Contractor Information						
Contractor Name	Address		City	Zip	Phone	Fax
ONE HOUR HEAT AND AIR	3845 ATHERTON RD #4		ROCKLIN	95765	916 442 5542	916 435 4687
Company Contact	Est Start	Est Complete	Job Number	Permit Number	License #	Company ID #
MIKE ALLEN					588096	40003

Residential Project Information						
Owner's Name/ Project Title	Address		City	Zip	Phone	Fax/ email
SALLY KIHARA	7109 REICHMUTH		SACRAMENTO	95831	916 395 5863	916 435 4687
County	Bld Dept - Permit From	Utility	Sample	Plan #	Group #	House #
SACRAMENTO	SAC CITY	SMUD	4	40003	530A	1074

Building Information										
Multi Family		# of Dwellings	1	Front Orientation (N,S,E,W)	W		Heat Load	85K	BTUs
Single Family	X	Slab Floor		Number of Stories	1		Cool Load	38K	BTUs
Addition-new rm		Raised Floor	X	Conditioned Floor Area	1685	SF	Duct Location	CRAWL SPACE	
Alteration-change	X	Climate Zone	12	Maximum Ceiling Height	8	Ft	Garage		Duct -R value	R4

Package Unit		Gas / Electric	X	AFUE	0.92	SEER	14.5	Heat: BTU Input	120K	BTUs
Split System	X	Heat Pump		HSPF		EER	12	Cooling: BTUs	48K	BTUs
Heat System Mfg	AMERICAN STANDARD			Condenser Sys Mfg	AM STANDARD			Coil System Mfg	SUMMIT	
Model #	ADY120R9V5W			Model #	2A7A048B1000			Model #	CA060A97XMG	
Serial #				Serial #				Serial #		

Title 24 requirements - contractor and HERS verification check list

CF6R forms on job site		Permit #	
Furnace Mfg and model # documented		Duct System - New or Exist	
Furnace serial # documented		CFM Leakage	
Coil Mfg and model # documented		Leakage pressure	
Coil serial # documented		Equipment air flow in CFM	
Condenser Mfg and model # documented		System % leakage	
Condenser serial # documented		Test Date	
TXV verified on split system		ARI #	
High EER verified on options		Notes:	
Air distribution system fully ducted			
Existing duct tape has draw bands and mastic			
All Supply registers sealed for test			
All Return grilles sealed for test			
Duct blaster w/ rings installed correctly			
Smoke required to pass test			
All register & grille seals removed		Signature	
Thermostat turned on after test			

7109 Reichmuth
080824

CERTIFICATE OF COMPLIANCE: RESIDENTIAL (Page 1 of 5) CF-1R

SALLY KIHARA
Project Title

16 FEB 06
Date

7109 REICHMUTH SACRAMENTO CA 95831
Project Address

Building Permit #

MIKE ALLEN 916 442 5542
Documentation Author Telephone

Plan Check / Date

Prescriptive 12
Compliance Method (Prescriptive) Climate Zone

Field Check / Date

Enforcement Agency Use Only

[X] Alternative Component Package Method: (check one) ____ C __X__ D ____ D (Alternative)
Package C and Package D choices require HERS rater field verification and/or diagnostic testing (see CF-1R page 3)
For Package D Alternative see Appendix B Table 151-C Footnotes 7-14

GENERAL INFORMATION

Total Conditioned Floor Area (CFA) 1685 ft2 Average Ceiling Height: 8 ft
Maximum Allowed West Facing Fenestration Products Per Table 151-B or 151-C — (5% X CFA) NA ft2
Maximum Allowed Total Fenestration Products Per Table 151-B or 151-C — (20% X CFA) NA ft2
Building Type: (check one or more) X Single Family ___ Multifamily ___ Addition X Alteration
(If adding fenestration fill out WS-4R, Fenestration Maximum Allowed Area Worksheet and see Section 8.3.2 for Additions and 8.3.3 for Alterations.)
Number of Stories: 1 Number of Dwelling Units: 1
Floor Construction Type: raised Slab/Raised Floor (circle one or both)
Front Orientation: W North / South / East / West / All Orientations (input front orientation in degrees from True North and circle one).

