APPLICANT'S NAME: OLD COUNTRY MILLWORK

FACILITY PERMIT ID# 89248

CONTACT PERSON: Tim Kilgallon

MAILING ADDRESS: 5855 HOOPER AVENUE
LOS ANGELES, CA 90001

EQUIPMENT ADDRESS: 11212 EAST 58th PLACE
LOS ANGELES, CA 90001

PERMIT TO CONSTRUCT

Title V/RECLAIM Permit Revision:
Application No. 511564

Equipment Description:

PROCESS 2: AIR POLLUTION CONTROL EQUIPMENT					
Equipment	Device ID	Connected To	Source Type/ Monitoring Unit	Emissions	Equipment Specific Conditions
~~AFTERBURNER, HIRT, MODEL NO. HILIOM7MX, NATURAL GAS, 11 MMBTU/HR~~ ~~Reference A/N 261761~~	~~C-46~~	~~D31, D32, D33, D34, D39, D40, D41, D42, D43, D44~~	~~NOX: PROCESS UNIT~~	~~CO: 2000 PPMV (5);[RULE 407, 4-2-1982]: NOX: 130 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]: PM: 0.1 GRAINS/SCF (5)[RULE 409, 8-7-1981] PM:(9) [RULE 404, 2-7-1986]~~	~~C1.1, D12.1, D28.1, E71.1, E193.1~~
REGENERATIVE THERMAL OXIDIZER, ADWEST TECHNOLOGIES, MODEL 10.0RTO95, 10,000CFM, NATURAL GAS FIRED, WITH 1500 CFH NATURAL GAS INJECTION, 2.89 MMBTU/HR START-UP BURNER BURNER, MAXON KINEDIZER LE-4, LOW-NOX BURNER, 2,89 MMBTU/HR Reference A/N 511563	C-50	D31, D32, D33, D34, D39, D40, D41, D42, D43, D44	NOX: PROCESS UNIT	CO: 2000 PPMV (5);[RULE 407, 4-2-1982]: NOX: 130 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]: PM: 0.1 GRAINS/SCF (5)[RULE 409, 8-7-1981] PM:(9) [RULE 404, 2-7-1986]	D12.1, D28.1, D29.1, D323.1, E71.2, E193.2

Conditions:

D12.1 The operator shall install and maintain a(n) non-resettable totalizing fuel flow meter to accurately indicate the fuel usage of the equipment.
[RULE 2012, 5-6-2005]

D28.1 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted to demonstrate compliance with Rule 1125.

The test shall be conducted to determine the ROG emissions using District method 25.1 measured over a 60 minute averaging time period.

The test shall be conducted at least once during the life of the permit.

The test shall be conducted to determine the ROG emissions at the inlet and outlet simultaneously.

The test shall be conducted no later than July 6, 2014 unless otherwise approved in writing by the District.

The test shall be conducted while the oxidizer is operating at a temperature of not less than the minimum operating temperature specified in this permit. If the operating temperature during the source test is greater than the minimum operating temperature specified in this permit, the minimum operating temperature specified in this permit may be increased to reflect the operating temperature during the source test.
[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

D29.1 The operator shall conduct source test(s) for the pollutant(s) identified below.:

Pollutants to Be tested	Required Test Method(s)	Averaging Time	Test Location
VOC	Approved District Method	District Approved Averaging time	Simultaneous inlet and outlet
NOx Emissions	Approved District Method	District Approved Averaging time	Outlet
CO Emissions	Approved District Method	District Approved Averaging time	Outlet

In addition to the source test requirements of Section E of this facility permit, notify the District of the date and time of the test at least 10 days prior to the test.

In addition to the source test requirements of Section E of this facility permit, the facility permit holder shall submit a source test protocol to the District engineer

no later than 45 days prior to the proposed test date.

The test(s) shall be conducted within 90 days after achieving maximum production rate, but no later than 120 days after initial start-up.

The test shall be conducted to determine the collection and destruction efficiencies.

The test shall be conducted to demonstrate compliance with a destruction efficiency of 95% and an overall collection/destruction efficiency of 83%.

Not withstanding the requirements of Section E conditions, the source test results shall be submitted to the District no later than 60 days after the source test was conducted.
[RULE 1303(a)(1)-BACT]

D323.1 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on a semi-annual basis, at least, unless the equipment did not operate during the entire semi-annual period. The routine semi-annual inspection shall be conducted while the equipment is in operation and during daylight hours.

