This document was too large to scan as a single document. It has been divided into smaller sections.

Section 8 OF 15

Document Information			
Document #	0601116		
Title	ECOLOGY APPROVAL OF THE CONSTRUCTION OF THE IN-CONTAINER VITRIFICATION SYSTEM AND THE OFF-GAS TREATMENT SYSTEM OF THE FINAL DANGEROUS AND/OR MIXED WASTE RESEARCH AND DEVELOPMENT AND DEMONSTRATION PERMIT (RD&D PERMIT) WA789000/8967		
DATE	07/24/2006		
Originator	J. A. HEDGES	Originator Co.	DOEC
Recipient	R. J. SCHEPENS, M.S. SPEARS	Recipient Co.	DOE-ORP, CH2M
References			
Keywords			
Projects			
Other Information			

CALCULATION SHEET

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CALC. NO.: 145579-V-CA-005 REV: 1 DATE: March 26, 2006
CALC. TITLE: Off-Gas Treatment System Duct Stress Analysis
PROJECT NO.: 145579 PROJECT TITLE: Final DBVS Design

D-2220 CYLINDRICAL TUBULAR MEMBERS IN BENDING

The local buckling behavior in the compression portion of a cylindrical tubular member subjected to a bending load is similar to the local buckling behavior under axial compression. Therefore, equations (3), (4), and (5) of Article D-2210 may be used to determine both local buckling stresses due to axial compression as well as the onset of flexural buckling.

$$\frac{D}{t} = \begin{pmatrix} 15.4 \\ 16.2 \\ 19.0 \\ 80.0 \\ 96.0 \end{pmatrix}$$

$$0.070 \cdot \frac{E_{A53}}{\sigma_{y\_A53}} = 67.7$$

$$0.319 \cdot \frac{E_{A53}}{\sigma_{y\_A53}} = 308.4$$

$$0.441 \cdot \frac{E_{A53}}{\sigma_{y\_A53}} = 426.3$$

If $\frac{D}{t} \le 0.070 \frac{E}{\sigma_y}$, then

$\sigma_{a1} := 0.75 \cdot \sigma_{y\_A53}$ $\boxed{\sigma_{a1} = 22.5\,ksi}$

Equation 6, Allowable bending stress for 2", 3" and 4" carbon steel duct.

If $0.070 \frac{E}{\sigma_y} < \frac{D}{t} \le 0.319 \frac{E}{\sigma_y}$, then

$i := 3 .. 4$

$$\sigma_{a2_i} := \left(0.581 + 0.012 \cdot \frac{\frac{E_{A53}}{\sigma_{y\_A53}}}{\frac{D_i}{t_i}} \right) \cdot \sigma_{y\_A53}$$

Equation 7, Allowable bending stress.

$$\boxed{\sigma_{a2_i} = \begin{pmatrix} 21.8 \\ 21.1 \end{pmatrix} ksi}$$

Allowable bending stress for 20" and 24" Carbon Steel duct.

If $0.319 \cdot \frac{E}{\sigma_y} < \frac{D}{t} \le 0.441 \frac{E}{\sigma_y}$, then

$$\sigma_{a3_i} := 0.196 \cdot \frac{E_{A53}}{\frac{D_i}{t_i}}$$

Equation 8, Allowable bending stress, **NOT APPLICABLE**

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If none of the above conditions have been satisfied, use Equation 3 of Article D-2210 per above stipulation.

$\sigma_a = \sigma_{A53}$ Allowable bending stress.

$X := \frac{E_{A53}}{\sigma_{y\_A53}}$ $X = 966.7$ for Carbon Steel pipe

$$\sigma_{a_i} := \text{if}\left(\frac{D_i}{t_i} \le 0.070 \cdot X, \sigma_{a1}, \text{if}\left(\frac{D_i}{t_i} \le 0.319X, \sigma_{a2_i}, \text{if}\left(\frac{D_i}{t_i} \le 0.441X, \sigma_{a3_i}, \sigma_a\right)\right)\right)$$

$i := 0 .. 4$

$$\sigma_{a_i} = \begin{pmatrix} 22.5 \\ 22.5 \\ 22.5 \\ 21.8 \\ 21.1 \end{pmatrix} \text{ksi}$$

Summary of Allowable Bending Stresses

D-2230 TORSION

The normal allowable shear stress, v_t, due to local buckling of a circular tubular member subjected to torsion shall not exceed the following:

$v := 0.3$ Poisson's Ratio, AISC ASD, page 6-37.

Secant modulus, also called Shear modulus of Elasticity or Modulus of Rigidity, Equation 2-19, Shigley page 34.

$E_s := \frac{E_{A53}}{2 \cdot (1 + v)}$ $E_s = 11153.8 \text{ ksi}$ For Carbon Steel

$a := 1.16 \cdot \frac{E_s}{E_{A53}}$ $a = 0.45$ Plasticity reduction factor

$R := \frac{D}{2}$ $R = \begin{pmatrix} 1.19 \\ 1.75 \\ 2.25 \\ 10.00 \\ 12.00 \end{pmatrix} \text{in}$ Outside duct radius

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$$v_{t_i} := 0.395 \cdot a \cdot E_{A53} \cdot \left(\frac{t_i}{R_i}\right)^{\frac{5}{4}} \cdot \left(\frac{R_i}{L}\right)^{\frac{1}{2}}$$

Equation 9. Carbon Steel

$$v_{t_i} = \begin{pmatrix} 32.3 \\ 36.9 \\ 34.3 \\ 12.0 \\ 10.4 \end{pmatrix} \text{ksi}$$

Allowable shear stress due to torsion.

D-2240 TRANSVERSE SHEAR

The allowable shear stress, σ_v, due to local buckling of a circular tubular member subjected to transverse shear shall not exceed the following:

$$\sigma_{v_i} := 0.493 \cdot a \cdot E_{A53} \cdot \left(\frac{t_i}{R_i}\right)^{\frac{5}{4}} \cdot \left(\frac{R_i}{L}\right)^{\frac{1}{2}}$$

Equation 10, Allowable Transverse shear stress. Carbon Steel

$$\sigma_{v_i} = \begin{pmatrix} 40.3 \\ 46.0 \\ 42.8 \\ 14.9 \\ 13.0 \end{pmatrix} \text{ksi}$$

Allowable shear stress due to torsion.

D-2250 COMBINED AXIAL COMPRESSION AND BENDING

When subject to both axial compression and bending loads, members shall be proportioned so that the interaction of these loads does not over stress the ductwork.

$$\sigma_{c_i} := \text{if}\left(\sigma_{o_i} < \sigma_{A53}, \sigma_{o_i}, \sigma_{A53}\right)$$

σ_c, allowable bending stress, is the lesser of the values of σ_o and σ, from section D-2210.

$$\sigma_{c_i} = \begin{pmatrix} 4.5 \\ 9.5 \\ 11.9 \\ 17.0 \\ 17.2 \end{pmatrix} \text{ksi} \qquad D = \begin{pmatrix} 2.38 \\ 3.50 \\ 4.50 \\ 20.00 \\ 24.00 \end{pmatrix} \text{in}$$

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If $\frac{f_a}{\sigma_c} \le 0.15$, use equation 11. Calculation performed on Excel spreadsheet, Attachments 9-13.

$$\frac{f_a}{\sigma_c} + \frac{f_{bx}}{\sigma_a} + \frac{f_{by}}{\sigma_a} \le 1.0$$

Equation 11, must be less than or equal to 1.0, calculation performed on Excel spreadsheet, Attachments 9-13.

f_a - applied compressive stress.

f_b - applied bending stress in the x and y direction.

