Add insulation to ceiling and hatch.				
8	2	2	Weatherstrip all exterior doors.				
9	2	8	Insulate walls with rigid insulation on inside.				
10	3	1	Check the calibration on all control and devices for proper settings and operations.	lers			
11	3	3	Check for packing wear which can cau excessive leakage. Repack to avoid excessive water wastage and shaft erosion.	se			

IEW PPORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

OPTIONAL: OPTIONAL CLASSIFICATION **ENERGY** ITEM NO. **ENERGY NEW MINI-AUDIT OPPORTUNITIES** COST DATE OF IMPLEMENTATION SUB SAVINGS NO. SAVINGS CLASS CLASS Inspect bearings and drive belts for 12 3 wear and binding. Adjust, repair or replace as necessary. Inspect damper blades and linkages. 13 3 3 Clean, oil and adjust. Keep records of the operating schedule, 14 monthly energy consumption and purchase of any new equipment that affedts energy consumption of efficiency of the building. These records will indicate the impact of energy conservation measures. Review the record books on a regular 15 basis. Inspect electrical contacts and work-16 ing parts of relays and maintain in good working order. Check heater elements for cleanliness. 17 7 Replace as necessary. Check controls for proper operation. 18 7 Adjust as necessary. Periodically tighten all electrical-19 7 mechanical connections to prevent arcing and burning due to metal flow or loosening of terminal bolts or luds.

A	BUILDING NAME	***************************************	NAME OF ORGANIZATION	DATE
~	Pump House - Well #3		City of Bloomington	3/18/81
	BUILDING ADDRESS		ADDRESS	
	9141 Normandale Boulevard		2215 West Old Shakopee Road	
_	CITY	ZIP CODE	CITY	ZIP CODE
aC.	Bloomington	55431	Bloomington	55431
CONTACT	PERSON COMPLETING FORM	TELEPHONE	CONTACT PERSON	TELEPHONE
ŏŏ	Randy Smith	935-6901	Arthur Jensen	881-5811

	1. OWNERSHIP TYPE XXPublic (F □Non-Profit Association	PUB) (NAP)	3a.	SCHOOLS □ Elementary □ Secondary □ Coll. or Univ.	(SCHL-ELM) (SCHL-SECD) (SCHL-POST)	C.	LOCAL GOVERNMENT Office Storage Service	(LOCG-OFFC) (LOCG-STRG) (LOCG-SERV)
CODE	2. ULTIMATE OWNER ☐County XXCity ☐Township	(CNTY) (CITY) (TOWN)		□Vocational □Education Agency □Administration □OTHER	(SCHL-VOCL) (SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR)		□Library □Police □Fire □OTHER	(LOCG-LBRY) (LOCG-PLCE) (LOCG-FIRE) (LOCG-OTHR)
ELIGIBILITY C	☐ Fownship ☐ State ☐ Public School ☐ Private School ☐ Non-Profit Association ☐ Indian Tribe	(STAT) (PUSC) (PRSC) (NPAP) (INDN)	b.	PUBLIC CARE Nursing Home Long Term Care Rehab. Facility Public Health Ctr. Res. Child Care Ctr.	(PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-HCTR) (PBCR-RCCC)	d.	HOSPITALS General Tuberculosis OTHER	(HOSP-GENL) (HOSP-TUBR) (HOSP-OTHR)

just Federal funding, then	ce to page 23 entitled Funding Informa answer the questions correctly for the	situation. This section must be	signed and dated by the he	ad of the organization
If eligible for both Federa Have you received a mi Have you previously ap Do you wish to apply fo	and State Funding: ni-audit grant before? ☐ Yes XX No plied for mini-audit funding? XX Yes or mini-audit funding? ☐ Yes XX No	□ No		
Date: March 18.	1981	or constant and the con		
Name: Arthur Jei	nsen			
Signature: UT2	un W Jenun			
If eligible for Federal fund	ling only:			
Have you previously ap Do you wish to apply (plied for mini-audit funding? ☐ Yes or mini-audit funding? ☐ Yes ☐ No eral funds will come from: (Use additio)		
Have you previously ap Do you wish to apply (plied for mini-audit funding?)		
Have you previously ap Do you wish to apply (plied for mini-audit funding?)		
Have you previously ap Do you wish to apply (plied for mini-audit funding?)		
Have you previously ap Do you wish to apply t	plied for mini-audit funding?)		
Have you previously ap Do you wish to apply t	plied for mini-audit funding?)		
Have you previously ap Do you wish to apply t	plied for mini-audit funding?)		
Have you previously ap Do you wish to apply t	plied for mini-audit funding?)		
Have you previously ap Do you wish to apply t	plied for mini-audit funding?)		
Have you previously ap Do you wish to apply t The 50% match for Fed	plied for mini-audit funding?	nal sheets if necessary.)		

nı	· · · · · · · · · · · · · · · · · · ·	
	Check the type of energy report which was completed and submitted price	or to this mini-audit report.
REPORT FF	☐ Elementary School Energy Report (Form No. ED-00444-02) ☐ Secondary School Energy Report (Form No. ED-00445-02) ☑ Existing Building Energy Report (Form No. EN-00041-01)	
ENERGY REPORT CHECK-OFF	If an energy report has not been completed previous to this mini-audit re vocational schools should use form ED-00444-02 or form ED-00445-02, dep building energy report, form EN-00041-01.	port, one must be included with this report. Elementary, secondary, and ending on building complexity. All other buildings should use the existing
E	Instructions: This section is to be completed and signed by a registered p completed the State of Minnesota's Mini-Audit Procedures Course. This sec are completed. All blanks must be filled in.	professional engineer or by a certified mini-auditor who has successfully stion should be completed after this mini-audit report and an energy report
	I have reviewed the energy report and/or the energy report results for this corrected any misinformation on the energy report which will be resubm I am not directly responsible for the day to day operations of this building	itted with this mini-audit report to the Minnesota Energy Agency.
	I have fully disclosed my financial interests relating to this mini-audit and	any energy conservation measures considered by this audit.
	I have walked through this building and have found the recommendatio maintenance changes, and low cost energy conservation measures, which	ns listed in section I of this mini-audit report to be the operations and the would reduce energy consumption in this building.
	I have made a rough estimate, in section \mathbf{G}_i of the range of savings which listed in section I. i am not responsible if the actual savings resulting fro	m this mini-audit do not fall within the estimated range.
	Based on actual records, the energy conservation operating and maintenations of the building's energy consumption as specified in section I.	ance procedures listed in section K <u>did not</u> save at least (did, did not)
	Based upon my observation of the physical characteristics of this buildin Should not be the subject of a maxi-audit. (should, should not)	
	I realize that this is not a final judgement, that the State reserves the right to and other criteria.	make the maxi-audit funding determination based on this mini-audit report
	Based upon the information in section E and the information referred to in	(Should, Should not)
	undergo further solar conversion analysis, and/or Should no wind, wood. (Circle proper resources) (should, should resources)	t undergo further analysis of the renewable resources — waste,
	In my judgement, as a mini-auditor, all of the above statements are true	and correct.
		Witnessed by:
	Daniela Cuitela	
	Randy Smith Mini-Auditor's Name (Print or Typp)	Assistant Maintenance Supervisor Building Organizational Authority (Print or Type)
	Randy SNX 206	My W Endr
	Signature	Signature
	Rieke Carroll Muller Assoc., Inc. Firm Name (if none, enter none)	March 18, 1981
	P.O. Box 130	
	Address 612 025 6001	
	612-935-6901 Phone	
	3-19-81	
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MINI-AUDIT STATEMENTS		
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F	NAME	POSITION	ORGANIZATION
	Randy Smith	Certified Mini-Auditor	Rieke Carroll Muller Assoc., Inc
	Scott Hutchins	CET	Rieke Carroll Muller Assoc., Inc
	Art Parvey		City of Bloomington
		·	
AUDIT TEAM			
<u> </u>	:		
G		AL BUILDING CONDITION (i.e. type, and function)	
	Good, well house	THIN NEXT 15 YEARS (i.e. demolition, rehabilitation,	conversion from one building type to another)
z	None		, , , , , , , , , , , , , , , , , , ,
, E	STRUCTURAL COMPONENTS O	ROOF (i.e. metal beams, wooden rafters, concrete)	
BUILDING	Concrete		
P.F.	ROOFING MATERIAL (i.e. tar and Tar and grave)	gravel, shingles, tile)	
<u> </u>	Tall alla graver		
H	INSTRUCTIONS: Correctly answer	r the following questions for the building being mini-	-audited.
	Is there open land adjacent to the	building?	
	3 p.m.? Roof: □ Yes XXNo		south facing wall unshaded between the hours of 9 a.m. and
	South facing Wall: Yes XX	No	
	If the roof or wall are partly shade % of roof unshaded % of south facing wall unshade	id, what percentage of the surface is unshaded?	
	What is the overall shape of the b		
	Is the roof of the building flat or p XDKflat pitched	pitched?	
	If pitched, what is the compass o	rientation of the ridgeline?	
	If pitched, what is the angle that	he roof makes with horizontal?°	
	Are there large obstructions on the Yes XXNo	ne roof such as chimneys, rooms for mechanical equi	ipment, ventilating units, water towers, etc?
	What is the exterior facing mater	al for the south facing wall? Face brick	No
	What percentage of the south fac	ing wall is glass?%	
	Is the building's space heating ed XXYes □ No	uipment located within or on the building? (A no ans	swer indicates the equipment is in a separate building.)
	If the space heating equipment is XX Ground Floor ☐ Basemer	inside the building, where is it located? It Roof Other (specify)	
NTIAL		uipment located within the building? (A no answer in	1
SOLAR POTENTIAL INFORMATION	If the water heating equipment is Ground Floor Basemen	inside the building, where is it located?	
SOLA		stral system, does it consist of multiple units, or is it	· · · · · · · · · · · · · · · · · · ·