If any visible emissions (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emission and any associated air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either:

1). Take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or

2). Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", within three business days and report any deviations to AQMD. The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

1). Stack or emission point identification;
2). Description of any corrective actions taken to abate visible emissions;
3). Date and time visible emission was abated; and
4). All visible emission observation records by operator or a certified smoke reader.
[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

E71.2 The operator shall only operate this equipment if it can achieve a 95% destruction efficiency and a minimum overall efficiency of 83 percent.
[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

E193.2 The operator shall operate and maintain this equipment according to the following requirements:

The operator shall comply with the terms and conditions set forth below:

The combustion chamber temperature shall be maintained at a minimum of 1,500 degrees Fahrenheit whenever the equipment it serves is in operation.

The operator shall operate and maintain a temperature measuring and recording system to continuously measure and record the combustion chamber temperature pursuant to the operation and maintenance requirements specified in 40 CFR Part 64.7. Such a system shall have an accuracy of within of the temperature being monitored and shall be inspected, maintained, and calibrated on an annual basis in accordance with the manufacturer's specifications using an applicable AQMD or EPA approved method.

For the purpose of this condition, a deviation shall be defined as when the combustion chamber temperature of less than 1,500 degrees Fahrenheit occurs during the normal operation of the equipment it serves. The operator shall review the records of the combustion chamber temperature on a daily basis to determine if a deviation occurs or shall install an alarm system to alert the operator when a deviation occurs.

Whenever a deviation occurs, the operator shall inspect this equipment to identify the cause of such a deviation, take immediate corrective actions to maintain the combustion chamber temperature at or above 1,500 degrees Fahrenheit, and keep records of the duration and cause (including unknown cause, if applicable) of the deviation and the corrective actions taken.

All deviations shall be reported to the AQMD on a semi-annual basis pursuant to the requirements specified in 40 CFR Part 64.9 and Condition Nos. 22 and 23 in Section K of this permit. The semi-annual monitoring report shall include the total operating time of this equipment and the total accumulated duration of all deviations for each semi-annual reporting period specified in Condition No. 23 in Section K of this permit.

The operator shall submit an application with an Quality Improvement Plan (QIP) in accordance with 40 CFR Part 64.8 to the AQMD if an accumulation of deviations exceeds 5 percent duration of this equipment's total operating time for any semi-annual reporting period specified in Condition No. 23 in Section K of this permit. The required

QIP shall be submitted to the AQMD within 90 calendar days after the due date for the semi-annual monitoring report.

The operator shall inspect and maintain all components of this equipment on an annual basis in accordance with the manufacturer's specifications.

The operator shall keep adequate records in a format that is acceptable to the AQMD to demonstrate compliance with all applicable requirements specified in this condition and 40 CFR Part 64.9 for a minimum of five years.
[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; 40CFR Part 64, 10-22-1997]

PERMIT REVISION
DEVICE REMOVAL

Equipment Description:

PROCESS 1: COIL COATING EQUIPMENT **SYSTEM #4 STRIP COATING AND BAKING SYSTEM NO. 4**					
Equipment	Device ID	Connected To	Source Type/ Monitoring Unit	Emissions	Equipment Specific Conditions
~~OVEN, WATER DRY-OFF, LINE NO.4, NATURAL GAS, 0.03 MMBTU/HR~~ ~~A/N: 259218~~	~~D30~~		~~NOX: PROCESS UNIT**~~	~~**CO**: 2000 PPMV (5) [**RULE 407, 4-2-1982**]; **NOX**: 130 LBS/MMSCF NATURAL GAS (1) [**RULE 2012, 5-6-2005**]; **PM**: (9) [**RULE 404, 2-7-1986**]; **PM**: 0.1 GRAINS/SCF (5) [**RULE 409, 8-7-1981**]~~	~~D323.1~~

Equipment Description:

PROCESS 1: COIL COATING EQUIPMENT **SYSTEM #5 STRIP COATING AND BAKING SYSTEM NO. 5**					
Equipment	Device ID	Connected To	Source Type/ Monitoring Unit	Emissions	Equipment Specific Conditions
~~OVEN, WATER DRY-OFF, LINE NO.5, NATURAL GAS, 0.05 MMBTU/HR~~ ~~A/N: 261762~~	~~D38~~		~~NOX: PROCESS UNIT**~~	~~**CO**: 2000 PPMV (5) [**RULE 407, 4-2-1982**]; **NOX**: 130 LBS/MMSCF NATURAL GAS (1) [**RULE 2012, 5-6-2005**]; **PM**: (9) [**RULE 404, 2-7-1986**]; **PM**: 0.1 GRAINS/SCF (5) [**RULE 409, 8-7-1981**]~~	~~D323.1~~

Background:
Old Country Millwork, Inc. (OCM) owns and operates an aluminum and steel coil coating operation located at 1212 East 58th Place, Los Angeles, CA 90001. OCM is a RECLAIM, Cycle 2, Coastal Zone facility and has a Title V permit with their facility ID# 89248.