[ ] RADIANT BARRIER (required in climate zones 2, 4, 8-15)

OPAQUE SURFACES INCLUDING OPAQUE DOORS

Component Type (Wall, Roof, Floor, Slab Edge, Doors)	Frame Type (Wood or Metal)	Cavity Insulation R-Value	Continuous Insulation R-Value	Assembly Ufactor (for wood, metal frame and mass assemblies) 1	Joint Appendix IV Reference	Roof Radiant Barrier Installed Yes or No	Location/Comments (attic, garage, typical, etc.)

1) See Joint Appendix IV in Section IV.2, IV.3 and IV.4, which is the basis for the U-factor criterion. U-factors can not exceed prescriptive value to show equivalence to R-values.

SALLY KIHARA
Project Title

16 FEB 06
Date

FENESTRATION PRODUCTS – U-FACTOR AND SHGC

FENESTRATION MAXIMUM ALLOWED AREA WORKSHEET WS-4R –must be included for New Construction, Additions and Alterations.

Fenestration #/Type/Pos. (Front, Left, Rear, Right, Skylight)	Orientation, N, S, E, W1	Area (ft2)	U-factor2	U-factor Source3	SHGC4	SHGC Source5	Exterior Shading/Overhangs6, 7 Ck box if WS-3R is included		

1) Skylights are now included in West-facing fenestration area if the skylights are tilted to the west or tilted in any direction when the pitch is less than 1:12. See §151(f)3C and in Section 3.2.3 of the Residential Manual
2) Enter values in this column are either NFRC Rated value or from Standards default Table 116A.
3) Indicate source either from NFRC or Table 116A,
4) Enter values in this column from NFRC or from Standards Default Table 116B or adjusted SHGC from WS-3R.
5) Indicate source either from NFRC or Table 116B.
6) Shading Devices are defined in Table 3-3 in the Residential Manual and see WS-3R to calculate Exterior Shading devices.
7) See Section 3.2.4 in the Residential Manual.

HVAC SYSTEMS

Heating Equipment Type and Capacity furnace, heat pump, boiler, etc.	Minimum Efficiency (AFUE or HSPF)	Distribution Type and Location (ducts, attic, etc.)	Duct or Piping R-Value	Thermostat Type	Configuration (split or package)
G/E	0.92 AFUE	CRAWL SPACE	R4	Programable	
	0 HSPF				Split Sys
120K BTU					

Cooling Equipment Type and Capacity (A/C, Heat Pump, Evap Cool)	Minimum Efficiency (SEER or EER)	Duct Location (attic, etc.)	Duct R-Value	Thermostat Type	Configuration (split or package)
G/E	14.5 SEER	CRAWL SPACE	R4	Programable	
	12 EER				Split Sys
48K BTU					

SALLY KIHARA
Project Title

16 FEB 006
Date

SEALED DUCTS and TXVs (or Alternative Measures)

A signed CF-4R Form must be provided to the building department for each home for which the following. are required.

☒	Sealed Ducts (all climate zones) (Installer testing and certification and HERS rater field verification required.)
☒	TXVs, readily accessible (climate zones 2 and 8-15 only) (Installer testing and certification and HERS Rater field verification required.)
☐	Refrigerant Charge (climate zones 2 and 8-15 only) (Installer testing and certification and HERS Rater field verification required.)

OR

☐	Alternative to Sealed Ducts and Refrigerant Charge /TXVs (See Package D Alternative Package Features for Project Climate Zone in the RM Appendix B Table 151-C, Footnotes 7-14.

OR

☐	For additions and alterations, duct systems that are not documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Residential ACM Manual and duct systems with more than 40 linear feet in unconditioned spaces shall meet the requirements of Section 150(m) and duct insulation requirements of Package D.