		BASE	PERIOD YEA	NR.		Fiscal Ye	ar
ENERGY TYPE	ENERGY	USAGE	C	CONVERSION F	ACTOR		BTU USAGE
Electricity							
Fuel 1							
Fuel 2							
TOTAL						·	
		20% S/	AVINGS YEA	R		Fiscal Ye	ear
ENERGY TYPE	ENERGY	USAGE	C	CONVERSION	FACTOR		BTU USAGE
Electricity							
Fuel 1							
Fuel 2							
TOTAL							
of the new mini-audit opportunitie percentages by the annual electric	es listed in section al and fuel consum	L. Secondly,	calculate the	range of ener	uld be saved res gy and cost sa	sulting from the savings by mu	he implementation of iltiplying the estimat
		□ 10%	□ 15%	□ 20%	□ 25%	other (specify)
Range of Fuel Savings	0% 🗆 5%	□ 10%	□ 15%	□ 20%	□ 25%		specify)
Calculate ranges of energy and co	st savings —						a galadagan kapan saman ganggan ganggan ganggan ganggan saman All All ganggan da All All All All All All All All All Al
		Range o	f Electrical S	avings			
% Range	Annual Electrical Consumption			% Range			Range of Electric Dollars Saving
lower bound 0 % x	551105 kwh	=	kwh, _	%	x \$1413	6.57 .	s 0
to			to	to			to
upper bound5 % x	551105 kwh	= 275	55 kwh, _	5_%	× \$1413	6.57	\$ 706.83
Building does not us	e fuel	Rang	e of Fuel Sav	vings	**************************************		
% Range	Annual Fuel Consumption			% Range			Range of Fue Dollars Saving
lower bound % x	Btu	=	Btu, .	%	× \$		·
to			to	to			to
	Fuel 2 TOTAL ENERGY TYPE Electricity Fuel 1 Fuel 2 TOTAL Instructions: This section is to be constant the roughly estimated range of the new minitary and to of the new minitary percentages by the annual electric check two boxes in each category. Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and constant to the constant of the new minitary and constant of the new minitary and constant of the new minitary and the new minitary and electric check two boxes in each category. Range of Fuel Savings — Calculate ranges of energy and constant of the new minitary and constant of the new minitary and electric check two boxes in each category. Range of Fuel Savings — Range lower bound — Range lower bound — Range lower bound — Range lower bound — Range lower bound — Range lower bound — Range Ra	Fuel 2 TOTAL ENERGY TYPE ENERGY Electricity Fuel 1 Fuel 2 TOTAL Instructions: This section is to be completed by the min state the roughly estimated range of the percent of total of the new mini-audit opportunities listed in section percentages by the annual electrical and fuel consum Check two boxes in each category — Range of Electrical Savings — ② 0% ③ 5% Range of Fuel Savings — ② 0% ⑤ 5% Calculate ranges of energy and cost savings — When a savings — Oh Oh Oh Savings — When a savings — Oh Oh Oh Savings — When a savings — Oh Oh Oh Savings — When a savings — Oh Oh Oh Savings — When a savings — Oh Oh Oh Savings — When a savings — Oh Oh Oh Savings — When a savings — Oh Oh Oh Savings — Annual Electrical Consumption oh Oh Oh Oh Oh Oh Oh Oh Oh Oh Oh Oh Oh Oh	Fuel 1 Fuel 2 TOTAL 20% S/ ENERGY TYPE ENERGY USAGE Electricity Fuel 1 Fuel 2 TOTAL Instructions: This section is to be completed by the mini-auditor after state the roughly estimated range of the percent of total electrical and of the new mini-audit opportunities listed in section L. Secondly, percentages by the annual electrical and fuel consumption data on Check two boxes in each category — Range of Electrical Savings — ② 0% ② 5% □ 10% Range of Fuel Savings — □ 0% □ 5% □ 10% Calculate ranges of energy and cost savings — Range of Savings — □ 0% □ 5% □ 10% Calculate ranges of energy and cost savings — Range of Savings — □ 0% □ 5% □ 10% Calculate ranges of energy and cost savings — Range of Savings — □ 0% □ 5% □ 10% Calculate ranges of energy and cost savings — Range of Savings — □ 0% □ 5% □ 10% Range Onsumption Range of the Savings — □ 0% Louper bound □ 0 % x □ 551105 kwh = □ 0.00 Annual Fuel Consumption Range Consumption Savings — □ 0% Building does not use fuel Range Consumption Range Consumption Savings — □ 0% Building does not use fuel Range Consumption Savings — □ 0% Building does not use fuel Range Consumption Savings — □ 0% Building does not use fuel Range Consumption Savings — □ 0% Building does not use fuel Range Consumption Savings — □ 0%	Fuel 1 Fuel 2 TOTAL 20% SAVINGS YEA ENERGY TYPE ENERGY USAGE Electricity Fuel 1 Fuel 2 TOTAL Instructions: This section is to be completed by the mini-auditor after the walk-thristate the roughly estimated range of the percent of total electrical and fuel consum of the new mini-audit opportunities listed in section L. Secondly, calculate the percentages by the annual electrical and fuel consumption data on the energy Check two boxes in each category — Range of Electrical Savings — 0% 0% 0% 5% 0 10% 0 15% Range of Fuel Savings — 0% 0% 0% 5% 0 10% 0 15% Calculate ranges of energy and cost savings — Range of Electrical Savings — Range of Electrical Savings — What is a savings — 0 10% 0 15% 0 10% 0 15% Calculate ranges of energy and cost savings — Range of Electrical Savings — Range of Electrical Savings — 0 10% 0 15% Calculate ranges of energy and cost savings — Range of Electrical Savings — 0 10% 0 15% Range of Electrical Savings — 0 10% 0 15% Range of Electrical Savings — 0 10% 0 15% Range of Electrical Savings — 0 10% 0 15% Range of Electrical Savings — 0 10% 0 15% Range of Electrical Savings — 0 10% 0 15% Range of Electrical Savings — 0 10% 0 15% Building does not use fuel 100% Range of Fuel Savings — 100% Range	Fuel 1	Fuel 1 Fuel 2 TOTAL 20% SAVINGS YEAR ENERGY TYPE ENERGY USAGE CONVERSION FACTOR Electricity Fuel 1 Fuel 2 TOTAL Instructions: This section is to be completed by the mini-auditor after the walk-thru portion of the mini-audit portion of the m	Fuel 1 Fuel 2 TOTAL 20% SAVINGS YEAR Fiscal Ye ENERGY TYPE ENERGY USAGE CONVERSION FACTOR Electricity Fuel 1 Fuel 2 TOTAL Instructions: This section is to be completed by the mini-auditor after the walk-thru portion of the mini-audit. First, check the a state the roughly estimated range of the percent of total electrical and fuel consumption which would be saved resulting from tot the new mini-audit open training and cost savings by must be stated the range of energy and cost savings by must be received and fuel consumption data on the energy report. Check two boxes in each category — Range of Electrical Savings — 00% 01,5% 010% 015% 020% 025% 04ther (Range of Fuel Savings — 00% 05,5% 010% 015% 020% 025% 04ther (Calculate ranges of energy and cost savings — Range of Electrical S

Instructions. Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor. OPTIONAL: OPTIONAL: CLASSIFICATION **ENERGY** NO **ENERGY** DATE OF IMPLEMENTATION ITEM PAST ENERGY CONSERVATION ACTIONS COST SAVINGS NO. MAJOR SUB **SAVINGS** CLASS CLASS 5 Routine maintenance schedule.

Note Reproduce this page as necessary

EW PPORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

20	CLASSIFICATION				OPTIONAL	
ITEM	NO.	O	NEW MINI-AUDIT OPPORTUNITIES	ENERGY	ENERGY COST	DATE OF IMPLEMENTATION
NO.	MAJOR CLASS	SUB CLASS		SAVINGS	SAVINGS	
1	1	1	Keep all controls free of dust.			
2	1	2	Look for loose connections and bad contacts on a regular basis.			
3	1	2	Eliminate excessive vibration.			
4	1	2	Lubricate motors to reduce wear and excessive torque.	, .		
5	1	2	Check alignment of motors to driven equipment, align and tighten as neces ary.	5-		
6	1	2	Replace worn or defective motors with motors that are sized as close to the load as possible and use the highest efficiency motors available.			
7	1	2	Where it is impractical to replace motors which have low loads and power factors, use capacitors at motor term inals to correct the power factor to 90%.			
8	1	3	An instantaneous power factor reading was .87.			
9	2	1	Add insulation to ceiling and hatch.			
10	2	2	Weatherstrip all exterior doors.			
11	2	8	Insulate walls with rigid insulation on inside surfaces.			
 12	3	1	Check the calibaration of all control and devices for proper settings and	ers		

JEW OPPORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

OPTIONAL: OPTIONAL:

	·		· · · · · · · · · · · · · · · · · · ·	OPTIONAL:	OPTIONAL	
ITEM NO.	CLASSIF NO MAJOR	O. SUB	NEW MINI-AUDIT OPPORTUNITIES	ENERGY SAVINGS	ENERGY COST SAVINGS	DATE OF IMPLEMENTATION
	CLASS	CLASS				
			operations.			
10	1		Check for packing wear which can caus	e		
13	3	3	excessive leakage. Repack to avoid			
			excessive water wastage and shaft erosion.			
1 //		_	Inspect bearings and drive belts for			
14	3	3	wear and binding. Adjust, repair or	}		
			replace as necessary.			
15	3	3	Inspect damper blades and linkages. Clean, oil and adjust.			
13	+		crean, orr and adjust.			
 	-		 	e		
16	5	1 1	monthly, energy consumption and pur-			
	1	† * *	chase of any new equipment that affect	ts		
			energy consumption of efficiency of			
			the building. These records will in-			
			dicate the impact of energy conserva-			
			tion measures.			
1.7	+		Review the record books on a regular			
17	5	1	basis.	 	-	
10	_	_	Inspect electrical contacts and work-	-		
18	7	4	ing parts of relays and maintain in			
			good working order.			
19	7	1	Check heater elements for cleanliness	; ,		
19	+ '-	4	Replace as necessary.			
		-	Chack controls for many analytics			
20	7	4	Check controls for proper operation. Adjust as necessary.			
	_	<u> </u>	Periodically tighten all electrical-	1	 	
21	7	4	mechanical connections to prevent arc ing and burning due to metal flow or	 	 	
			loosening of terminal bolts or lugs.		ļ	
•						
		1				1