OCM's existing Title V permit has an annual facility cap of 10 tons of single VHAP and 25 tons for a combination VHAPs emitted by this facility. This cap ensures that OCM is not considered a Major source of VHAPs and therefore is not subject to the Coil Coating NESHAP.

Old Country Millwork submitted application no. 511563 on 6/09/2010 to install a new Regenerative Thermal Oxidizer. Application no. 511564 submitted on the same date is the Title V/RECLAIM permit revision. The proposed project will replace the existing 11,000,000 btu per hour afterburner with a new more efficient regenerative thermal oxidizer that have a 2,890,000 btu per hour startup burner and with 1,575,000 btu per hour natural gas injection. Old Country Millwork is also removing out of service two water dry off ovens D30 and D38. The proposed changes to the facilty permit is considered a "de minimis significant permit revision" to the Title V permit.

Over the past five years, there were two notices to comply, NC D05407 & NC D12316, and a notice of violation, NOV P52559.

D05407 was issued on 8/08/08 for OCM to provide gas bills, NOx calculations and VOC usage records with the source tests demonstrating the afterburner's capture efficiency. All records were provided and the facility in compliance as of 8/22/08.

D12316 was issued on 10/19/2007 for OCM to demonstrate compliance with Rule 1171 general cleaning limits. The facility was in compliance as of 11/2/07.

P52559 was issued on 3/18/09 for failure to do annual tune-ups on 2 process units per permit condition Section F paragraph 3. The facility is in compliance as of 6/19/2010.

There are no other Notices of Violation, Notices to Comply or Complaints issued or filed against this facility as of 6/19/2010.

Process Description:
OCM is a Metal coil coating facility. The operation involves two strip coating and baking processes. Each process includes two coaters, process tanks, and baking ovens. The coating consists of polyesters, polyvinylidine fluorides (PVDFs), and silicon modified polyesters (SMPs). All the coaters and baking ovens are currently vented to an existing afterburner. This afterburner will be replaced by a new Regenerative Thermal Oxidizer.

The coaters operate an average ofg 24 hrs/day, 5 days/week and 50 weeks/year with a maximum operating schedule of 24 hrs/day, 7days/week and 52 weeks/year.

Thermal Oxidizer Capacity Evaluation:

Burner Capacity Check

Check list

1. Combustion Chamber Temperature – 1500^0f
2. Combustion Chamber dimensions - 4.16ft H x 24.83ft L x 5.67 ft W – 586 cuft
3. Combustion Chamber inlet temperature – 300^0F
4. Exhaust temperature 350^0F
5. Inlet Combustion flow rate 10,000 scfm
6. Start-up burner @ 2.89 mmbtu/hr
7. Natural gas injection rate1500 cfh – 1.5775 mmbtu/hr
8. VOC inlet estimated lbs/hr 54 – 165 lbs/hr

Inlet CFM = 10,000 ft^3/min Inlet Temp. - 300^0F

Outlet Temp - 350^0F

Combustion Temp - 1500^0F

% Heat Recovery:

$$\frac{(1500F - 350^0F)}{(1500F - 300^0F)}(100) = 95.83\%$$

Inlet Air Temp. - 1500F(0.9583) = 1438F

Enthalpy @ 1500^0F = 28.24btu/scf (Table D4, Appendix D, AP40)

1438^0F = 26.93 btu/scf (Table D4, Appendix D, AP40)

Net Enthalpy = 1.31 BTU/scf (28.24-26.93)

Total Exhaust Flow Rate = 10,000 scfm

Net Heat (Q_{net})

= (10,000 ft3/min)(60min/hr)(1.31BTU/scf) = 786,000 BTU/hr

Nat Gas injection Rate = 1500 ft3/hr = 1,575,000 btu/hr is sufficient to run the RTO

= 786,000 btu/hr)/(935 btu/cft) = 840.6 cfh Nat gas input

935 btu/cft -–(Table C1, Appendix C, AP40 & Worst Case Assumption)

Retention Time Check

Volume of gases in RTO

Combustion Air;

(840.6 ft^3 nat gas/hr)(10.36 ft^3/ft^3nat gas)/(60min/hr) = 145.15ft^3/min

Products of Combustion;

(840.6 ft^3 nat gas/hr)(11.45 ft^3/ft^3nat gas)/(60min/hr) = 160.41ft^3/min

Total Volume of Gases through RTO

10,000 ft^3/min – 145.15 ft^3/min +160.41 ft^3/min = 10,015.3 ft^3/min

Volume at 1500^0F

$(10{,}015.3 ft^3/min)(1960^0R)/((60sec/min)(520^0R)) = 629.16\ ft^3/sec$

Velocity through RTO;

(629.16 ft3/sec)/(23.58ft2)= 26.68 ft/sec

Chamber length; 24.83 ft

Residence time

(24.83 ft)/(26.68 ft/sec) = 0.93 sec

Therefore, the minimum retention time of 0.3 sec is met.