WATER HEATING SYSTEMS

☐	Check box if system meets criteria of a "Standard" system. Standard system is one gas-fired water heater per dwelling unit. If the water heater is a storage type, 50 gallons is the maximum capacity and recirculation system is not allowed.
☐	Check box when using Preapproved Alternative Water Heating table, Table 5-4 in Chapter 5 in the Residential Manual. No water heating calculations are required, and the system complies automatically.
☐	Check box if system does not meet criteria of "Standard" system, and does not comply with the Preapproved Alternative Water Heating table. In this case, the Performance Method must be used and must be included in the submittal.
☐	Check box to verify that a time control is required for a recirculating system pump for a system serving multiple units

Systems serving single dwelling units

Water Heater Type/Fuel Type	Distribution Type	Number in System	Rated Input1 (kW or Btu/hr)	Tank Capacity (gallons)	Energy Factor1 or Thermal Efficiency	Standby1 Loss (%)	Tank External Insulation R-Value

System serving multiple dwelling units

Water Heater Type/Fuel Type	Distribution Type	Number in System	Rated Input1 (kW or Btu/hr)	Tank Capacity (gallons)	Energy Factor1 or Thermal Efficiency	Standby1 Loss (%)	Tank External Insulation R-Value

1 For small gas storage water heaters (rated inputs of less than or equal to 75,000 Btu/hr), electric resistance, and heat pump water heaters, list Energy Factor. For large gas storage water heaters (rated input of greater than 75,000 Btu/hr), list Rated Input, Recovery Efficiency, Thermal Efficiency and Standby Loss. For instantaneous gas water heaters, list Rated Input and Thermal Efficiencies.

Pipe Insulation (kitchen lines > 3/4 inches) All hot water pipes from the heating source to the kitchen fixtures that are ¾ inches or greater in diameter shall be thermally insulated as specified by Section 150 (j) 2 A or 150 (j) 2 B.

SALLY KIHARA
Project Title

16 FEB 06
Date

SPECIAL FEATURES NOT REQUIRING HERS VERIFICATION (add extra sheets if necessary)
Indicate which special features are part of this project. The list below represents special features relevant to the Prescriptive and Performance Method.

	Feature	Required Forms (if applicable)	Description
☐	Metal Framed Walls	CF-1R	
☐	Radiant Barriers	CF-1R	
☐	Exterior Shades	WS-4R N/A; Performance Calculation	
☐	Cool Roof	Required. Attach CRRC Label to Forms.	
☐	Dedicated Hydronic Heating System	Performance Calculation Required; Attach Run to Forms.	
☐	Combined Hydronic System	Performance Calculation Required; Attach Run to Forms.	
☐	Gas Cooling	N/A; Performance Calculation Required.	
☐	Buried Ducts	N/A; Indicate on building plans.	
☐	Kitchen Pipe Insulation	See Section 5.6.2 Distribution Systems in Residential Manual.	
☐	Multiple Water Heaters Per Dwelling Unit	See Table 5-13 or use Performance Calculation and attach Run to Forms.	
☐	Central Water Heating System Serving Multiple Dwellings	Performance Calculation and attach Run to Forms.	
☐	Non-NAECA Large Water Heater	CF-1R	
☐	Indirect Water Heater	See Table 5-13 or use Performance Calculation and attach Run to Forms	
☐	Instantaneous Gas Water Heater	See Table 5-13 or use Performance Calculation and attach Run to Forms	
☐	Solar Water Heating System	See Table 5-13 or use Performance Calculation and attach Run to Forms	
☐	Wood Stove Boiler	Performance Calculation and attach Run to Forms	

SPECIAL FEATURES REQUIRING HERS RATER VERIFICATION
(add extra sheets if necessary) Indicate to the HERS Rater which credits are part of this project and need verification.