A	BUILDING NAME		NAME OF ORGANIZATION	DATE	
A	Pump House - Well #4		City of Bloomington 3/18/8		
	BUILDING ADDRESS		ADDRESS		
	9301 Collegeview Road		2215 West Old Shakopee Road	1	
<u>-</u>	CITY	ZIP CODE	CITY	ZIP CODE	
ACT.	Bloomington	55431	Bloomington	55431	
CONT	PERSON COMPLETING FORM	TELEPHONE	CONTACT PERSON	TELEPHONE	
SO	Randy Smith	935-6901	Arthur Jensen	881-5811	

B	Instructions: For blocks 1 and 2 check the box which describes the building type and then within the ca				lour categories
	1. OWNERSHIP TYPE 3. QPublic (PUB) QNon-Profit Association (NAP)	a. SCHOOLS □ Elementary □ Secondary □ Coll. or Univ.	(SCHL-ELM) (SCHL-SECD) (SCHL-POST) (SCHL-VOCL)	LOCAL GOVERNMENT Office Storage Service Library	(LOCG-OFFC) (LOCG-STRG) (LOCG-SERV) (LOCG-LBRY)
CODE	2. ULTIMATE OWNER County (CNTY) XX(city (CITY) Township (TOWN)	□ Vocational □ Education Agency □ Administration □ OTHER b. PUBLIC CARE	(SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR)	□Police □Fire □OTHER	(LOCG-EBRY) (LOCG-PLCE) (LOCG-FIRE) (LOCG-OTHR)
BUILDING ELIGIBILITY CODE	□State (STAT) □Public School (PUSC) □Private School (PRSC) □Non-Profit Association (NPAP) □Indian Tribe (INDN)	ONUrsing Home OLong Term Care Rehab. Facility OPublic Health Ctr. Res. Child Care Ctr.	(PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-HCTR)	d. HOSPITALS □General □Tuberculosis □OTHER	(HOSP-GENL) (HOSP-TUBR) (HOSP-OTHR)
C	Instructions: With reference to page 23 entitled Fu just Federal funding, then answer the questions co				
	If eligible for both Federal and State Funding: Have you received a mini-audit grant before? Have you previously applied for mini-audit fund Do you wish to apply for mini-audit funding?	ing? XXYes DNo			
	Date: <u>March 18, 1981</u>				
	Name: Arthur Jensen				
	Signature: (Ittill) (1) Jennes	22			
	If eligible for Federal funding only: Have you received a mini-audit grant before? Have you previously applied for mini-audit fund Do you wish to apply for mini-audit funding? The 50% match for Federal funds will come from	ling? ☐ Yes ☐ No ☐ Yes ☐ No	ocessary.)		
_					
QUES	Date:				
DIT G RE(Name:				
MINI-AUDIT FUNDING REQUEST	Signature:				
3 5	2				

D	-		
		Check the type of energy report which was completed and submitted prior to this m	ini-audit report.
PORT		☐ Elementary School Energy Report (Form No. ED-00444-02) ☐ Secondary School Energy Report (Form No. ED-00445-02) XX Existing Building Energy Report (Form No. EN-00041-01)	
ENERGY REPORT CHECK-OFF		If an energy report has not been completed previous to this mini-audit report, one new vocational schools should use form ED-00444-02 or form ED-00445-02, depending on building energy report, form EN-00041-01.	
25 25		building diengy report, form Ext 66641 61.	
E		Instructions: This section is to be completed and signed by a registered professional completed the State of Minnesota's Mini-Audit Procedures Course. This section should are completed. All blanks must be filled in.	l engineer or by a certified mini-auditor who has successfully the completed after this mini-audit report and an energy report
		I have reviewed the energy report and/or the energy report results for this building. I for corrected any misinformation on the energy report which will be resubmitted with t	ound all information contained therein to be correct OR I have his mini-audit report to the Minnesota Energy Agency.
		I am not directly responsible for the day to day operations of this building being au	dited.
		I have fully disclosed my financial interests relating to this mini-audit and any energ	y conservation measures considered by this audit.
		I have walked through this building and have found the recommendations listed in maintenance changes, and low cost energy conservation measures, which would re	
		I have made a rough estimate, in section G, of the range of savings which may result listed in section I. I am not responsible if the actual savings resulting from this mini	-audit do not fall within the estimated range.
		Based on actual records, the energy conservation operating and maintenance proced 20% of the building's energy consumption as specified in section I.	dures listed in section K did not save at least (did, did not)
		Based upon my observation of the physical characteristics of this building and the SNOUL (not) be the subject of a maxi-audit.	building's major energy using systems, I recommend that this
		(should, should not) I realize that this is not a final judgement, that the State reserves the right to make the mand other criteria.	axi-audit funding determination based on this mini-audit report
		Based upon the information in section E and the information referred to in section F, I	recommend that this building <u>should not</u>
		ton bluede	(should, should not) indergo further analysis of the renewable resources — waste,
		wind, wood. (Circle proper resources) (should, should not)	
		In my judgement, as a mini-auditor, all of the above statements are true and correct	rt.
		Witness	sed by:
			sistant Maintepance Supervisor
			g Organizational Authority (Print or Type)
		Signature 206	
		Rieke Carroll Muller Associates, Inc. Firm Name (if none, enter none) Date	rch 18, 1981
		P.O. Box 130	
		612/935-6901 Phone	
		March 18, 1981 Date	
TIN			
MINI-AUDIT STATEMENTS			
MINI			
	L		

F	NAME	POSITION	ORGANIZATION
	Randy Smith	Certified Mini-Auditor	Rieke Carroll Muller Associates
	Scott Hutchins	CET	Rieke Carroll Muller Associates
	Art Parvey		City of Bloomington
<u></u> =			
AUDIT			
G	BRIEF DESCRIPTION OF GENERAL BI	JILDING CONDITION (i.e. type, and function)	
_	MAJOR CHANGES PLANNED WITHIN	NEXT 15 YEARS (i.e. demolition, rehabilitation, conv	version from one building type to another)
BUILDING INFORMATION		OF (i.e. metal beams, wooden rafters, concrete)	
OR	Concrete ROOFING MATERIAL (i.e. tar and grave	el, shingles, tile)	
B N	Tar and gravel	·	
Н	INSTRUCTIONS: Correctly answer the	following questions for the building being mini-audit	ed.
	Is there open land adjacent to the build XOX Yes No	ing?	
	Solar collectors need to be located in an 3 p.m.? Root: □ Yes XIX No South facing Wall: □ Yes XI No	unshaded area. Is the roof of the building and the south	facing wall unshaded between the hours of 9 a.m. and
	-	at percentage of the surface is unshaded? 10	
	What is the overall shape of the buildin		
	Is the roof of the building flat or pitche XIX flat □ pitched	• • • • • • • • • • • • • • • • • • • •	
	If pitched, what is the compass oriental	ion of the ridgeline?	
	If pitched, what is the angle that the ro	of makes with horizontal?	
	Are there large obstructions on the roo	f such as chimneys, rooms for mechanical equipmer	nt, ventilating units, water towers, etc?
	What is the exterior facing material for	the south facing wall? Face brick	
	What percentage of the south facing w	all is glass?%	
	Is the building's space heating equipmed. Dayes Displays	ent located within or on the building? (A no answer i	indicates the equipment is in a separate building.)
	If the space heating equipment is insid	e the building, where is it located? Roof □ Other (specify)	
NTIAL		ent located within the building? (A no answer indicat	
SOLAR POTENTIAL	If the water heating equipment is insid	e the building, where is it located? Other (specify)	
SOLAF		vstem, does it consist of multiple units, or is it a com-	

Inc.