σ_a - allowable bending stress.

D-2260 COMBINED TORSION AND AXIAL COMPRESSION OR BENDING

f_c - applied compressive stress due to axial loading or bending, value used is the maximum of the RISA-3D calculated axial, y top bending, y bot bending, z top bending or z bot bending stress.

$\varepsilon_c := \sigma_a$

ε_c = allowable compressive stress due to axial loading or bending, ksi.

$\varepsilon_v := v_t$

ε_v = allowable torsional shear stress, ksi

σ_v - applied torsional shear stress.

$$\varepsilon_{c_i} := \begin{pmatrix} 22.5 \\ 22.5 \\ 22.5 \\ 21.8 \\ 21.1 \end{pmatrix} \text{ksi} \qquad \varepsilon_{v_i} := \begin{pmatrix} 32.3 \\ 36.9 \\ 34.3 \\ 12.0 \\ 10.4 \end{pmatrix} \text{ksi}$$

$$\left(\frac{f_c}{\varepsilon_c}\right)^2 + \left(\frac{\sigma_v}{\varepsilon_v}\right)^2 \le 1.0$$

Equation 13, must be less than or equal to 1.0, calculation performed on Excel spreadsheet, Attachments 9-13.

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D-2270 COMBINED TORSION AND TRANSVERSE SHEAR

f_t - applied torsional shear stress

f_v - applied transverse shear stress

v_t - allowable torsional shear stress.

σ_v - allowable transverse shear stress.

$$v_{t_i} = \begin{pmatrix} 32.3 \\ 36.9 \\ 34.3 \\ 12.0 \\ 10.4 \end{pmatrix} \text{ksi} \qquad \sigma_{v_i} = \begin{pmatrix} 40.3 \\ 46.0 \\ 42.8 \\ 14.9 \\ 13.0 \end{pmatrix} \text{ksi}$$

$$\frac{f_t}{v_t} + \frac{f_v}{\sigma_v} < 1.0$$

Equation 14, must be less than 1.0, calculation performed on Excel spreadsheet, Attachments 9-13.

D-2300 ALLOWABLE DESIGN STRESSES SERVICE LEVELS B, C, OR D

Members and assemblies subject to stresses produced by Service Levels B, C, or D load combinations shown in Table SA-4212 (ASME AG-1-2000), may be proportioned for unit stresses 1.3 (Service Level B) or 1.6 (Service Levels C or D) times greater than those specified in Articles D-2210 through D-2240 for Service Level A load combinations. However, the increased stress allowables shall not exceed the following limits:

$\sigma_{o\_max} := 0.9 \cdot \sigma_{y\_A53}$ $\qquad \sigma_{o\_max} = 27.0\,\text{ksi}$

Equation 21, maximum allowable compression stress for column buckling under axial loading.

$\sigma_o := \sigma_o \cdot 1.3$

Service Level B

$$\sigma_{o_i} = \begin{pmatrix} 5.8 \\ 12.4 \\ 15.5 \\ 22.1 \\ 22.3 \end{pmatrix} \text{ksi}$$

$\sigma_o < \sigma_{o\_max}$, therefore OK.

$\sigma_{max} := 0.9 \cdot \sigma_{y\_A53}$ $\qquad \sigma_{max} = 27.0\,\text{ksi}$

Equation 22, maximum allowable compression stress for local buckling under axial loading.

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$\sigma_{A53} := \sigma_{A53} \cdot 1.3$ Service Level B

$\boxed{\sigma_{A53} = 23.4\,ksi}$ $\sigma < \sigma_{max}$, therefore OK.

$\sigma_{a\_A53\_max} := 0.9 \cdot \sigma_{y\_A53}$ $\sigma_{a\_A53\_max} = 27.0\,ksi$ Equation 23, maximum allowable bending stress.

$\sigma_a := \sigma_a \cdot 1.3$ Service Level B

$\sigma_{a_i} := if\left(\sigma_{a_i} < \sigma_{a\_A53\_max}, \sigma_{a_i}, \sigma_{a\_A53\_max}\right)$ if $\sigma_a < \sigma_{a\_max}$, use σ_a or else use max value.

$$\sigma_{a_i} = \begin{pmatrix} 27.0 \\ 27.0 \\ 27.0 \\ 27.0 \\ 27.0 \end{pmatrix} ksi$$

Allowable bending stress.

$v_{t\_A53\_max} := \frac{0.9 \cdot \sigma_{y\_A53}}{\sqrt{3}}$ $v_{t\_A53\_max} = 15.6\,ksi$ Equation 23a, maximum allowable shear stress due to torsion.

$v_t := 1.3 \cdot v_t$ Service Level B

$$v_{t_i} = \begin{pmatrix} 42.0 \\ 47.9 \\ 44.6 \\ 15.6 \\ 13.6 \end{pmatrix} ksi$$

if $v_t < v_{t\_max}$ use v_t, otherwise use v_{t_max}

$v_{t_i} := if\left(v_{t_i} < v_{t\_A53\_max}, v_{t_i}, v_{t\_A53\_max}\right)$

$$v_{t_i} = \begin{pmatrix} 15.6 \\ 15.6 \\ 15.6 \\ 15.6 \\ 13.6 \end{pmatrix} ksi$$

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$\sigma_{v\_A53\_max} := \frac{0.9 \cdot \sigma_{y\_A53}}{\sqrt{3}}$ $\sigma_{v\_A53\_max} = 15.6\,ksi$

Equation 24, maximum allowable transverse shear.

$\sigma_v := \sigma_v \cdot 1.3$

Service Level B

$$\sigma_{v_i} = \begin{pmatrix} 52.4 \\ 59.8 \\ 55.6 \\ 19.4 \\ 16.9 \end{pmatrix} ksi$$

if $\sigma_v < \sigma_{v\_max}$ use σ_v, otherwise use σ_{v_max}

$$\sigma_{v_i} := if\left(\sigma_{v_i} < \sigma_{v\_A53\_max}, \sigma_{v_i}, \sigma_{v\_A53\_max}\right)$$

$$\sigma_{v_i} = \begin{pmatrix} 15.6 \\ 15.6 \\ 15.6 \\ 15.6 \\ 15.6 \end{pmatrix} ksi$$

D-2400 STIFFENER DESIGN

There are no stiffeners used in this duct system.

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6.6 Ductwork Pressure Analysis

D-2280 PRESSURE

Positive Internal Pressure. Positive internal pressure causes tensile stresses within the duct and actually reduces the tendency toward buckling. The tensile stresses due to internal pressure are:

$$\sigma_R = \frac{P' \cdot R}{t \cdot in}$$

Equation 15, Hoop stress as a result of NOPD.

$$\sigma_L = \frac{P' \cdot R}{2 \cdot t \cdot in}$$

Equation 16, Longitudinal stress as a result of NOPD.