			Feature	Required Forms (if applicable)	Description
☐	☐	☐	Duct Sealing	CF-6R part 4 of 12	
☐	☐	☐	Refrigerant Charge	CF-6R part 5 of 12	
☐	☐	☐	Thermostatic Expansion Valve	CF-6R part 6 of 12	

SALLY KIHARA
Project Title

16 FEB 06
Date

COMPLIANCE STATEMENT

This certificate of compliance lists the building features and specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations, and the administrative regulations to implement them. This certificate has been signed by the individual with overall design responsibility. The undersigned recognizes that compliance using duct design, duct sealing, verification of refrigerant charge and TXVs, insulation installation quality, and building envelope sealing require installer testing and certification and field verification by an approved HERS rater.

Designer or Owner (per Business and Professions Code)	Documentation Author
Name: MIKE ALLEN	Name: MIKE ALLEN
Title/Firm: ONE HOUR HEAT AND AIR	Title/Firm: ONE HOUR HEAT AND AIR
Address: 3845 ATHERTON RD #4 ROCKLIN CA 95765	Address: 3845 ATHERTON RD #4 ROCKLIN CA 95765
Telephone: 916 442 5642	Telephone: 916 442 5642
License #: 588096	
16 FEB 06	16 FEB 06
(signature) (date)	(signature) (date)

Enforcement Agency

Name:	Comments:
Title	
Agency:	
Telephone:	
(signature / stamp) (date)	

INSTALLATION CERTIFICATE (Page 3 of 12) CF-6R

7109 REICHMUTH SACRAMENTO CA 95831

Site Address Permit Number

An installation certificate is required to be posted at the building site or made available for all appropriate inspections. (The information provided on this form is required) After completion of final inspection, a copy must be provided to the building department (upon request) and the building owner at occupancy, per Section 10-103(a).

HVAC SYSTEMS:

Heating Equipment

Equip Typ (pkg. heat pump	CEC Certified Mfr. Name, Model and Serial Number	# of Identical Systems	Efficiency (AFUE, etc.)1 >(CF-1R value)	Duct Location (attic, etc.)	Duct or Piping R-value	Heating Load (Btu/hr)	Heating Capacity (Btu/hr)
	AMERICAN STANDARD	1	0.92 AFUE	AWL SPA	R4	85K	120K
Split Sys	ADY120R9V5W		0 HSPF				
G/E							

Cooling Equipment

Equip Typ (pkg. heat pump	CEC Certified Mfr. Name, Model and Serial Number	# of Identical Systems	Efficiency (AFUE, etc.)1 >(CF-1R value)	Duct Location (attic, etc.)	Duct or Piping R-value	Cooling Load (Btu/hr)	Cooling Capacity (Btu/hr)
	AM STANDARD	1	14.50 SEER	AWL SPA	R4	38K	48K
Split Sys	2A7A048B1000		12 EER				
G/E							
	SUMMIT						
Coil	CA060A97XMG						

1. > symbol reads greater than or equal to what is indicated on the CF-1R value.
Include both SEER and EER if compliance credit for high EER air conditioner is claimed.

I, the undersigned, verify that equipment listed above is: 1) is the actual equipment installed, 2) equivalent to or more efficient than that specified in the certificate of compliance (Form CF-1R) submitted for compliance with the Energy Efficiency Standards for residential buildings, and 3) equipment that meets or exceeds the appropriate requirements for manufactured devices (from the Appliance Efficiency Regulations or Part 6), where applicable.

16 FEB 06 — Signature, Date

1074

ONE HOUR HEAT AND AIR

Installing Subcontractor (Co. Name)
OR General Contractor (Co. Name) OR Owner

COPY TO: Building Department
HERS Rater (if applicable)
Building Owner at Occupancy

7109 REICHMUTH SACRAMENTO CA 95831
Site Address Permit Number

INSTALLER COMPLIANCE STATEMENT FOR DUCT LEAKAGE

Copies to: Builder, HERS Rater, Building Owner at Occupancy and Building Department

INSTALLER COMPLIANCE STATEMENT

The building was: [X] Tested at Final [ ] Tested at Rough-in

INSTALLER VISUAL INSPECTION AT FINAL CONSTRUCTION STAGE:

[ ] Remove at least one supply and one return register, and verify that the spaces between the register boot and the interior finishing wall are properly sealed.