Inc.

l				BASE PE	ERIOD YEA	R		Fiscal Y	ear	
	ENERGY TYPE	EN	IERGY USA	\GE	С	ONVERSION	FACTOR		BTU USA	AGE
	Electricity									
	Fuel 1									
	Fuel 2									
	TOTAL									
		4		20% SAV	INGS YEAR	3		Fiscal	rear	
	ENERGY TYPE	EN	ERGY US	AGE	C	ONVERSION	FACTOR		BTU US	AGE
	Electricity						4.4			
_	Fuel 1								are annual constraints althou	
	Fuel 2		· · · · · · · · · · · · · · · · · · ·							
	TOTAL							1		
	Instructions: This section is to be									
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electri	of the percent ties listed in s rical and fuel o	of total election L. S	ctrical and fu secondly, ca	uel consump alculate the	ntion which wo range of ene	uld be saved re	sulting from	the implem	entation of a
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor	of the percent ties listed in s rical and fuel c	of total election L. Sconsumptio	ctrical and fu secondly, ca n data on t	uel consump alculate the he energy r	otion which wo range of ene eport.	uld be saved re rgy and cost s	sulting from avings by m	the implem nultiplying	entation of a the estimate
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electricheck two boxes in each categor Range of Electrical Savings —	of the percent ties listed in sideal and fuel of the try —	of total election L. Sconsumptio	etrical and fusion data on t	uel consump alculate the he energy r	otion which wo range of ene eport.	uld be saved re rgy and cost s	sulting from avings by m	the implem nultiplying (specify)	entation of a
-	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — X Range of Fuel Savings — X	of the percent ties listed in s ical and fuel c ry — \$\$X0% \$\$X\$	of total election L. Sconsumptio	ctrical and fu secondly, ca n data on t	uel consump alculate the he energy r	otion which wo range of ene eport.	uld be saved re rgy and cost s	sulting from avings by m	the implem nultiplying (specify)	entation of a
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electricheck two boxes in each categor Range of Electrical Savings —	of the percent ties listed in s ical and fuel c ry — \$\$X0% \$\$X\$	of total election L. Sconsumptio	ctrical and fusion data on t	uel consump alculate the he energy r	otion which we range of ene eport.	uld be saved re rgy and cost s	sulting from avings by m	the implem nultiplying (specify)	entation of a
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — A Range of Fuel Savings — Calculate ranges of energy and compared to the same of the savings — Calculate ranges of energy and compared to the savings — Calculate ranges — Calculate ranges — Calculate ranges — Calculate ranges — C	of the percent ties listed in s ical and fuel c ry — KK0%	of total election L. Sconsumptio	ctrical and fusion data on t 10% 10% Range of E	uel consumpalculate the he energy r 15% 15% 15% Electrical Sales of Energy ings	avings	□ 25% □ 25% Annual E	sulting from avings by m other other	the implem nultiplying (specify) (specify)	entation of a
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and company to the same of the savings of energy and company to the savings of energy and co	of the percent ties listed in sirical and fuel cory — EXO% 0% cost savings Annual Elec	of total election L. Sconsumption 25% trical ion kwh =	Carical and fuecondly, can data on t 10% 10% Range of t Range of Sav	uel consump alculate the he energy r 15% 15% Electrical Sa	avings Range to	25%	ulting from avings by mother other other lectrical Spent * 5,81	the implem nultiplying (specify) (specify)	entation of a the estimate
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — X Range of Fuel Savings — X Calculate ranges of energy and compare the savings — X Range lower bound — 0 % x	of the percent ties listed in sical and fuel or y — KK0% K cost savings — Annual Elec Consumpt 187262	of total election L. Sconsumption 25% trical ion kwh =	Range of B	uel consumpalculate the he energy r 15% 15% 15% Electrical Saff Energy ings kwh,	avings % Range 0 % to 5 %	□ 25% □ 25% □ 25% Annual E Dollars x \$ 476	ulting from avings by mother other other lectrical Spent * 5,81	(specify) (specify) Range Doll	entation of a the estimate e of Electric lars Savings ()
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — X Range of Fuel Savings — X Calculate ranges of energy and compared to the same of	of the percent ties listed in sical and fuel or y — KK0% K cost savings — Annual Elec Consumpt 187262	of total election L. Sconsumption 2x5% 1 5% trical ion kwh =	Range of Bange Range Range Range Range Range Range Range	uel consumpalculate the he energy r 15% 15% 15% Electrical Satisfication with the satisfic	avings % Range 0 % to 5 %	□ 25% □ 25% □ 25% Annual E Dollars x \$ 476	ul Fuel	the implemental interpretation (specify) (specify) Range Doll	e of Electrical ars Savings 0 10 238.29
	state the roughly estimated range of the new mini-audit opportunit percentages by the annual electric Check two boxes in each categor Range of Electrical Savings — X Range of Fuel Savings — X Calculate ranges of energy and control of the X Range lower bound — 0 % x to upper bound — 5 % x Building does not upper bound — 5 % x	of the percent ties listed in sical and fuel of the percent of the sical and fuel of the sical and fuel of the sical and fuel of the sical and fuel of the sical and s	of total election L. Sconsumption 2x5% 1 5% trical ion kwh =	Range of B	uel consumpalculate the he energy r 15% 15% 15% Electrical Sate of Energy ings kwh, to kwh, to f Fuel Save	avings % Range 0 % to 5 % ings	D 25% D 25% D 25% Annual E Dollars x \$ 476	ul Fuel	the implemental interpretation (specify) (specify) Range Doll	e of Electrica ars Savings 0 to 238.29

^{*} Note: This figure is for 4 months.

K

Instructions. Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor.

OPTIONAL: OPTIONAL: CLASSIFICATION **ENERGY** DATE OF IMPLEMENTATION ITEM **ENERGY** PAST ENERGY CONSERVATION ACTIONS COST MAJOR SAVINGS NO. SUB CLASS CLASS Routine maintenance schedule.

VEW OPPORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

OPTIONAL: OPTIONAL:

				OPTIONAL:	OPTIONAL	
		ICATION			ENERGY	74
ITEM	N	The state of the s	NEW MINI-AUDIT OPPORTUNITIES	ENERGY	COST	DATE OF IMPLEMENTATION
NO.	MAJOR	SUB		SAVINGS	SAVINGS	
	CEASS	CLASS				
.1	1	1	Koon oll sentuals Coss of dust			
1	1	1	Keep all controls free of dust.			
		Ì	Look for loose connections and bad			
2	1	2	contacts on a regular basis.			· ·
	 		concaces on a regular pasis.			
	ļ	Ļ				
			Lubricate motors to reduce wear and			
3	1	2	excessive torque.			
				, .		
	+		Check alignment of water to be		<u> </u>	
4			Check alignment of motors to driven			
4	 	2	equipment, align and tighten as	dance was		
	j		necessary.			
		ĺ	·			
			Replace worn or defective motors with	1		
5	1	2	motors that are sized as close to the]		
	╁╌		lload as possible and use the highest	}		
	۲	1	load as possible and use the highest		1	
	_	ļ	efficiency motors available.			
			·			
		İ		1		
			Where it is impractical to replace	<u> </u>		
6	1	2	motors which have low loads and never]	Ì	
	╁┷┷	 	motors which have low loads and power	}	ļ	
		1	factors, use capacitors at motor			
		<u> </u>	terminals to correct the power factor	1		
			to 90%.			
	1	1	Capacitors are overheated and should	†	<u> </u>	
7	1	2	be checked.			
	 	+	be checked.	 	 	
		l				·
	↓	 		ļ	ļ	
		}				
8	2	1	Add insulation to ceiling and hatch.	1		
					1	
		1				
	1	 	Weatherstrip all exterior doors.	 	†	
9	2	2				
	+	+	Weatherstrip all exterior doors.	 	 	
		1				
			Insulate walls with rigid insulation			
10	2	8	on inside.			
	 	 		1	1	<u> </u>
	+		Chock the calibration of all and all	1000	-	
	_		Check the calibration of all control	ijers		
11	3	1 1	and devices for proper settings and			
			operations.			
		1				
***************************************	+	 	Check for packing wear which can	1	 	
12	3	3			1	
1 仁		1 2	cause excessive leakage. Repack to	<u> </u>	1	

EW PPORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

20	_		ation of the mini-addit report should be completed by the mini-addit	OPTIONAL:		
ITEM	CLASSIF	Ο.	NEW MINI-AUDIT OPPORTUNITIES	ENERGY	ENERGY COST	DATE OF IMPLEMENTATION
NO.	MAJOR CLASS	SUB CLASS	·	SAVINGS	SAVINGS	
			avoid excessive water wastage and			
			shaft erosion.			
			·		-	
			Transat basis			
13	3	3	Inspect bearings and drive belts for wear and binding. Adjust, repair or			
13	3	<u> </u>	replace as necessary.		<u> </u>	
			l cprace as necessary.			
			Inspect damper blades and linkages.			
14	3	3	Clean, oil and adjust.			
				,		
			Keep records of the operating schedu	е		
15	5	1	monthly energy consumption and pur-	ļ	ļ	
			chase of any new equipment that affect	ts		
	-	<u> </u>	energy consumption of efficiency of			
			the building. These records will			
	 	 	indicate the impact of energy conser-	 	ļ	
			vation measures.			
	 	 	Review the record books on a regular	 	 	
16	5	1	basis.			
	 			 	 	
			Inspect electrical contacts and work			
17	7	4	ing parts of relays and maintain in			
			good working order.			
		 	Check heater elements for cleanlines		 	
18	7	4	Replace as necessary.	٦.		
		<u> </u>	neprace as necessary.	 	 	
	ļ	ļ		ļ		
10	7		Check controls for proper operation.			
19	+ /	4	Adjust as necessary.	 	 	
					1	
			Periodically tighten all electrical-			
20	7	4	mechanical connections to prevent ar	d-		
			ing and burning due to metal flow or			
			loosening of terminal bolts or lugs.			
		 		-	_	
	 	+		+	 	
						