Negative Internal Pressure. The critical hoop stress results from an external or negative internal pressure The critical elastic buckling pressure for ducts subjected to external pressure is given below:

d :=

2.38
2.38
2.88
2.88
3.50
4.50
5.56
6.63
8.63
12.75
14.00
16.00
20.00
20.00
24.00

t :=

0.154
0.218
0.276
0.375
0.216
0.237
0.258
0.280
0.148
0.180
0.188
0.188
0.218
0.250
0.250

$D := d \cdot in$

$t := t \cdot in$

For conservatism use Modulus of Elasticity for stainless steel at worst case temperature 875F.

For carbon steel duct of 2", 3" and 4" sizes, the diameters and wall thickness are the same as stainless steel; therefore, these sizes are not repeated in the tables.

$E_0 = 23650.0\,ksi$

$i := 0 .. 14$ $j := 0 .. 7$

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$$\frac{D}{t} = \begin{pmatrix} 15.4 \\ 10.9 \\ 10.4 \\ 7.7 \\ 16.2 \\ 19.0 \\ 21.6 \\ 23.7 \\ 58.3 \\ 70.8 \\ 74.5 \\ 85.1 \\ 91.7 \\ 80.0 \\ 96.0 \end{pmatrix} \qquad \frac{1.818 \cdot L}{D_i} \cdot \left(\frac{D_i}{t_i}\right)^{\frac{1}{2}} = \begin{pmatrix} 541.1 \\ 454.8 \\ 367.4 \\ 315.2 \\ 376.4 \\ 316.9 \\ 273.2 \\ 240.3 \\ 289.6 \\ 216.0 \\ 201.7 \\ 188.7 \\ 156.7 \\ 146.3 \\ 133.6 \end{pmatrix} \qquad 4 \cdot \frac{D}{t} = \begin{pmatrix} 61.7 \\ 43.6 \\ 41.7 \\ 30.7 \\ 64.8 \\ 75.9 \\ 86.2 \\ 94.6 \\ 233.1 \\ 283.3 \\ 297.9 \\ 340.4 \\ 367.0 \\ 320.0 \\ 384.0 \end{pmatrix}$$

If $10 < \frac{1.818 \cdot L}{D} \cdot \left(\frac{D}{t}\right)^{\frac{1}{2}} < \frac{D}{t}$ then, $P'_{CR} = \frac{2.6 \cdot E}{\left(\frac{L}{D}\right) \cdot \left(\frac{D}{t}\right)^{2.5}}$ Equation 17

If $\frac{1.818 \cdot L}{D} \cdot \left(\frac{D}{t}\right)^{\frac{1}{2}} < \frac{4D}{t}$ then, $P'_{CR} = 2.2 \cdot E \cdot \left(\frac{t}{D}\right)^{3}$ Equation 18

ASME AG-1 does not give any guidance on the determination of P'_{CR} if $\frac{1.818 \cdot L}{D} \cdot \left(\frac{D}{t}\right)^{\frac{1}{2}}$ is greater than $\frac{4 \cdot D}{t}$, for conservatism use the most conservative value for P'_{CR}.

For duct diameters 2" - 8", use equation 17, for duct diameters 12" - 24", use equation 18.

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$$X_i := \frac{1.818 \cdot L}{D_i} \cdot \left(\frac{D_i}{t_i}\right)^{\frac{1}{2}} \qquad Y_i := 4 \cdot \frac{D_i}{t_i}$$

$$P'_{CR_i} := \text{if}\left[X_i < Y_i \wedge X_i > \frac{D_i}{t_i}, 2.2 \cdot E_0 \cdot \left(\frac{t_i}{D_i}\right)^3, \frac{2.6 \cdot E_0}{\left(\frac{L}{D_i}\right) \cdot \left(\frac{D_i}{t_i}\right)^{2.5}}\right]$$

$$P'_{CR} = \begin{pmatrix} 868.6 \\ 2071.0 \\ 2804.5 \\ 6034.7 \\ 1131.3 \\ 978.6 \\ 880.3 \\ 831.1 \\ 113.6 \\ 146.4 \\ 126.0 \\ 84.4 \\ 67.4 \\ 101.6 \\ 58.8 \end{pmatrix} \text{psi} \qquad P'_{allow} := \frac{P'_{CR}}{1.67} \qquad P'_{allow} = \begin{pmatrix} 520.1 \\ 1240.1 \\ 1679.3 \\ 3613.6 \\ 677.4 \\ 586.0 \\ 527.1 \\ 497.7 \\ 68.1 \\ 87.7 \\ 75.4 \\ 50.5 \\ 40.3 \\ 60.9 \\ 35.2 \end{pmatrix} \text{psi}$$

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$$P' := \begin{pmatrix} -12.6 \\ -12.6 \\ -12.6 \\ -12.6 \\ -12.6 \\ -12.6 \\ -2.57 \\ -2.46 \\ -2.6 \\ -2.46 \\ -96.2 \\ -96.2 \\ -96.2 \\ 0.6 \\ -117.6 \end{pmatrix} \cdot in\_H2O \qquad P' = \begin{pmatrix} -0.45 \\ -0.45 \\ -0.45 \\ -0.45 \\ -0.45 \\ -0.45 \\ -0.09 \\ -0.09 \\ -0.09 \\ -0.09 \\ -3.47 \\ -3.47 \\ -3.47 \\ 0.02 \\ -4.25 \end{pmatrix} psi$$

Actual duct system pressure for duct (negative internal pressure) is far below the allowable for the given NOPD values. Pressures as found on drawing F-145579-00-A-0022, streams 13, 13A, 14, 15, 16 and 17 and F-145579-A-0023, streams 39, 40, and 45.

As shown, the pressures in the round duct are low and therefore the NOPD loads will be neglected.

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CALCULATION SHEET

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CALC. TITLE:	Off-Gas Treatment System Pipe Stress Analysis				
PROJECT NO.:	145579	PROJECT TITLE:	Final DBVS Design		