[ ] If the house rough-in duct leakage test was conducted without an air handler installed, inspect the connection points between the air handler and the supply and return plenums to verify that the connection points are properly sealed.

[X] Inspect all joints to ensure that no cloth backed rubber adhesive duct tape is used

[X] DUCT LEAKAGE REDUCTION

Procedures for field verification and diagnostic testing of air distribution systems are available in RACM, Appendix RC4.3

NEW CONSTRUCTION: Duct Pressurization Test Results (CFM @ 25 Pa)	Measured Values	
1 Enter Tested Leakage Flow in CFM:		
2 Fan Flow: Calculated (Nominal: [X] Cooling [ ] Heating) or [ ] Measured If Fan Flow is Calculated as 400 cfm/ton x number of tons or as 21.7 cfm/(kBtu/hr) x Heating Capacity in Thousands of Btu/hr, enter total calculated or measured fan flow in CFM here:	16000	
3 Pass if Leakage Percentage < 6% for Final or < 4% at Rough-in: [100 x [_____ (Line # 1) / _____ (Line # 2)]]		[ ] Pass [ ] Fail
ALTERATIONS: Duct System and/or HVAC Equipment Change-Out		
4 Enter Tested Leakage Flow in CFM from Pre-Test of Existing Duct System Prior to Duct System Alteration and/or Equipment Change-Out.		
5 Enter Tested Leakage Flow in CFM from Final Test of New Duct System or Altered Duct System for Duct System Alteration and/or Equipment Change-Out.	1300	
6 Enter Reduction in Leakage for Altered Duct System [_____ (Line # 4) Minus _____ (Line # 5)] – (Only if Applicable)		
7 Enter Tested Leakage Flow in CFM to Outside (Only if Applicable)		
8 Entire New Duct System - Pass if Leakage Percentage < 6% for Final or < 4% at Rough-in [100 x [_____ (Line # 5) / _____ Line # 2)]]		[ ] Pass [ ] Fail
TEST OR VERIFICATION STANDARDS: For Altered Duct System and/or HVAC Equipment Change-Out Use one of the following four Test or Verification Standards for compliance:		
9 Pass if Leakage Percentage < 15% [100 x [1300 (Line # 5) / 16000 (Line # 2)]]	8%	[X] Pass [ ] Fail
10 Pass if Leakage to Outside Percentage < 10% [100 x [_____ (Line # 7) / _____ (Line # 2)]]		[ ] Pass [ ] Fail
11 Pass if Leakage Reduction Percentage > 60% [100 x [_____ (Line # 6) / _____ (Line # 4)]] and Verification by Smoke Test and Visual Inspection		[ ] Pass [ ] Fail
12 Pass if Sealing of all Accessible Leaks and Verification by Smoke Test and Visual Inspection		[ ] Pass [ ] Fail
Pass if One of Lines # 9 through # 12 pass		[ ] Pass [ ] Fail

[X] I, the undersigned, verify that the above diagnostic test results were performed in conformance with the requirements for compliance credit. I, the undersigned, also certify that the newly installed or retrofit Air-Distribution System Ducts, Plenums and Fans comply with Mandatory requirements specified in Section 150 (m) of the 2005 Building Energy Efficiency Standards.

Signature 16 FEB 06 Date ONE HOUR HEAT AND AIR
Installing Subcontractor (Co. Name) OR General Contractor (Co. Name)

7109 REICHMUTH SACRAMENTO CA 95831

Site Address Permit Number

☑ THERMOSTATIC EXPANSION VALVE (TXV)

Procedures for field verification of thermostatic expansion valves are available in RACM, Appendix RI.