					1,	

A	BUILDING NAME		NAME OF ORGANIZATION	DATE
~	Water Tower - Vault		City of Bloomington	3-18-81
	BUILDING ADDRESS		ADDRESS	
	9000 4th Ave. S.		2215 West Old Shakopee Road	
_	CITY	ZIP CODE	CITY	ZIP CODE
ACT	Bloomington	55431	Bloomington	55431
CONT	PERSON COMPLETING FORM	TELEPHONE	CONTACT PERSON	TELEPHONE
ă	Randy Smith	935-6901	Arthur Jensen	881-5811

						our categories
1⊡Public (P	OUB) (NAP)	SCHOOLS DElementary Descondary Coll. or Univ.	(SCHL-ELM) (SCHL-SECD) (SCHL-POST)	C.	LOCAL GOVERNMENT Office Ostorage Oservice	(LOCG-OFFC) (LOCG-STRG) (LOCG-SERV)
County City	(CNTY) (CITY)	□Vocational □Education Agency □Administration □OTHER	(SCHL-VOCL) (SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR)		□Library □Police □Fire □OTHER	(LOCG-LBRY) (LOCG-PLCE) (LOCG-FIRE) (LOCG-OTHR)
	(STAT) b. (PUSC) (PRSC) (NPAP) (INDN)	PUBLIC CARE Nursing Home Long Term Care Rehab. Facility Public Health Ctr. Res. Child Care Ctr.	(PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-HCTR) (PBCR-RCCC)	d.	HOSPITALS General Tuberculosis OTHER	(HOSP-GENL) (HOSP-TUBR) (HOSP-OTHR)
ections: With reference to pa	age 23 entitled Fundi r the questions correc	ng Information, determine	if the facilities are	eligib ned ar	ele for both Federal and Sind dated by the head of the	tate funding or e organization.
e you received a mini-audit e you previously applied fo	t grant before? Dy or mini-audit funding?	X Yes No				**************************************
3-18-81						
117/11	111					
ible for Federal funding online you received a mini-audite you previously applied for you wish to apply for mini-	ly: t grant before?	Yes□ No Y □ Yes □ No Yes □ No	cessary.)			
9:						
	OWNERSHIP TYPE DPublic Non-Profit Association ULTIMATE OWNER County City Township State Public School Private School Non-Profit Association Indian Tribe	GWNERSHIP TYPE GWNERSHIP TYPE GPUBIC GPUB GNON-Profit Association GULTIMATE OWNER GCOUNTY GCITY GULTIMATE OWNER GCOUNTY GCITY GULTIMATE OWNER GCOUNTY GULTIMATE OWNER GCNTY GULTIMATE OWNER GCNTY GULTIMATE OWNER GCNTY (GITY) D. GULTIMATE OWNER GRAPH GULTIMATE OWNER GRAPH GRAPH GULTIMATE OWNER GRAPH GULTIMATE GENERAL GENERAL GOOD GOOD	WNERSHIP TYPE Public	ibes the building type and then within the category check off the sub category befitting the I WINERSHIP TYPE Public Non-Profit Association (NAP) Non-Profit Association (NAP) ULTIMATE OWNER County (CNTY) County (CITY) Township (TOWN) State (STAT) Public School (PUSC) Private School (PSC) Non-Profit Association (NPAP) Indian Tribe (INDN) Indian Tribe (INDN) Private School (PSC)	ibes the building type and then within the category check off the sub category befitting the building WNERSHIP TYPE Public (PUB) Deblic (PUB) Compared to the provided and the public of the publ	Public (PUB)

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Check the type of energy report which was completed and submitted prior to this mini-audit report.

☐ Elementary School Energy Report (Form No. ED-00444-02)
☐ Secondary School Energy Report (Form No. ED-00445-02)
☑ Existing Building Energy Report (Form No. EN-00041-01)

If an energy report has not been completed previous to this mini-audit report, one must be included with this report. Elementary, secondary, and vocational schools should use form ED-00444-02 or form ED-00445-02, depending on building complexity. All other buildings should use the existing building energy report, form EN-00041-01.

completed the State of Minnesota's Mini-Audit Procedures Course. This se are completed. All blanks must be filled in.	professional engineer or by a certified mini-auditor who has successiony iction should be completed after this mini-audit report and an energy report
I have reviewed the energy report and/or the energy report results for this corrected any misinformation on the energy report which will be resubm	building. I found all information contained therein to be correct <i>OR</i> I have nitted with this mini-audit report to the Minnesota Energy Agency.
I am not directly responsible for the day to day operations of this building	ng being audited.
I have fully disclosed my financial interests relating to this mini-audit an	d any energy conservation measures considered by this audit.
I have walked through this building and have found the recommendation maintenance changes, and low cost energy conservation measures, whi	ons listed in section I of this mini-audit report to be the operations and ch would reduce energy consumption in this building.
I have made a rough estimate, in section G, of the range of savings which listed in section I. i am not responsible if the actual savings resulting from	n may result from the implementation of all of the mini-audit opportunities om this mini-audit do not fall within the estimated range.
Based on actual records, the energy conservation operating and mainten 20% of the building's energy consumption as specified in section I.	nance procedures listed in section K did not save at least (did, did not)
——————————————————————————————————————	ing and the building's major energy using systems, I recommend that this
(should, should not) I realize that this is not a final judgement, that the State reserves the right to and other criteria.	o make the maxi-audit funding determination based on this mini-audit report
Based upon the information in section E and the information referred to in	section F, I recommend that this building Should not (should, should not)
undergo further solar conversion analysis, and/or <u>should not</u> wind, wood. (Circle proper resources) (should, should	undergo further analysis of the renewable resources — waste,
In my judgement, as a mini-auditor, all of the above statements are true	e and correct.
	Wildersond by
	Witnessed by:
Randy Smith Mini-Auditor's Name (Print or Type)	Asst. Maintenance Supervisor Building/Olganizational Authority (Print or Type)
Signature 206	Signature Signature
_Rieke_Carroll_Muller	3-18-81
Firm Name (if none, enter none)	Date
P.O. Box 130 Address	
612 935-6901 Phone	•
<u>3-18-81</u> Date	

F	NAME .	POSITION	ORGANIZATION
	Rand	dy Smith Certified Mini-Auditor	RCM
AUDIT		tt Hutchins CET RCM	
	Art	Parvey City of Bloom	ington
G		TION OF GENERAL BUILDING CONDITION (i.e. type, add, underground vault	nd function)
_	MAJOR CHANG		rehabilitation, conversion from one building type to another)
INFORMATION	STRUCTURAL C	COMPONENTS OF ROOF (i.e. metal beams, wooden rafte CYP te	irs, concrete)
INFOR	ROOFING MATE	ERIAL (i.e. tar and gravel, shingles, tile)	
H	INSTRUCTIONS	: Correctly answer the following questions for the building	g being mini-audited.
1	Is there open lar ☐ Yes ☐ No	nd adjacent to the building?	
	3 p.m.? Roof: DX Yes		ilding and the south facing wall unshaded between the hours of 9 a.m. and
	% of roof unst	ill are partly shaded, what percentage of the surface is un naded	shaded?
	Whet is the over	rall shape of the building? I rectangle H-shaped E-shaped other (spec	ity)
		e building flat or pitched?	
		is the compass orientation of the ridgeline?	
	If pitched, what	is the angle that the roof makes with horizontal?	•
	Are there large	obstructions on the roof such as chimneys, rooms for me o	chanical equipment, ventilating units, water towers, etc?
	What is the exte	erior facing material for the south facing wall?NONE	
	What percentag	e of the south facing wall is glass? %	
	Is the building's ☐ Yes ☐ N	space heating equipment located within or on the building NONE	ng? (A no answer indicates the equipment is in a separate building.)
	If the space hea	ating equipment is inside the building, where is it located' loor	?
Z Z		s water heating equipment located within the building? (A	A no answer indicates the equipment is in a separate building)
SOLAR POTENTIAL NFORMATION	If the water hea	ating equipment is inside the building, where is it located?	?
NFOR	is the water he		units, or is it a combination of the central and multiple units?