Attachment 1: DBVS Off-Gas Duct Drawings

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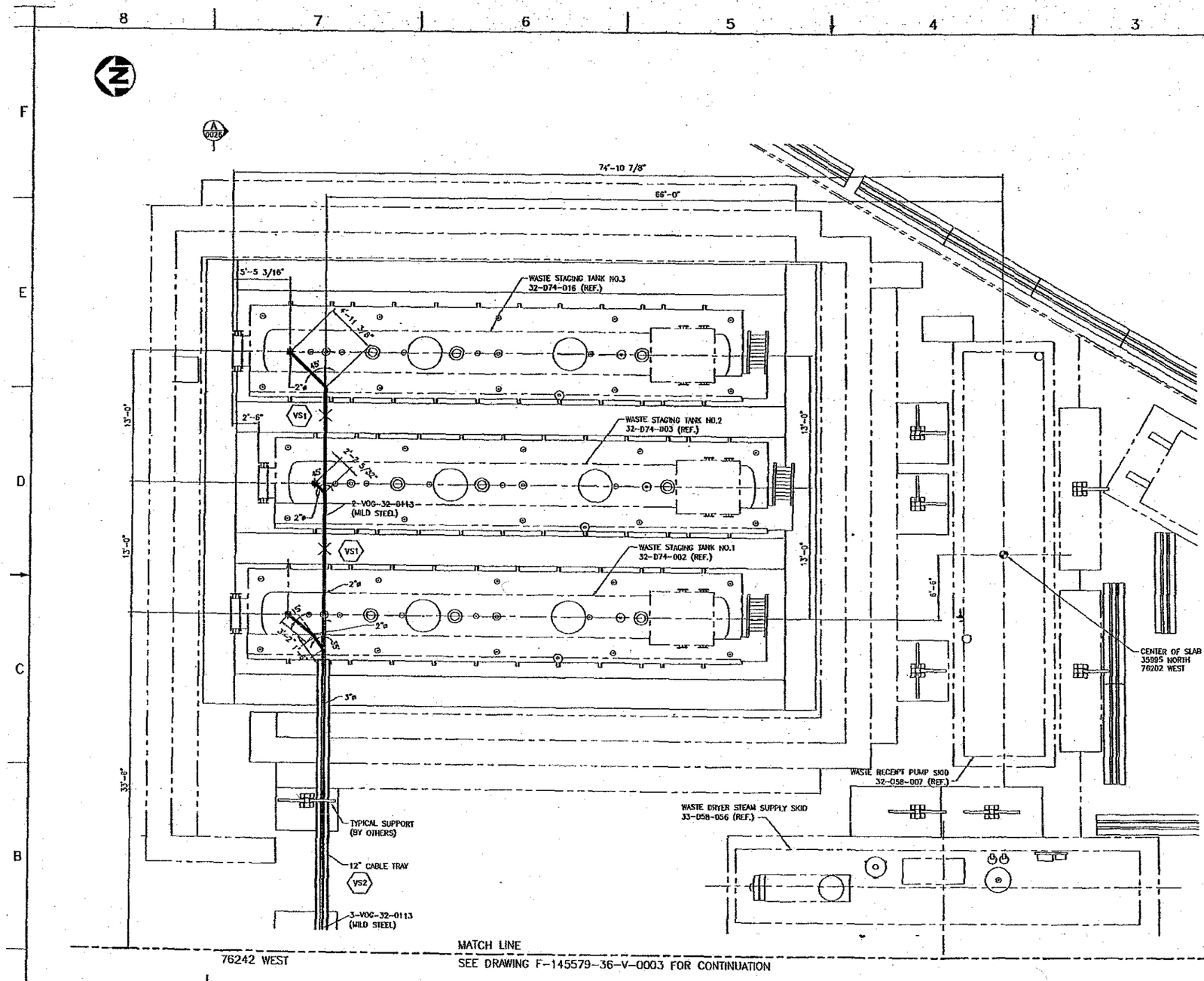
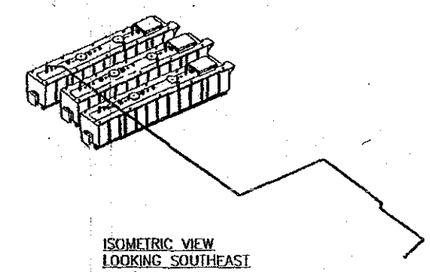
No	AMEC Drg. No.	REFERENCE DRAWINGS
1	F-145579-36-V-0026	OFF-GAS TREATMENT - WASTE RECEIPT AREA SECTION 'A'
2	F-145579-00-D-0011	WASTE RECEIPT & DRYER AREA G.A. - PLAN
3	F-145579-00-D-0028	WASTE RECEIPT & DRYER AREA G.A. - SECTIONS 'A,B,C,&D'
4	F-145579-00-P-0005	DRYER PIPING LAYOUT
5	F-145579-00-P-0010	DRYER PIPING SECTIONS



NOTES:

1. ONLY VENTILATION DUCTWORK PIPING AND SUPPORTING CABLE TRAYS SHOWN. ALL OTHER PIPING AND CABLE TRAYS OMITTED FOR CLARITY.
2. DIMENSIONS AND LOCATIONS OF JOINTS TO BE CONFIRMED BY SELECTED VENDOR.
3. VENTILATION DUCTWORK PIPING TO BE MINIMUM THICKNESS SCHEDULE 40 EXCEPT AS NOTED.
4. DUCTWORK MATERIAL AND FABRICATION SHALL CONFORM TO ASME B31.1 POWER PIPING.
5. DUCTWORK FITTINGS AS PER AMEC DWG. NO. F-145579-36-V-0023 STANDARD DETAILS - SHT. 1.
6. I.D. DESIGNATES ISOLATION DAMPERS TO BE FLANGED ROUND BUBBLE-TIGHT (FLAT BLADE TYPE). FLANGES TO MATCH 150# DRILLING.
7. VENTILATION DUCTWORK SUPPORTS ARE REPRESENTED BY A HEXAGON.
   EXAMPLES - VS- OR RG- CG- CS- A- H- DS-
   FOR 'VS' TYPE SUPPORTS SEE DWG. F-145579-36-0024.
   FOR ALL OTHER SUPPORTS SEE DRAWINGS F-145579-00-P-0001 TO -0004.
8. SEE BRANCH REINFORCEMENT DETAIL ON DWG. F-145579-36-V-0023 FOR FITTINGS SHOWN SHADED.

NOT APPROVED FOR CONSTRUCTION



ISOMETRIC VIEW
LOOKING SOUTHEAST

Rev.	REVISION DESCRIPTION	Date	By	Chk'd	Appr'd	Appr'd Proj Mgr	DWG NO
H	RE-ISSUED FOR DOTS DESIGN REPORT	24 MAR 06	SW	JM	JL	JSG	
G	ISSUED FOR DOTS DESIGN REPORT	24 FEB 06	RBB	JM	SRB	JSG	
F	ISSUED FOR DESIGN	16 DEC 05	RBB		FWS	JDS	
E	REISSUED FOR CH2M HILL REVIEW/SBOX REPORT - (AREA 36 ONLY)	26 APR 05	RDB	PCF	FWS	SC	
D	ISSUED FOR CH2M HILL REVIEW/SBOX REPORT - (AREA 36 ONLY)	15 MAR 05	RDB	PCF	FWS	TH	
C	ISSUED FOR CH2M HILL REVIEW/SBOX REPORT	20 JAN 05	RDB	PCF	FWS	TH	
B	ISSUED FOR INTERNAL APPROVAL	13 DEC 04	RDB	AP	FWS	TH	
A	ISSUED FOR REVIEW	21/10/04	JCH	AP	FWS	JDS	

AMEC DRAWING NO: F-145579-36-V-0002 REV: H

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AMEC PROJECT: 145579-FINAL DBVS DESIGN

U.S. DEPARTMENT OF ENERGY
Office of River Protection

BULK VITRIFICATION
OFF-GAS TREATMENT
WASTE RECEIPT AREA PLAN

NAME	DATE	COMPANY
DRAWN BY		
CHECKED BY		
DESIGN BY		
DESIGN / AREA ENG		
CHEMICAL SERVICE		
PROJECT MANAGER		
DESIGN AUTHORITY		

SIZE F | MAT'L NO | PROJ NO | DWG NO | REV | SCALE 1/4"=1'-0" | SHEET | OF

DWG NO	TITLE	REF NUMBER	TITLE	REV NO	REV DATE	DESCRIPTION	REV BY	CHECKED BY	CHK'D	COMPANY
DRAWING TRACEABILITY LIST		NEXT USED ON	REFERENCES	REVISIONS						