☑ Yes ☐ No	Access is provided for inspection. The procedure shall consist of visual verification that the TXV is installed on the system and installation of the specific equipment shall be verified.		
	Yes is a pass	☑ Pass	☐ Fail

☐ REFRIGERANT CHARGE MEASUREMENT

Verification for Required Refrigerant Charge and Adequate Airflow for Split System Space Cooling Systems without Thermostatic Expansion Valves

Outdoor Unit Serial #		
Location		
Outdoor Unit Make		
Outdoor Unit Model		
Cooling Capacity		Btu/hr
Date of Verification		
Date of Refrigerant Gauge Calibration		(must be checked monthly)
Date of Thermocouple Calibration		(must be checked monthly)

Standard Charge Measurement Procedure (outdoor air dry-bulb 55oF and above):

Procedures for Determining Refrigerant Charge using the Standard Method are available in RACM, Appendix RD2.

Note: The system should be installed and charged in accordance with the manufacturer's specifications before starting this procedure.

Measured Temperatures

Supply (evaporator leaving) air dry-bulb temperature (Tsupply, db)		F
Return (evaporator entering) air dry-bulb temperature (Treturn, db)		F
Return (evaporator entering) air wet-bulb temperature (Treturn, wb)		F
Evaporator saturation temperature (Tevaporator, sat)		F
Suction line temperature (Tsuction, db)		F
Condenser (entering) air dry-bulb temperature (Tcondenser, db)		F

Superheat Charge Method Calculations for Refrigerant Charge

Actual Superheat = Tsuction, db – Tevaporator, sat		F
Target Superheat (from Table RD-2)		F
Actual Superheat – Target Superheat (System passes if between -5 and +5°F)		F

Temperature Split Method Calculations for Adequate Airflow

Split Method Calculation is not necessary if Adequate Airflow credit is taken

Actual Temperature Split = T return, db Tsupply, db		F
Target Temperature Split (from Table RD3)		F
Actual Temperature Split Target Temperature Split (System passes if between -3°F and +3°F or, upon remeasurement, if between -3°F and -100°F)		F

7109 REICHMUTH SACRAMENTO CA 95831

Site Address Permit Number

Standard Charge Measurement Summary:

System shall pass both refrigerant charge and adequate airflow calculation criteria from the same measurements. If corrective actions were taken, both criteria must be remeasured and recalculated.

		Yes		No	System Passes

Alternate Charge Measurement Procedure (outdoor air dry-bulb below 55 oF)

Note: The system should be installed and charged in accordance with the manufacturer's specifications and installer verification shall be documented on CF-6R before starting this procedure. If outdoor air dry-bulb is 55 oF or above, installer shall use the Standard Charge Measure Procedure:

Procedures for Determining Refrigerant Charge using the Alternate Method are available in RACM, Appendix RD3.

Weigh-In Charging Method for Refrigerant Charge

Actual liquid line length:		ft
Manufacturer's Standard liquid line length:		ft
Difference (Actual – Standard):		ft

Manufacturer's correction (ounces per foot)_____ x difference in length = _____ ounces
(+ = add) (- = remove)

Measured Airflow Method for Adequate Airflow Verification available in RACM, Appendix RD2.6

Calculated Airflow: Cooling Capacity (Btu/hr) _____	X 0.033 (cfm/Btu-hr) = _____ CFM
Measured Airflow is	CFM (Measured airflow must be greater than the calculated airflow).

Alternate Charge Measurement Summary:

System shall pass both refrigerant charge and adequate airflow calculation criteria from the same measurements. If corrective actions were taken, both criteria must be remeasured and recalculated.

		Yes		No	System Passes

16 FEB 06

Signature, Date

ONE HOUR HEAT AND AIR

Installing Subcontractor (Co. Name) OR
General Contractor (Co. Name) OR Owner

COPY TO: Building Department
HERS Rater (if applicable)
Building Owner at Occupancy

7109 REICHMUTH SACRAMENTO CA 95831

Site Address Permit Number

FAN WATT DRAW

Procedures for measuring the air handler watt draw are available in RACM, Appendix RE3.2.