					BASE	ERIOD YEA	10			Fisca	ıl Voar		
	ENERGY TYPE		ENERG	Y USA		1	CONVERSI	ON FA	ACTOR	Fisca		TU US	
	Electricity								***************************************	 			
	Fuel 1	1											
	Fuel 2												
	TOTAL											**********	
					20% SA	/INGS YEA	ıR			Fisc	ai Yea	ſ	
	ENERGY TYPE		ENERG	Y USA	GE.		CONVERSI	ON F	ACTOR		1	BTU US	AGE
	Electricity		`										
	Fuel 1												
	Fuel 2												
	TOTAL												
_													
	Instructions: This section is to b state the roughly estimated rang of the new mini-audit opportu percentages by the annual elec	ge of the nities lis	percent of to	tal elect	rical and f	uel consum alculate the	ption which a range of	would	d be saved re	sulting fr	om the	implen	nentation of a
	state the roughly estimated rang of the new mini-audit opportu	ge of the nities lis ctrical ar	percent of to	tal elect	rical and f	uel consum alculate the	ption which a range of	would	d be saved re	sulting fr	om the	implen	nentation of a
	state the roughly estimated rang of the new mini-audit opportu percentages by the annual elec	ge of the nities lis ctrical ar gory —	percent of to ited in section and fuel cons	tal elect on L. Se umption	rical and f condly, c	uel consum alculate the	ption which a range of	n would energy	d be saved re	esulting from	om the	implen iplying	nentation of a
	state the roughly estimated rang of the new mini-audit opportu percentages by the annual elec Check two boxes in each categ Range of Electrical Savings — Range of Fuel Savings —	ge of the nities list ctrical argory — XX 0%	percent of to sted in section and fuel consistency \$\sqrt{\chi}\chi_{\chi} 5\%	tal elect on L. Se umption	rical and f condly, o data on	uel consum alculate the he energy	ption which e range of report.	would energy	d be saved roy y and cost	esulting from savings by	om the y mult her (sp	implentiplying	nentation of a the estimate
	state the roughly estimated rang of the new mini-audit opportu percentages by the annual elec Check two boxes in each categ Range of Electrical Savings —	ge of the nities list ctrical argory — XX 0%	percent of to sted in section and fuel consistency \$\sqrt{\chi}\chi_{\chi} 5\%	tal elect on L. Se umption	data on 1	uel consum alculate the he energy 15%	ption which a range of report.	would energy	d be saved roy and cost	esulting from savings by	om the y mult her (sp	implentiplying	nentation of a
	state the roughly estimated rang of the new mini-audit opportu percentages by the annual elec Check two boxes in each categ Range of Electrical Savings — Range of Fuel Savings —	ge of the nities listrical argory — XX 0% 0% 1 cost sa	percent of to ted in section of fuel consi	tal elect on L. Se umption	condly, of data on 110%	uel consum alculate the he energy 15% 15%	ption which a range of report.	would energy	d be saved roy and cost:	osulting from savings by	om the y mult her (sp	pecify)	nentation of a
	state the roughly estimated rang of the new mini-audit opportu percentages by the annual elec Check two boxes in each categ Range of Electrical Savings — Range of Fuel Savings —	ge of the nities listotrical argory — XXX 0% 0 0% 1 cost sa	percent of to sted in section and fuel constant \$\sum_{\cup}^{\cup} 5\%	tal elect on L. Se umption	rical and ficondly, of data on 1	uel consum alculate the he energy 15%	ption which a range of report.	wouldenergy	d be saved rey and cost :	esulting from savings by	om the y mult her (sp	pecify)	nentation of a
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	state the roughly estimated rang of the new mini-audit opportung percentages by the annual electronic content of the category of the content of the category o	ge of the nities listical argory — XOX 0% □ 0% □ d cost sa	percent of to ted in section of fuel consistency of the consistency of	tal election L. Se umption	rical and ficondly, of data on 1 10% 1 10% Range of Sar	uel consumalculate the he energy 15% 15% Electrical Soft Energy	ption which a range of report.	wouldenergy	d be saved roy and cost : 25% 25% Dollars	esulting fresevings by other of the control of the	om the y mult her (sp	pecify)	e of Electric
	state the roughly estimated rang of the new mini-audit opportunce percentages by the annual electron check two boxes in each categoral Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and Range lower bound 0 % Range	ge of the nities listical argory — XOX 0% □ 0% □ cost sa Annu Co 51	percent of to ted in section of fuel consider of the consideration of the co	tal election L. Secumption C	rical and ficondly, of data on 1 10% 1 10% Range of Sar	uel consumalculate the he energy 15% 15% 15% Electrical Sof Energy rings kwh.	ption which a range of report.	wouldenergy	d be saved roy and cost : 25% 25% Dollars	esulting fresavings by other of the savings by other of the savings by other other of the savings of the saving	om the y mult her (sp	ecity) Decity) Rang Dol	e of Electric lars Savings
	state the roughly estimated rang of the new mini-audit opportupercentages by the annual electrical savings. Check two boxes in each categrange of Electrical Savings. Range of Fuel Savings. Calculate ranges of energy and which was a second of the savings. **Range** **Range** lower bound** **To upper	ge of the nities list circal argory — XOX 0% □ 0% □ cost sa Annu Co 51	percent of to ted in section of fuel consistence of the consistence of	tal election L. Secumption C	rical and ficondly, conduction of the conduction	uel consumalculate the he energy 15% 15% Electrical Sof Energy rings kwh,	ption which a range of report.	wouldenergy	d be saved roy and cost: 25% 25% Dollars \$255	esulting fresavings by other of the savings by other of the savings by other other of the savings of the saving	om the y mult her (sp	ecity) Decity) Rang Dol	e of Electric lars Savings
	state the roughly estimated rang of the new mini-audit opportupercentages by the annual electorical savings. Check two boxes in each categoral savings. Range of Electrical Savings. Calculate ranges of energy and which was a second saving second second saving second saving second saving second saving second saving second saving second	ge of the nities listorical argory — XOX 0% □ 0% □ cost sa Annu Co 51 □ 15 □ 15 □ 15 □ 15 □ 15 □ 15 □ 15	percent of total distributed in section of the consistence of the consistence of the consistence of the consumption of the cons	tal election L. Secumption C	rical and foodly, condity, condity, condity, condity, conditions on the food of the food o	uel consumalculate the energy 15% 15% 15% Electrical Sof Energy rings kwh, - to kwh, -	ption which a range of report. 20 20 20 8 Avings 4 Range 0 % to 5 %	n would renergy	d be saved rey and cost : 25% 25% Annual & Dollars \$255	esulting fresavings by other of the savings by other of the savings by other of the savings by other other of the savings by other o	om the y mult her (sp	Rang Dol	e of Electric lars Savings 0 to 12.78
	state the roughly estimated rang of the new mini-audit opportupercentages by the annual electron category and the state of	ge of the nities list ctrical argory — XOX 0% — 0% — 1 cost sa — Annu Co — 51 — 51 — 4 — Co	percent of to ted in section of the first section o	tal electon L. Secumption C I	rical and foodly, condity, condity, condity, condity, conditions on the food of the food o	uel consumalculate thiche energy 15% 15% 15% Electrical S of Energy rings kwh, - to kwh, -	ption which a range of report. 20 20 20 4 savings Range 0 % vings Range	x x	d be saved rey and cost : 25% 25% Annual E Dollars \$255 \$255	esulting fresavings by other of the control of the	omthe y mult her (sp	Rang Dol	e of Electric lars Savings 0 to 12.78
	state the roughly estimated rang of the new mini-audit opportupercentages by the annual electron category and the state of	ge of the nities listorical argory — XOX 0% d cost sa Anni Co 51 USE f	percent of total distributed in section of the consistence of the consistence of the consistence of the consumption of the cons	tal electon L. Secumption C I	rical and foodly, condity, condity, condity, condity, conditions on the food of the food o	uel consumalculate the energy 15% 15% 15% Electrical Sof Energy rings kwh, - to kwh, -	ption which a range of report. 20 20 20 4 savings Range 0 % vings Range	x x	d be saved rey and cost : 25% 25% Annual E Dollars \$255 \$255	esulting fresavings by other of the savings by other of the savings by other of the savings by other other of the savings by other o	om the y mult her (sp	Rang Dol	e of Electric lars Savings 0 to 12.78

K

Instructions. Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor.

OPTIONAL: OPTIONAL CLASSIFICATION **ENERGY** NO. **ENERGY** DATE OF IMPLEMENTATION ITEM PAST ENERGY CONSERVATION ACTIONS COST SAVINGS NO. MAJOR SUB SAVINGS **CLASS** CLASS 2 5 Routine Maintenance Schedule 1

NEW OPPORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

OPTIONAL: OPTIONAL CLASSIFICATION **ENERGY** NO **ENERGY** ITEM DATE OF IMPLEMENTATION **NEW MINI-AUDIT OPPORTUNITIES** COST MAJOR SAVINGS SUB SAVINGS CLASS CLASS Keep all controls free of dust Check that the valves open fully, 3 close tightly, and don't leak. 3 3 Lubricate all bearings on valves Keep records of the operating schedule, monthly energy consumption and purchase of any new equipment that affects energy consumption of efficiency of the building. These records will indicate the impact of energy conservation measures. Review the record books on a regular

A	BUILDING NAME		NAME OF ORGANIZATION	DATE
A	Water Reservior - Vault		City of Bloomington	3-18-81
	BUILDING ADDRESS		ADDRESS	
	9951 - Rich Road		2215 West Old Shakopee Road	
_	CITY	ZIP CODE	CITY	ZIP CODE
ACT	Bloomington	55431	Bloomington	55431
CONT	PERSON COMPLETING FORM	TELEPHONE	CONTACT PERSON	TELEPHONE
22	Randy Smith	935-6901	Arthur Jensen	881-5811

B	Ins des	tructions: For blocks 1 and 2 scribes the building type and	check the box then within th	which b	est fits the building owners ory check off the sub cate	thip conditions. Fo	r bloc buildi	k 3 determine which of the fing function.	our categories
	1.	QWNERSHIP TYPE ĀIPublic (F □Non-Profit Association	PUB) (NAP)	За.	SCHOOLS □Elementary □Secondary □Coll. or Univ.	(SCHL-ELM) (SCHL-SECD) (SCHL-POST)	C.	LOCAL GOVERNMENT Office Storage Service	(LOCG-OFFC) (LOCG-STRG) (LOCG-SERV)
ODE	2.	ULTIMATE OWNER County City	(CNTY) (CITY)		□Vocational □Education Agency □Administration □OTHER	(SCHL-VOCL) (SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR)		□Library □Police □Fire □OTHER	(LOCG-LBRY) (LOCG-PLCE) (LOCG-FIRE) (LOCG-OTHR)
BUILDING ELIGIBILITY C		☐ Township☐ State☐ Public School☐ Private School☐ Non-Profit Association☐ Indian Tribe	(TOWN) (STAT) (PUSC) (PRSC) (NPAP) (INDN)	b.	PUBLIC CARE Nursing Home Long Term Care Rehab. Facility Public Health Ctr. Res. Child Care Ctr.	(PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-HCTR) (PBCR-RCCC)	d.	HOSPITALS □General □Tuberculosis □OTHER	(HOSP-GENL) (HOSP-TUBR) (HOSP-OTHR)
	· · · ·	tructions: With reference to a							

		determine if the facilities are eligible for both Federal and State funding or ion. This section must be signed and dated by the head of the organization.
Have Have	ole for both Federal and State Funding: y y you received a mini-audit grant before? ☐ Yes ☐ No you previously applied for mini-audit funding? ☐ Yes ☐ No ou wish to apply for mini-audit funding? ☐ Yes ☐ No	0
Date: .	3-18-81	_
Name:	Arthur Jensen	_
Signat	ure: Myun W Jensen	_
Have Have Do	ole for Federal funding only: you received a mini-audit grant before? you previously applied for mini-audit funding? Yes No you wish to apply for mini-audit funding? Yes No 50% match for Federal funds will come from: (Use additional s	
	30% materi for rederal funds will come from. (Use additional s	neets if necessary.)
	,	
1		
Date:		
Date: Name Signa		