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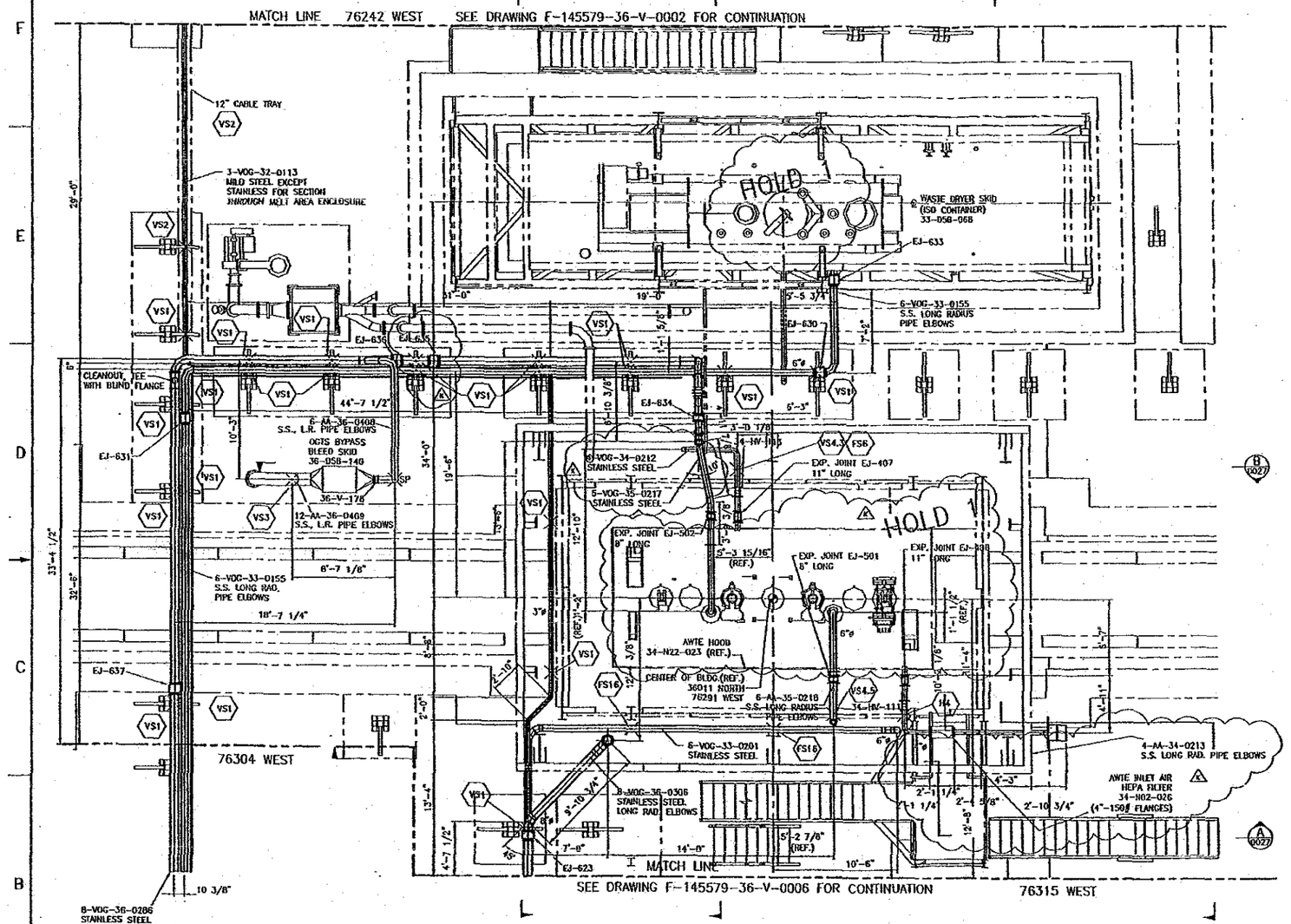
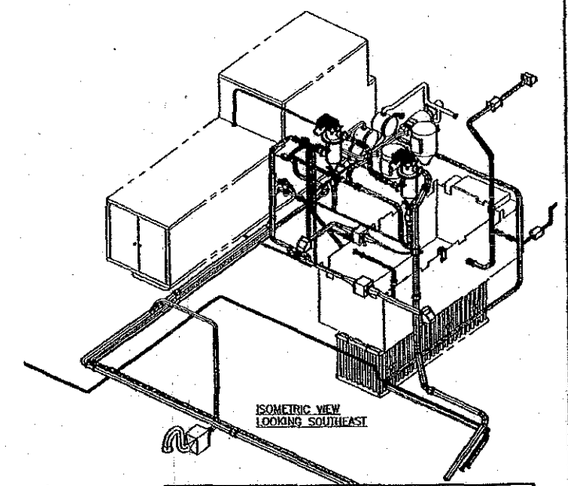
No.	AMEC Dwg. No.	REFERENCE DRAWINGS
1	F-145579-00-D-0041	MELT AREA G.A. ELEVATIONS NORTH AND WEST
2	F-145579-00-D-0051	MELT AREA G.A. PLAN VIEWS
3	F-145579-36-V-0004	OFF-GAS TREATMENT MELT & DRYER MIDDLE PLAN
4	F-145579-36-V-0005	OFF-GAS TREATMENT MELT & DRYER UPPER PLANS
5	F-145579-36-V-0027	OFF-GAS TREATMENT MELT & DRYER SECTIONS A & B
6	F-145579-36-V-0028	OFF-GAS TREATMENT MELT & DRYER SECTION C
7	F-145579-36-V-0029	OFF-GAS TREATMENT MELT & DRYER SECTION D
8	F-145579-36-V-0030	OFF-GAS TREATMENT MELT & DRYER SECTION E



PLAN @ 675'-0"

NOTES:

1. ONLY VENTILATION DUCTWORK PIPING AND SUPPORTING CABLE TRAYS SHOWN. ALL OTHER PIPING AND CABLE TRAYS OMITTED FOR CLARITY.
2. DIMENSIONS AND LOCATIONS OF JOINTS TO BE CONFIRMED BY SELECTED VENDOR.
3. VENTILATION DUCTWORK PIPING TO BE MINIMUM THICKNESS SCHEDULE 40 COMPLETE WITH LONG RADIUS ELBOWS FOR 6" AND SMALLER AND SCHEDULE 10 PIPE AND PIPE FITTINGS FOR PIPE 8" AND LARGER EXCEPT AS NOTED.
4. DUCTWORK MATERIAL AND FABRICATION SHALL CONFORM TO ASME B31.1 POWER PIPING.
5. DUCTWORK FITTINGS AS PER AMEC DWG. NO. F-145579-36-V-0023 STANDARD DETAILS – SHT. 1.
6. I.D. DESIGNATES ISOLATION DAMPERS TO BE FLANGED ROUND BUBBLE-TIGHT (FLAT BLADE TYPE). FLANGES TO MATCH 150# DRILLING.
7. VENTILATION DUCTWORK SUPPORTS ARE REPRESENTED BY A HEXAGON.
   EXAMPLES – VS– OR RG– CG– CS– A– H– DS–
   FOR 'VS' TYPE SUPPORTS SEE DWG. F-145579-36-0024.
   FOR ALL OTHER SUPPORTS SEE DRAWINGS F-145579-00-P-0001 TO -0004.
8. SEE BRANCH REINFORCEMENT DETAIL ON DWG. F-145579-36-V-0023 FOR FITTINGS SHOWN SHADED.



NOT APPROVED FOR CONSTRUCTION

HOLDS:
1. PENDING VENDOR INFORMATION.