Method For Fan Watt Draw Measurement		
☐ RE3.2.1	Portable Watt Meter Measurement	
☐ RE3.2.2	Utility Revenue Meter Measurement	
Measured Fan watt Draw:	Enter results of Watts/cfm:	
Measured Fan Flow (Enter total cfm from airflow verification)		
	Enter results of Watts/cfm:	
☐ Yes ☐ No	Calculated fan watt/cfm is equal to or lower than the fan watt/cfm draw documented in CF-1R	☐ Pass ☐ Fail
	Yes is a pass	

☐ ADEQUATE AIRFLOW VERIFICATION

Procedures for field verification and diagnostic testing of adequate airflow are available in RACM, Appendix RE4.1.

Method For Airflow Measurement		
☐ Yes ☐ No	Duct design exists on plans	
☐ RE4.1.1	Diagnostic Fan Flow Using Flow Capture Hood	
☐ RE4.1.2	Diagnostic Fan Flow Using Plenum Pressure Matching	
☐ RE4.1.3	Diagnostic Fan Flow Using Flow Grid Measurement	
Measured Airflow:		☐ cfm/ton
☐ Yes ☐ No	Measured airflow is greater than the criteria in Table RE-2	
	Yes is a pass	☐ Pass ☐ Fail

☐ MAXIMUM COOLING CAPACITY

Procedures for determining maximum cooling load capacity are available in RACM, Appendix RF3.

1	☐ Yes ☐ No	Adequate airflow verified (see adequate airflow credit)	
2	☐ Yes ☐ No	Refrigerant charge or TXV	
3	☐ Yes ☐ No	Duct leakage reduction credit verified	
4	☐ Yes ☐ No	Cooling capacities of installed systems are ≤ to maximum cooling capacity indicated on the Performance's CF-1R and RF-3.	
5	☐ Yes ☐ No	If the cooling capacities of installed systems are > than maximum cooling capacity in the CF-1R, then the electrical input for the installed systems must be ≤ to electrical input in the CF-1R.	
		Yes to 1, 2, and 3; and Yes to either 4 or 5 is a pass	☐ Pass ☐ Fail

☐ HIGH EER AIR CONDITIONER

Procedures for verification are available in RACM, Appendix RI.

1	☐ Yes ☐ No	EER values of installed systems match the CF-1R
2	☐ Yes ☐ No	For split system, indoor coil is matched to outdoor coil
3	☐ Yes ☐ No	Time Delay Relay Verified (If Required)
		Yes to 1 and 2; and 3 (If Required) is a pass

☐ Pass ☐ Fail

Tests Performed	Signature, Date	ONE HOUR HEAT AND AIR Installing Subcontractor (Co. Name) OR General Contractor (Co. Name)
	16 FEB 06	

COPY TO: Building Department, HERS Rater, Building Owner at Occupancy

* * * Communication Result Report (Feb.16. 2006 10:34AM) * * *

FAX HEADER: SWITERLAND AIR

Date/Time: Feb.16. 2006 10:33AM

File Mode	Destination	Pg(s)	Result	Page Not Sent
5597 Memory TX	9882387	P. 5	OK	

Reason for error
E.1) Hang up or line fail
E.2) Busy
E.3) No answer
E.4) No facsimile connection

INSTALLATION CERTIFICATE (Page 3 of 12) CF-6R

7100 [illegible] SACRAMENTO CA [illegible]

Site Address Permit Number

An installation certificate is required to be posted at the building site or made available for all appropriate inspections. (The information provided on this form is required) After completion of final inspection, a copy must be provided to the building department (upon request) and the building owner at occupancy, per Section [illegible].