Combustion Emissions:

The original Afterburner under application no. 153435 had an 11,000,000 btu/hr burner. This new RTO has a start-up burner of 2.89 mmbtu/hr with a natural gas injection rate of 1.575 mmbtu/hr. The new RTO is equipped with a low-nox burner which will emit less than 30 ppm NOx.

The previous afterburner was a direct flame which would have generated a substantial amount of NOx. The new RTO will have a reduction in NOx since the start-up burner is a low-nox burner, is only 2.89 mmbtu/hr and the NOx emissions from natural gas injection are negligible.

Operating Schedule: 24hr/day, 7day/wk, 52 wk/yr

Existing Afterburner C46

Burner Rating: 11,000,000 btu per hour

1.0476x10E-2mmcuft/hr

Combustion Emissions

	Emission Factor lbs/mmcft	Hourly Emissions lbs/hr	Daily Emissions lbs/day	Annual Emissions lbs/yr	30 day average* lbs/day
ROG	7.0	0.0733	1.760	640.64	1.78
NOX	130	1.362	32.68	11,898	33.05
SOX	0.83	0.009	0.209	75.96	0.21
CO	35	0.367	8.80	3,203.2	8.90
PM10	7.5	0.0786	1.886	686.4	1.91

New RTO

Burner Rating: 2,890,000 btu per hour

2.7524x10E-3mmcuft/hr

Combustion Emissions

	Emission Factor lbs/mmcft	Hourly Emissions lbs/hr	Daily Emissions lbs/day	Annual Emissions lbs/yr	delta 30 day average* lbs/day	
ROG	7.0	0.0193	0.462	168	0.47-1.78	= -1.31
NOX	130	0.358	8.59	3,126	8.68-33.05	= -24.37
SOX	0.83	0.002	0.055	19.96	0.05-0.21	= -0.16
CO	310.07	0.855	20.52	7,471	20.75-8.90	= +11.85
PM10	7.5	0.0206	0.495	180	0.50-1.91	= -0.96

*30 day average is zero since this new RTO will be a Functionally Identical replacement which meets BACT and is more efficient with a reduced heat input from 11 mmbtu/hr to 2.89 mmbtu/hr

Risk Assessment:
The replacement of C46 by C50 will not result in an emission increase. C46 was originally a 11 mmbtu/hr direct flame afterburner. With the replacement device being a Regenerative Thermal Oxidizer, the heat input has been substantially reduced to a total of 4.465 mmbtu/hr. The reduction of the heat input will result in the reduction of toxics associated with the combustion emissions. There is no change proposed for the coating operation.

This Functionally Identical Replacement will not cause an increase in Risk and is exempt from the requirements of subdivision (d) under 1401(g)(1)(C);
Functionally Identical Replacement

A permit unit replacing a functionally identical permit unit, provided there is no increase in maximum rating or increase in emissions of any toxic air contaminants. For replacement of dry cleaning permit units only, provided there is no increase in any toxic air contaminants.

RULE EVALUATION

Rule 212 (c)(1):This section requires a public notice for all new or modified permit units that emit air contaminants located within 1,000 feet from the outer boundary of a school.

No public notice is required since no school is located within 1,000 ft from the above site.

Rule 212 (c)(2):This section requires a public notice for all new or modified facilities that have on-site emission increases exceeding any of the daily maximums as specified by Rule 212(g).

The proposed project will result in a small emission increase. A Rule 212(c) (2) notice will not be triggered since the emission increase is below the daily maximum specified in Rule 212(g).

Rule 212(c)(3):This section requires a public notice for all new or modified permit unit with increases in emissions of toxic air contaminants listed in Table I of Rule 1401 resulting in MICR greater than 1E-6 per permit unit or greater than 10E-6 per facility.

The proposed project will result in an emission decrease of toxic emissions by the removal of the existing afterburner and replacing it with a new RTO. Therefore Public Notice is not required under this section of the rule.

Rule 212(g): This section requires a public notice for all new or modified sources that result in emission increases exceeding any of the daily maximums as specified by Rule 212(g).