Rev.	Revision Description	Date	By	Ch'k'd	Approved Amec Rep	Approved Client Rep	Date
K	RE-ISSUED FOR OGTS DESIGN REPORT	28 MAR 05	TRB	JM	JK	JSO	
J	ISSUED FOR OGTS DESIGN REPORT	24 FEB 05	RRB	JM	SRB	JSO	
H	ISSUED FOR DESIGN	16/12/05	RRB		FWS	JDS	
G	ISSUED FOR INFORMATION – OFF-GAS SYSTEM REVISED	14/11/05	RRB		FWS	JDS	
F	REISSUED FOR CH2M HILL REVIEW/90% REPORT(AREA 36 ONLY)	26/01/05	JCH	PCF	FWS	SC	
E	ISSUED FOR CH2M HILL REVIEW/90% REPORT (AREA 38 ONLY)	15/03/05	JCH	PCF	FWS	TH	
D	ISSUED FOR CH2M HILL REVIEW/90% REPORT (ICV SYSTEM)	07/03/05	JCH	PCF	CJ	TH	
C	ISSUED FOR CH2M HILL REVIEW/90% REPORT (AREA 33 ONLY)	31/01/05	RRB	PCF	FWS	TH	
B	ISSUED FOR INTERNAL APPROVAL	17/12/04	JCH	AP	FWS	TH	
A	ISSUED FOR REVIEW	05/11/04	JCH	AP	FWS	TH	

AMEC DRAWING NO: F-145579-36-V-0003 REV: K

amec

AMEC PROJECT: 145579-FINAL DBVS DESIGN

U.S. DEPARTMENT OF ENERGY
Office of River Protection

BULK VITRIFICATION
OFF-GAS TREATMENT
MELT & DRYER LOWER PLAN

NAME	DATE
DRAWN BY JCH	10/11/04
DESIGNED BY	
CHECKED BY	
DESIGN / CALC CHK	
INSPECTION BUNDLE	
PROJECT ENGINEER	
CLIENT REVIEWER	

SIZE F | BLDG NO | SHEET NO | DWG NO | REV

SCALE 1/4"=1'-0" | SHEET OF

DWG NO	TITLE
DRAWING TRACEABILITY LIST	

REF NUMBER	TITLE
REFERENCES	
NEXT USED ON	

REV NO	REV DATE	DESCRIPTION	REV BY	REV CHK	CHECKED BY	ENGR	CLIENT REP
REVISIONS							

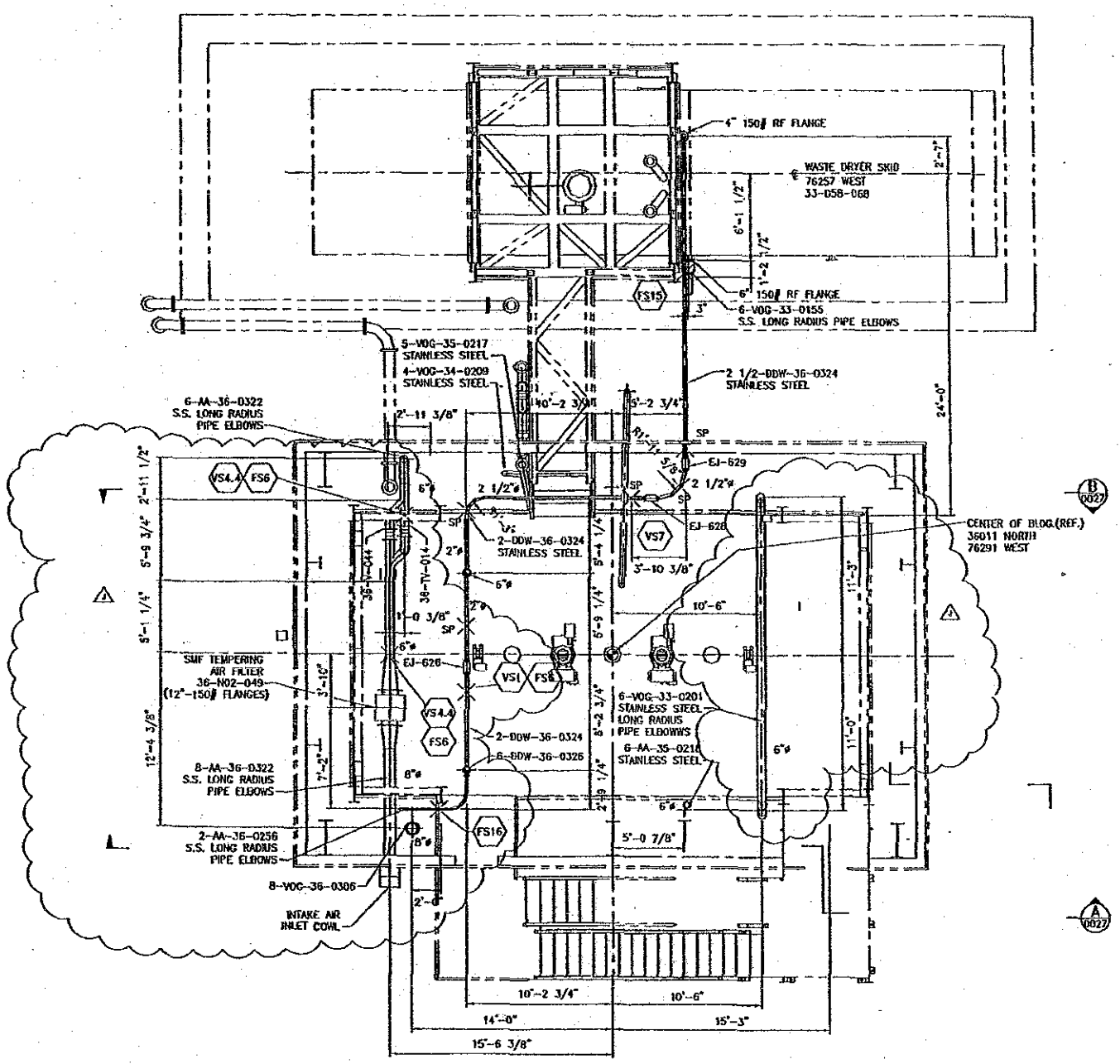
3 of 19

145579-V-CA-005 Revision 1

Attachment 1

In making corrects for transmittal of data by any electronic media, the Company receiving such data agrees that AMEC Americas Limited cannot be held responsible for errors of the data outside of or beyond the scope of our original agreement. Also, because data stored in electronic media or transmitted by electronic means can deteriorate undetected or be modified without the consultant's knowledge, the Company receiving data agrees that AMEC Americas Limited cannot be held liable for the compatibility, completeness or correctness of the data.