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	NAME		POSITION	ORGANIZATION
and the second				
No.	Randy	Smith Cer	tified Mini-Auditor	RCM
No. of apparent contracts				·
*Constraint				
The Party of Land	Scott	Hutchins	CET RCM	
N N	30000	Hu CCH HIS	CLI KUI	
	Art Pa	ırvey	City of Bloo	mington
-				
		rtion of GENER undergroun	AL BUILDING CONDITION (i.e. type,	and function)
Affilia dagla				rehabilitation, conversion from one building type to another)
N	none			
- E	STRUCTURAL		ROOF (i.e. metal beams, wooden raft	ters, concrete)
NFO			gravel, shingles, tile)	
5 2	Concre			
H	INSTRUCTIONS	S: Correctly answe	r the following questions for the buildi	ng being mini-audited.
Жинтеле	Is there open la	nd adjacent to the	building?	
Political Control			in an unahaded area, le the roof of the h	uilding and the south facing wall unshaded between the hours of 9 a.m. and
Vieragasposition	3 p.m.? Roof: □ Yes	V		unumg and the south facing wan unshaded between the hours of 9 a.m. and
riggel	If the roof or wa	il are partly shade	d, what percentage of the surface is u	nshaded?
Recognition	% of roof uns % of south fac	nadedU cing wall unshaded	mar personage of the samuel is a	·
Participality.	What is the ove	rall shape of the bill rectangle DH	uilding? -shaped □ E-shaped □ other (spe	city)
Properties	ls the roof of th	e building flat or p tched	itched?	
100	If pitched, what	is the compass or	ientation of the ridgeline?	
Figure	If pitched, what	is the angle that t	he roof makes with horizontal?	•
physiochemical physical Are there large	obstructions on th	e roof such as chimneys, rooms for m	echanical equipment, ventilating units, water towers, etc?	
100	What is the exte	erior facing materi	al for the south facing wall?NONE	
Month and American	What percentag	e of the south fac	ing wall is glass?%	
A	Is the building's	s space heating eq lo NONE	uipment located within or on the build	ding? (A no answer indicates the equipment is in a separate building.)
With the second	If the space he	ating equipment is loor D Basemen	inside the building, where is it located Boof Other (specify)	d?
POTENTIAL A.	Is the building'	s water heating eq No NONE	uipment located within the building? (A no answer indicates the equipment is in a separate building)
M. DOTE	If the water hea	ating equipment is loor D Basemen	inside the building, where is it located t □ Other (specify)	d?
ORM	is the water he	ating system a cer	itral system, does it consist of multiple ombination	units, or is it a combination of the central and multiple units?
	·			

L				BASE F	PERIOD YEA	R		Fiscal Y	ear	
	ENERGY TYPE		ENERGY	USAGE	С	ONVERSION F	ACTOR		BTU US	AGE
	Electricity									
	Fuel 1						<u> </u>			
	Fuel 2									
-	TOTAL									
				20% SA	VINGS YEAR	R		Fiscal Y	/ear	
	ENERGY TYPE		ENERGY	USAGE	C	ONVERSION	FACTOR		BTU US	SAGE
-	Electricity									
-	Fuel 1									
	Fuel 2	1				and the second s				
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Instructions. Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor. OPTIONAL: OPTIONAL: CLASSIFICATION **ENERGY** NO **ENERGY** DATE OF IMPLEMENTATION ITEM PAST ENERGY CONSERVATION ACTIONS COST **SAVINGS** NO. MAJOR SUB SAVINGS CLASS CLASS 2 5 Routine Maintenance Schedule.

ote Reproduce this page as necessary

IEW
OPPORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

DATE OF IMPLEMENTATION
35

A	BUILDING NAME		NAME OF ORGANIZATION	DATE 2 10 01			
-	Walter Tower - Base		City of Bloomington 3-18-81				
	BUILDING ADDRESS		ADDRESS				
	8400 Winslow Road		2215 West Old Shakopee Road				
_	CITY	ZIP CODE	CITY	ZIP CODE			
S	Bloomington	55431	Bloomington	55431			
CONTACT	PERSON COMPLETING FORM	TELEPHONE	CONTACT PERSON	TELEPHONE			
08	Randy Smith	935-6901	Arthur Jensen	881-5811			

1.	OWNERSHIP TYPE ØPublic (P □Non-Profit Association	PUB) (NAP)	3a.	SCHOOLS □ Elementary □ Secondary □ Coll. or Univ.	(SCHL-ELM) (SCHL-SECD) (SCHL-POST)	C.	LOCAL GOVERNMENT Office Storage	(LOCG-OFFC (LOCG-STRG (LOCG-SERV
2.	ULTIMATE OWNER County	(CNTY) (CITY)		□Vocational □Education Agency □Administration □OTHER	(SCHL-VOCL) (SCHL-ADMN) (SCHL-ADMN) (SCHL-OTHR)		□Library □Police □Fire □OTHER	(LOCG-LBRY (LOCG-PLCE (LOCG-FIRE) (LOCG-OTHF
	☐ Township ☐ State ☐ Public School ☐ Private School ☐ Non-Profit Association ☐ Indian Tribe	(TOWN) (STAT) (PUSC) (PRSC) (NPAP) (INDN)	b.	PUBLIC CARE Nursing Home Long Term Care Rehab. Facility Public Health Ctr. Res. Child Care Ctr.	(PBCR-NURS) (PBCR-TERM) (PBCR-RHAB) (PBCR-HCTR) (PBCR-RCCC)	d.	HOSPITALS □General □Tuberculosis □OTHER	(HOSP-GENL (HOSP-TUBR (HOSP-OTHR

	□Indian Tribe (INDN)	□ Res. Child Care Ctr. (PBCR-RCCC)
C		Funding Information, determine if the facilities are eligible for both Federal and State funding or correctly for the situation. This section must be signed and dated by the head of the organization.
	If eligible for both Federal and State Funding: Have you received a mini-audit grant before? Have you previously applied for mini-audit fu Do you wish to apply for mini-audit funding?	nding? ØYes □No
	Date: <u>3-18-81</u>	
	Name: Arthur Jensen Signature: Allill, M Jim	u_1
	If eligible for Federal funding only: Have you received a mini-audit grant before? Have you previously applied for mini-audit fu Do you wish to apply for mini-audit funding The 50% match for Federal funds will come f	P □ Yes□ No Inding? □ Yes □ No P □ Yes □ No
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EOU	Date:	
NG F	Name:	
WINI-AUDIT	Signature:	

20% of the building's energy consumption as specified in section I. (did, did not) Based upon my observation of the physical characteristics of this building and the building's major energy using systems, I recommend that to Should, should not) I realize that this is not a final judgement, that the State reserves the right to make the maxi-audit funding determination based on this mini-audit repland other criteria. Based upon the information in section E and the information referred to in section F, I recommend that this building Should not (should, should not)								
Esting Building Energy Report (Form No. ED-00445-02) Esting Building Energy Report (Form No. ED-00445-02) If an energy report has not been completed previous to this mini-audit report, one must be included with this report. Elementary, secondary, an overall as entering the control of the	Check the type of energy report which was completed and submitted	prior to this mini-audit report.						
Instructions: This section is to be completed and signed by a registered professional engineer or by a certified mini-auditor who has successful completed the State of Minnesotia's Mini-Audit Procedures Course. This section should be completed after this mini-audit report and an energy report are completed. All blanks must be filled in. I have reviewed the energy report and/or the energy report results for this building. I found all information contained therein to be correct OR I had corrected any misinformation on the energy report which will be resulmitted with this mini-audit report to the Minnesota Energy Agency. I am not directly responsible for the day to day operations of this building being sudfled. I have fully disclosed my financial interests relating to this mini-audit and any energy conservation measures considered by this audit. I have waked through this building and have found the recommendations listed in section I of this mini-audit report to be the operations a maintenance changes, and low cost energy conservation measures, which would reduce energy consumption in this building. I have made a rough estimate, in section G, of the range of savings which may result from the implementation of all of the mini-audit opportunit isted in section I. I am not reponsible if the actual savings resulting from this mini-audit from the implementation of all of the mini-audit opportunit isted in section 5. Based on actual records, the energy conservation operating and maintenance procedures listed in section K. Glid, did not) I realize that this is not a final judgement, that the State reserves the right to make the maxi-audit funding determination based on this mini-audit report of the buildings and the buildings major energy using systems. I recommend that the building of the renewable resources of the subject of a maxi-audit. Based upon the information in section E and the information referred to in section F. I recommend that this building Should not) I realize hat this is not a final judgement,	Secondary School Energy Report (Form No. ED-00445-02)							
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612 935-6901 Phone	(should, should not) I realize that this is not a final judgement, that the State reserves the right and other criteria. Based upon the information in section E and the information referred to undergo further solar conversion analysis, and/or Should no wind, wood. (Circle proper resources) (should, should in my judgement, as a mini-auditor, all of the above statements are to realize the statements are to signature 206 Rieke Carroll Muller	to make the maxi-audit funding determination based on this mini-audit report in section F, I recommend that this building Should not (should, should not) t undergo further analysis of the renewable resources — was due and correct. Witnessed by: Asst. Maintenance Supervisor Building Organizational Authority (Print or Type) Signature 3-18-81						
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<u>3-18-81</u> Date	(should, should not) I realize that this is not a final judgement, that the State reserves the right and other criteria. Based upon the information in section E and the information referred to undergo further solar conversion analysis, and/or Should no wind, wood. (Circle proper resources) (should, should no wind, wood. (Circle proper resources) In my judgement, as a mini-auditor, all of the above statements are to the statement of the shows statement o	to make the maxi-audit funding determination based on this mini-audit report in section F, I recommend that this building Should not (should, should not) t undergo further analysis of the renewable resources — was due and correct. Witnessed by: Asst. Maintenance Supervisor Building Organizational Authority (Print or Type) Signature 3-18-81						
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MINI-AUD