HVAC SYSTEMS:
Heating Equipment

Equip Type (pkg. heat pump)	CEC Certified Mfr. Name, Model and Serial Number	# of Identical Systems	Efficiency (AFUE, etc.)1 >(CF-1R values)	Duct Location (attic, etc.)	Duct or Piping R-value	Heating Load (Btu/hr)	Heating Capacity (Btu/hr)
	AMERICAN STANDARD	1	9.82 [illegible]	[illegible]	R4	65K	12[illegible]K
Split Sys.	ADY[illegible]		9 [illegible]				
C/F							

Cooling Equipment

Equip Type (pkg. heat pump)	CEC Certified Mfr. Name, Model and Serial Number	# of Identical Systems	Efficiency (SEER, etc.)1 >(CF-1R values)	Duct Location (attic, etc.)	Duct or Piping R-value	Cooling Load (Btu/hr)	Cooling Capacity (Btu/hr)
	AM STANDARD	1	14.[illegible] [illegible]	[illegible]	R4	[illegible]K	[illegible]K
Split Sys.	2A7[illegible]		12 [illegible]				
O/E							
	[illegible]						
Coil	CA[illegible]						

1. > symbol means greater than or equal to what is indicated on the CF-1R value. Include both [illegible] and [illegible] if compliance credit for high [illegible] air conditioner is claimed.

I, the undersigned, verify that equipment listed above is: 1) is the actual equipment installed, 2) equivalent to or more efficient than that specified in the certificate of compliance (Form CF-1R) submitted for compliance with the Energy Efficiency Standards for residential buildings, and 3) equipment that meets or exceeds the appropriate requirements for manufactured devices (from the Appliance Efficiency Regulations or Part 6), where applicable.

[signature] 16 FEB 06 — ONE HOUR HEAT AND AIR

Signature, Date 1074 — Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner

COPY TO: Building Department
HERS Rater (if applicable)
Building Owner at Occupancy

CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 5 of 8) **CF-4R**

7109 Reichmuth *Project Address*	ONE HOUR / Switzerland Air / 588096 *Contractor Name / License No.*
Contractor Contact *Telephone*	06-01824 *Permit Number*
Brian Sipp 916-965-8343 *HERS Rater* *Telephone*	17805 *Sample Group Number*
February 27, 2006 *Certifying Signature* *Date*	CC14-1798358391 *Certificate Number*

Firm: Energy Analysis and Comfort Solutions, Inc.
HERS Provider: **CalCERTS**
Street Address: P.O. Box 2233
City/State/Zip: Orangevale / CA / 95662

Copies to: **Homeowner, HERS Provider and Building Department**

This CF-4R has been registered with the CalCERTS® registry in accordance with the **Title 24** & **Title 20** of the CCR.
CalCERTS® is an approved HERS provider by the California Energy Commission.

HERS RATER COMPLIANCE STATEMENT

The house was Tested ✓ Approved as part of sample testing, but was not tested.
As the HERS rater providing diagnostic testing and field verification, I certify that the house identified on this form complies with the diagnostic tested compliance requirements as checked on this form.
✓ The installer has provided a copy of the CF-6R (Installation Certificate).

✓ **HIGH EER AIR CONDITIONER:**

Procedures for verification are available in RACM, Appendix RI.		
1	✓ Pass ... Fail	EER values of installed systems match the CF-1R
2	✓ Pass ... Fail	For split systems, indoor coil is matched to outdoor coil
3	... Pass ... Fail	Time Delay Relay Verified (If Required)
	HVAC System: **Yes to 1 and 2; and 3 (If Required) is a pass**	✓ Pass ... Fail

CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 3 of 8) **CF-4R**

7109 Reichmuth *Project Address*	ONE HOUR / Switzerland Air / 588096 *Contractor Name / License No.*
Contractor Contact *Telephone*	06-01824 *Permit Number*
Brian Sipp 916-965-8343	17805
HERS Rater *Telephone*	*Sample Group Number*
Certifying Signature February 27, 2006 *Date*	CC14-1798358391 *Certificate Number*

Firm: Energy Analysis and Comfort Solutions, Inc.
HERS Provider: **CalCERTS**
Street Address: P.O. Box 7233
City/State/Zip: Orangevale / CA / 95662

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✓ **THERMOSTATIC EXPANSION VALVE (TXV):**

Access is provided for inspection. The procedure shall consist of visual verification that the TXV is installed on the system and installation of the specific equipment shall be verified.	
HVAC System TXV	✓ Pass ... Fail