No	AMEC Drg. No.	REFERENCE DRAWINGS
1	F-145579-00-D-0041	MELT AREA G.A. ELEVATIONS NORTH AND WEST
2	F-145579-00-D-0051	MELT AREA G.A. PLAN VIEWS
3	F-145579-36-V-0003	OFF-GAS TREATMENT MELT & DRYER LOWER PLAN
4	F-145579-36-V-0005	OFF-GAS TREATMENT MELT & DRYER UPPER PLANS
5	F-145579-36-V-0027	OFF-GAS TREATMENT MELT & DRYER SECTIONS A & B
6	F-145579-36-V-0028	OFF-GAS TREATMENT MELT & DRYER SECTION C
7	F-145579-36-V-0029	OFF-GAS TREATMENT MELT & DRYER SECTION D
8	F-145579-36-V-0030	OFF-GAS TREATMENT MELT & DRYER SECTION E



NOTES:

1. ONLY VENTILATION DUCTWORK PIPING AND SUPPORTING CABLE TRAYS SHOWN. ALL OTHER PIPING AND CABLE TRAYS OMITTED FOR CLARITY.
2. DIMENSIONS AND LOCATIONS OF JOINTS TO BE CONFIRMED BY SELECTED VENDOR.
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6. I.D. DESIGNATES ISOLATION DAMPERS TO BE FLANDERS ROUND BUBBLE-TIGHT (FLAT BLADE TYPE). FLANGES TO MATCH 150# DRILLING.
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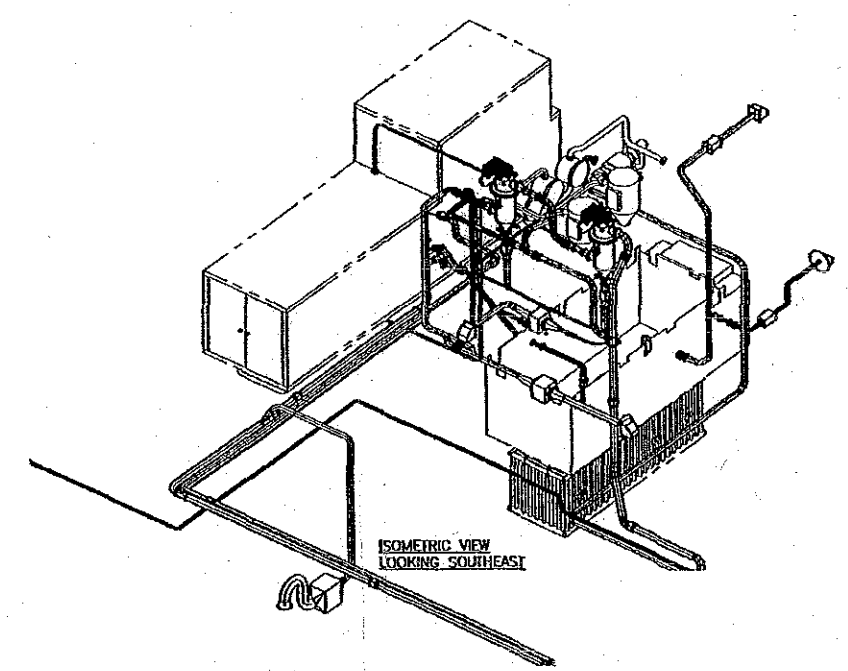
   FOR ALL OTHER SUPPORTS SEE DRAWINGS F-145579-00-P-0001 TO -0004.
8. SEE BRANCH REINFORCEMENT DETAIL ON DWG. F-145579-36-V-0023 FOR FITTINGS SHOWN SHADED.



NOT APPROVED FOR CONSTRUCTION

Rev.	REVISION DESCRIPTION	Date	By	Chk'd	Approved for Construction	Approved for Use
J	ISSUED FOR CHZM REVIEW/ REPORT (AREA 36 ONLY)	25 MAR 06	HRB	JM	JL	JSG
H	ISSUED FOR OGTS DESIGN REPORT	24 FEB 06	RRB	JM	SRB	JSG
G	ISSUED FOR DESIGN	16/12/05	RRB	-	EWS	JOS
F	REISSUED FOR CHZM WLL REVIEW/DOE REPORT (AREA 36 ONLY)	26/04/05	JCH	PCF	FWS	SC
E	ISSUED FOR CHZM WLL REVIEW/DOE REPORT - (AREA 36 ONLY)	15/03/05	JCH	PCF	FWS	TH
D	ISSUED FOR CHZM WLL REVIEW/DOE REPORT - (CV SYSTEM)	02/03/05	JCH	PCF	CJ	TH
C	ISSUED FOR CHZM WLL REVIEW/DOE REPORT - (AREA 33 ONLY)	31/01/05	JCH	PCF	FWS	TH
B	ISSUED FOR INTERNAL APPROVAL	17/12/04	JCH	AP	FWS	TH
A	ISSUED FOR REVIEW	05/11/04	JCH	AP	FWS	TH

DWG DRAWING NO: F-145579-36-V-0004 REV: J

amec

PROJECT: 145579-FINAL DBVS DESIGN

U.S. DEPARTMENT OF ENERGY
Office of River Protection

BULK VITRIFICATION
OFF-GAS TREATMENT
MELT & DRYER MIDDLE PLAN

SIZE: F SCALE: 1/4"=1'-0"

DRAWING TRACEABILITY LIST		REFERENCES		REVISIONS				
DWG NO	TITLE	REF NUMBER	TITLE	REV NO	DESCRIPTION	REV BY	CHECKED BY	DATE
		NEXT USED ON						

In making requests for transmittal of data by any electronic media, the Company receiving such data agrees that AMEC Americas Limited cannot be held responsible for errors of the data outside of or beyond the scope of our original agreement. Also, because data stored in electronic media or transmitted by electronic means can deteriorate undetected or be modified without the consultant's knowledge, the Company receiving data agrees that AMEC Americas Limited cannot be held liable for the compatibility, completeness or correctness of the data.