The emission increase due to the operation of this equipment is negligible and the following summarizes the emission increase:

	Maximum Daily Emissions					
	ROG	NO_x	PM_{10}	SO_2	CO	Pb
Emission increase	0	0	0	0	12	0
MAX Limit (lb/day)	**30**	**40**	**30**	**60**	**220**	**3**
Compliance Status	Yes	Yes	Yes	Yes	Yes	Yes

No public notice is required since the emission increase is below the thresholds.

Rule 401: Visible emissions are not expected with the proper maintenance and operation of this equipment.

Rule 402: With proper maintenance and operation, this equipment is not expected to create a nuisance.

Rule 1303(a):The replacement of the afterburner with a new RTO will comply with the BACT requirements of the coating line. Compliance with BACT will be maintained.

Rules 1303(b)(1) modeling:

The afterburner is equipped with a 30ppmv Low-Nox burner. The hourly emission rate is as follows:

(2.89mmbtu/hr)/(1050 but/cuft)(38.46lb/mmcuft) = 0.106 lbs/hr NOx

Mmbtu/hr	Table A-1	NOx	CO	PM10
>2 <5		0.31	17.1	1.9
2.89		0.106	0.855	0.021

Modeling is not required for VOC. Compliance is expected.

Rule 1303(b)(2) Offsets:

No offsets are required for this operation. This is a functionally Identical Replacement which is exempt from offsets under 1304(a)(1).

Rule 1303(b)(4): The facility is expected to be in full compliance with all applicable rules and regulations of the District.

Rule 1401: This Functionally Identical Replacement will not cause an increase in Risk and is exempt from the requirements of subdivision (d) under 1401(g)(1)(C); Functionally Identical Replacement

A permit unit replacing a functionally identical permit unit, provided there is no increase in maximum rating or increase in emissions of any toxic air contaminants. For replacement of dry cleaning permit units only, provided there is no increase in any toxic air contaminants.

Compliance with this rule is expected.

RULE 2005: Old Country Millwork is a NOx RECLAIM facility. The proposed project will not result in an increase in NOx emissions. Compliance with rule is expected.

REGULATION XXX:

This facility is in the RECLAIM program. The proposed project is considered as a "de minimis significant permit revision" for non-RECLAIM pollutants to the RECLAIM/Title V permit for this facility.

Non-RECLAIM Pollutants or HAPs

Rule 3000(b)(6) defines a "de minimis significant permit revision" as any Title V permit revision where the cumulative emission increases of non-RECLAIM pollutants or HAPs from these permit revisions during the term of the permit are not greater than any of the following emission threshold levels:

Air Contaminant	Daily Maximum (lbs/day)
HAP	30
VOC	30
NOx*	40
PM_{10}	30
SOx*	60
CO	220

* Not applicable if this is a RECLAIM pollutant

To determine if a project is considered as a "de minimis significant permit revision" for non-RECLAIM pollutants or HAPs, emission increases for non-RECLAIM pollutants or HAPs resulting from all permit revisions that are made after the issuance of the Title V renewal permit shall be accumulated and compared to the above threshold levels. This proposed project is the 4th permit revision to the Title V renewal permit issued to this facility on May 9, 2006. The following table summarizes the cumulative emission increases resulting from all permit revisions since the Title V renewal permit was issued:

Revision	HAP	VOC	NOx*	PM10	SOx	CO
Previous Permit Revision Total Cummulative to date. Title V permit renewed July 7, 2010	0	0	0	0	0	0
1st Permit Revision: Replacement ofC46 by C50 a/n 511563 and the removal from service D30 and D38	0	0	0	0	0	12
Cumulative Total	0	0	0*	0	0	12
Maximum Daily	30	30	40*	30	60	220

* RECLAIM pollutant, not subject to emission accumulation requirements

Since the cumulative emission increases resulting from all permit revisions are not greater than any of the emission threshold levels, this proposed project is considered as a "de minimis significant permit revision" for non-RECLAIM pollutants or HAPs.

RECOMMENDATION

The proposed project is expected to comply with all applicable District Rules and Regulations. Since the proposed project is considered as a "de minimis significant permit revision" it is exempt from the public participation requirements under Rule 3006 (b). A proposed permit incorporating this permit revision will be submitted to EPA for a 45-day review pursuant to Rule 3003(j). If EPA does not raise any objections within the review period, a revised Title V permit will be issued to this facility.

Conclusion:

This equipment will operate in compliance with all District Rule and Regulations. A Permit to Construct is recommended for application number 511563 subject to preceding conditions.