F	NAME POSITION ORGANIZATION
	Randy Smith Certified Mini - Auditor RCM
TEAM	Scott Hutchins CET RCM
TEC	Art Parvey City of Bloomington
	BRIEF DESCRIPTION OF GENERAL BUILDING CONDITION (i.e. type, and function)
G	Good, water tower base
	MAJOR CHANGES PLANNED WITHIN NEXT 15 YEARS (i.e. demolition, rehabilitation, conversion from one building type to another)
S N	NONE STRUCTURAL COMPONENTS OF ROOF (i.e. metal beams, wooden rafters, concrete)
MA	metal
BUI	ROOFING MATERIAL (i.e. tar and gravel, shingles, tile)
<u>=</u> 1	metal
A	INSTRUCTIONS: Correctly answer the following questions for the building being mini-audited.
	Is there open land adjacent to the building? ☑ Yes □ No
	Solar collectors need to be located in an unshaded area. Is the roof of the building and the south facing wall unshaded between the hours of 9 a.m. and 3 p.m.? Roof: 🖒 Yes 🗆 No South facing Wall: 🛱 Yes 🗆 No
	If the roof or wall are partly shaded, what percentage of the surface is unshaded? % of roof unshaded
	What is the overall shape of the building? ☐ square ☐ rectangle ☐ H-shaped ☐ E-shaped ☐ other (specify) round
	Is the roof of the building flat or pitched?
	If pitched, what is the compass orientation of the ridgeline?
	If pitched, what is the angle that the roof makes with horizontal?
	Are there large obstructions on the roof such as chimneys, rooms for mechanical equipment, ventilating units, water towers, etc? Yes No
	What is the exterior facing material for the south facing wall? metal
	What percentage of the south facing wall is glass?%
	Is the building's space heating equipment located within or on the building? (A no answer indicates the equipment is in a separate building.) □ Yes □ No NONE
	If the space heating equipment is inside the building, where is it located? ☐ Ground Floor ☐ Basement ☐ Roof ☐ Other (specify)
ALL	Is the building's water heating equipment located within the building? (A no answer indicates the equipment is in a separate building.) — Yes — No — NONE
OLARNTIA.	If the water heating equipment is inside the building, where is it located? ☐ Ground Floor ☐ Basement ☐ Other (specify)
OLAF	Is the water heating system a central system, does it consist of multiple units, or is it a combination of the central and multiple units? □ Central □ Multiple □ Combination

- 1				BASE F	ERIOD YEA	.R		Fiscal Y	ear	
	ENERGY TYPE		ENERGY	USAGE	C	ONVERSION	FACTOR		BTU US	AGE
Ì	Electricity									
	Fuel 1									
	Fuel 2									
	TOTAL								***	
-				20% SA	VINGS YEA	R		Fiscal	√ear	
	ENERGY TYPE		ENERGY	USAGE		CONVERSION	FACTOR		BTU US	SAGE
I	Electricity								····	-
	Fuel 1									
	Fuel 2						-			
	TOTAL									
	Instructions: This section is to b	e complete	d by the min	i-auditor after	the walk-thru	portion of the	mini-audit. Firs	st, check the	approprial	e boxes which
	Instructions. This section is to be state the roughly estimated range of the new mini-audit opportupercentages by the annual elec	ge of the per unities listed ctrical and f	cent of total	electrical and L. Secondly.	luel consump	ption which wo	uld be saved re	sulting from	the implen	nentation of all
	state the roughly estimated ranged the new mini-audit opportune percentages by the annual electric check two boxes in each category.	ge of the per unities listed ctrical and f gory —	cent of total in section uel consum	electrical and L. Secondly, o ption data on	luel consump calculate the the energy r	ption which wo range of ene- eport.	uld be saved re rgy and cost s	sulting from avings by m	the implen nultiplying	nentation of all the estimated
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	state the roughly estimated range of the new mini-audit opportung percentages by the annual electrical Savings — Range of Fuel Savings —	ge of the per inities listed ctrical and f gory —	Cent of total I in section luel consum CX 5%	electrical and L. Secondly, option data on 10% 10% Range of	uel consumpalculate the the energy r	otion which wo range of energeport.	uld be saved rergy and cost s	sulting from avings by m	the implementally ing (specify) (specify)	nentation of all the estimated
	state the roughly estimated range of the new mini-audit opportung percentages by the annual electrical Savings — Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and	ge of the per inities listed ctrical and f gory —	Cent of total in section luel consum \$\frac{1}{2}\) 5% \$\frac{1}{2}\) 5% \$\frac{1}{2}\) 5% Electrical umption	electrical and L. Secondly, option data on 10% 10% Range of Range	uel consumpaiculate the the energy r	ption which wo range of energeport. 20% 20% 20% Range	uld be saved rergy and cost s	sulting from avings by m other other	the implementally ing (specify) (specify)	e of Electrical
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	state the roughly estimated range of the new mini-audit opportung percentages by the annual electrical savings — Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and — % Range lower bound — to upper bound — 5 — %	ge of the per unities listed ctrical and for gory — M 0% — 0% — 0% — 1279 — 1279	Cant of total in section fuel consum 13 5% 15% 15% 15% 15% 24 5% 25% 25% 25% 26% 26% 27% 28% 28% 28% 28% 28% 28% 28	electrical and L. Secondly, option data on 10% Range of Range = 639	Leel consumplication and the energy of the e	potion which wo range of energeport. 20% 20% 20% Avings Range 0 % to 5 %	□ 25% □ 25% □ Dollars	sulting from avings by m other other	(specify) (specify) Rang Doi	e of Electrical lars Savings
	state the roughly estimated range of the new mini-audit opportung percentages by the annual electrical savings — Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and Range Nower bound % Range	ge of the per unities listed ctrical and for gory — 0% 0% d cost savin Annual Consult 1279 at	Cant of total in section fuel consum 13 5% 15% 15% 15% 15% 24 5% 25% 25% 25% 26% 26% 27% 28% 28% 28% 28% 28% 28% 28	electrical and L. Secondly, option data on 10% 10% Range of Range Sa =	Leel consumplication and the energy of the e	potion which wo range of energeport. 20% 20% 20% Avings Range 0 % to 5 %	uld be saved regy and cost s 25% 25% Annual E Dollars x \$ 57. Annual	sulting from avings by m other other	the implemental triangle (specify) (specify) Rang Doi \$	e of Electrical lars Savings
	state the roughly estimated rang of the new mini-audit opportung percentages by the annual electrical savings — Range of Electrical Savings — Range of Fuel Savings — Calculate ranges of energy and to to upper bound	ge of the per unities listed ctrical and for the gory — 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	Ceent of total in section luel consum C 5% 5% 5% Electrical umption kwh kwh lual Fuel	electrical and L. Secondly, option data on 10% 10% Range of Range Sa =	Lectrical Signature to kwh, to kwh, to kwh, to to fuel Savings	ption which wo range of energeport. 20% 20% 20% **Range 0 % to 5 % **Ings	uld be saved regy and cost s 25% 25% Annual E Dollars x \$ 57. Annual	sulting from avings by many other other other lectrical Spent 1.98	the implemental triangle (specify) (specify) Rang Doi \$	e of Electrical lars Savings 0 to 28.60

Instructions. Read through the list of energy conservation opportunities provided. As you read through the items, list below those items which have already been undertaken in your facility. The description of the past energy conservation action should contain the specific building location where the recommendation applies, if applicable. Indicate the date of implementation of each item and its classification number. Energy conserving items which have been undertaken and are not on the list provided should also be included along with their appropriate classification numbers. The classification number should be taken from the classification scheme for energy conservation opportunities listed on pages 25 through 37. This section of the mini-audit report should be completed by building personnel prior to the walk-through by the mini-auditor.

	CLASSIFICATION			OPTIONAL:			
TEM NO.	MAJOR	O. SUB	PAST ENERGY CONSERVATION ACTIONS	ENERGY SAVINGS	ENERGY COST SAVINGS	DATE OF IMPLEMENTATION	
	CLASS	CLASS					
l	5	2	Routine maintence schedule				
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	<u> </u>						
	<u> </u>						
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VEW POPORTUNITIES

Instructions: Read through the energy conservation recommendation list provided. Then walk through the building with the list. Examine the suggested maintenance and operational changes, and any other low cost energy conservation measures, that pertain to the facility. As you go along, record the item number, the classification number of the recommendation, and the new mini-audit opportunity. The description of the mini-audit opportunity should contain the specific building location where the recommendation applies, if applicable. Any recommendation not found on the list may also be included. For those other recommendations, assign an appropriate classification number from the classification scheme for energy conservation opportunities listed on pages 25 through 37. The date of implementation should only be completed as the recommendation is implemented. This section of the mini-audit report should be completed by the mini-audit team during the building walk-through.

20				OPTIONAL: OPTIONAL:			
ITEM	CLASSIFICATION NO.		NO. NEW MINI-AUDIT OPPORTUNITIES		ENERGY COST	DATE OF IMPLEMENTATION	
NO.	CLASS	CLASS		SAVINGS	SAVINGS		
1	1 ,						
1	+ $ 1$ $-$	11	Keep all controls free of dust.				
		_	Tighten and clean all electrical			,	
2	1 1	5	connections from the circuit breaker back through the transformers, to				
			the main switch gear. NOTE: Have				
			this done at least once a year by a				
			qualified electrician when the build-				
			ing power is shut off. This is not only a precaution but it can also				
			reduce electrical losses.				
	+						
3	11	5	Keep all switch gear free of dust.				
			Check the calibration of all control	İ-			
4	3	1	ers and devices for proper settings				
			and operations.				
	1	<u> </u>					
	-		Keep records of the operation sched-				
5	5	1	ule, monthly energy consumption and				
			purchase of any new equipment that				
	-	-	affects energy consumption of effec-				
			iency of the building. These records will indicate the impact of energy	9	'		
		-	conservation measures.	1			
			Review the record books on a regular	†	<u> </u>		
6	5	1	basis.				
				1.			
		-		<u> </u>	 		
		 		 	 		
				he mini-sud	1	1	