No.	AMEC Dwg. No.	REFERENCE DRAWINGS
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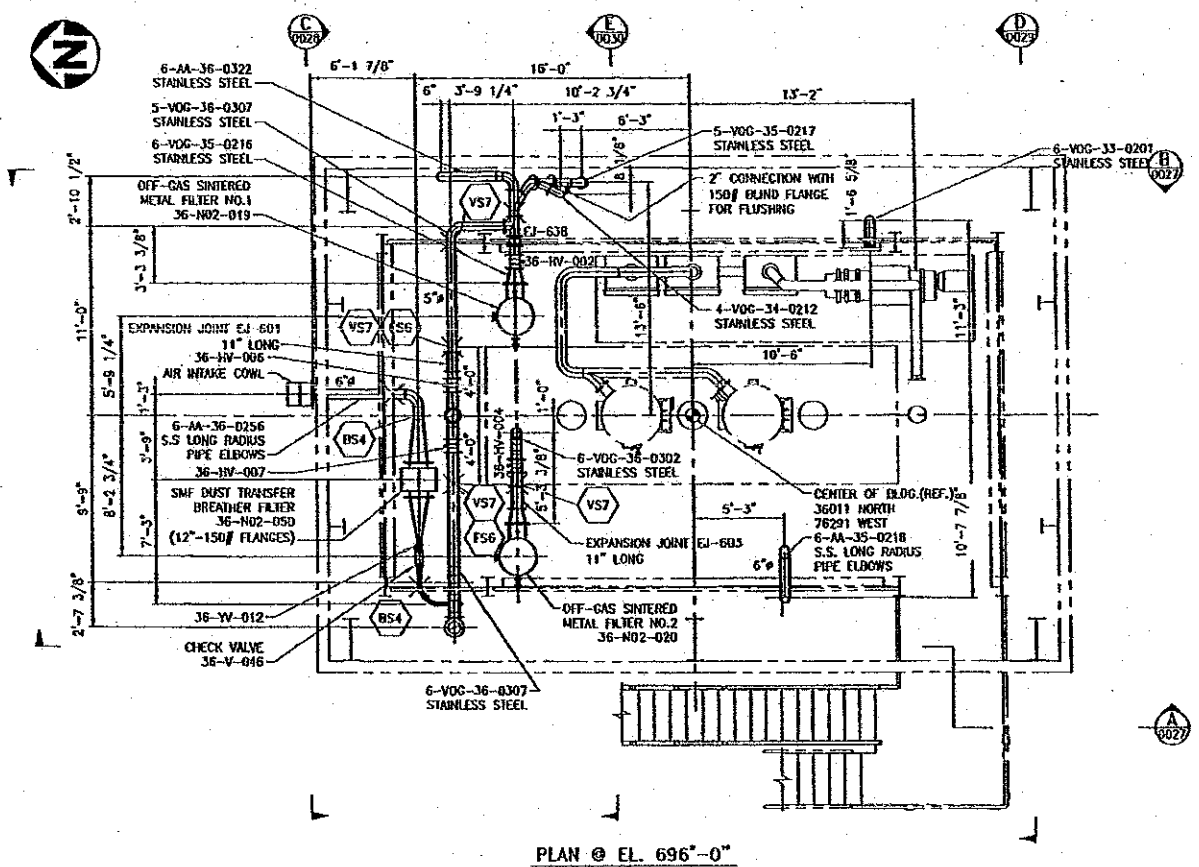
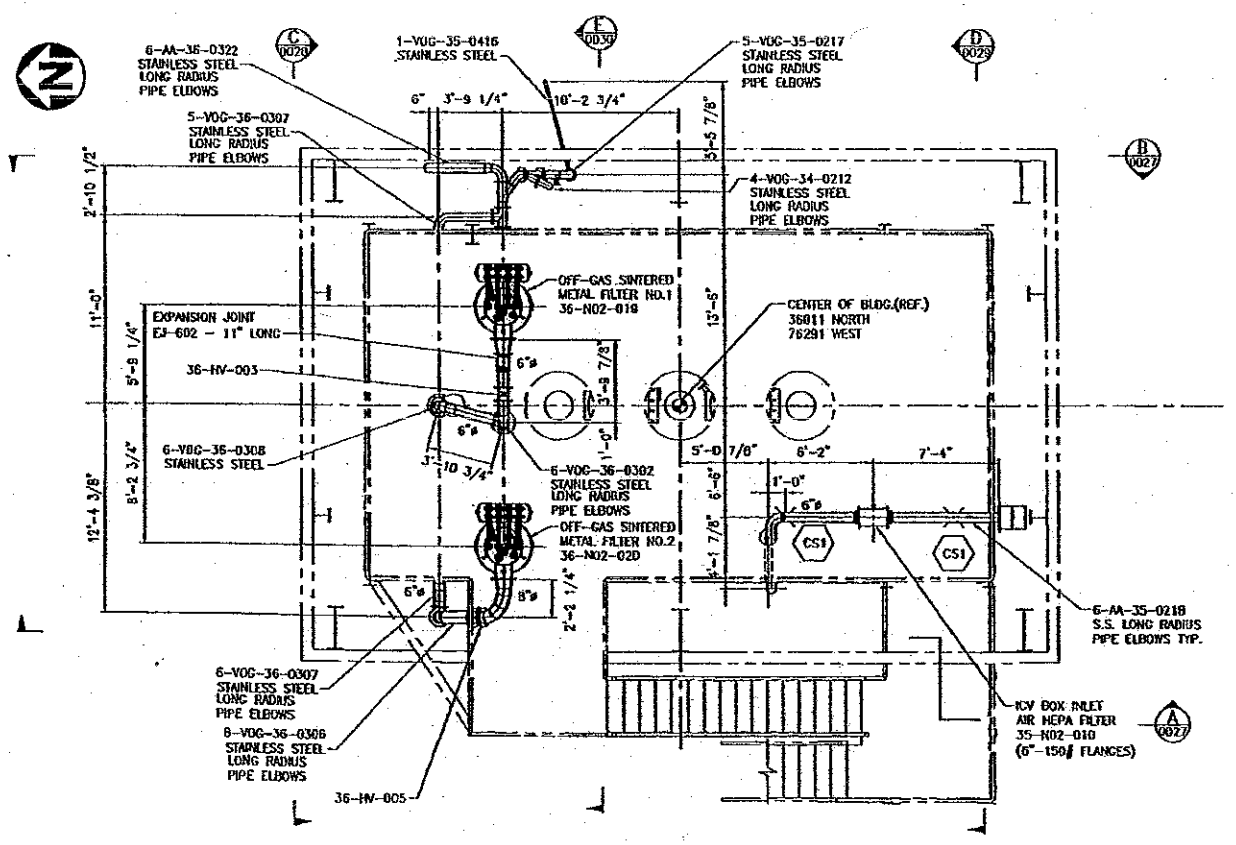
2	F-145579-00-D-0051	MELT AREA G.A. PLAN VIEWS
3	F-145579-36-V-0003	OFF-GAS TREATMENT MELT & DRYER LOWER PLAN
4	F-145579-36-V-0004	OFF-GAS TREATMENT MELT & DRYER MIDDLE PLAN
5	F-145579-36-V-0027	OFF-GAS TREATMENT MELT & DRYER SECTIONS A & B
6	F-145579-36-V-0028	OFF-GAS TREATMENT MELT & DRYER SECTION C
7	F-145579-36-V-0029	OFF-GAS TREATMENT MELT & DRYER SECTION D
8	F-145579-36-V-0030	OFF-GAS TREATMENT MELT & DRYER SECTION E



PLAN @ EL. 696'-0"



PLAN @ EL. 706'-0"

NOTES:

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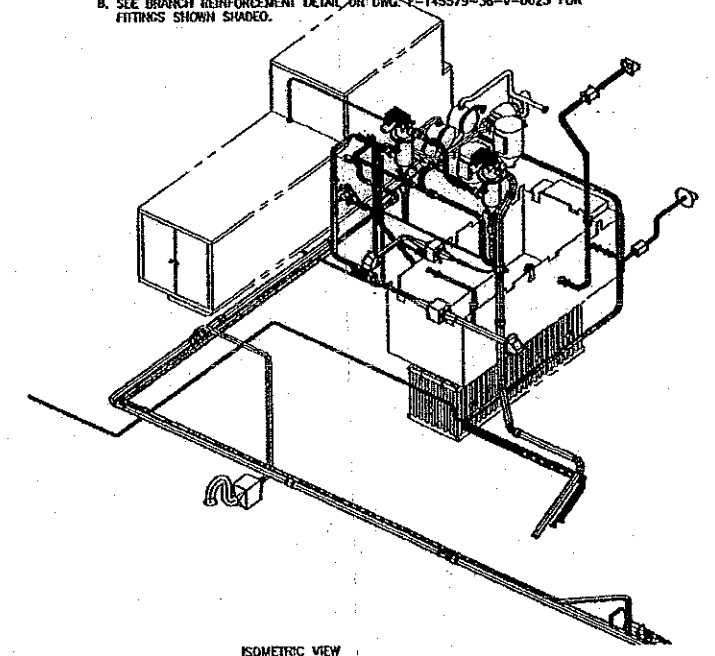
   FOR "VS" TYPE SUPPORTS SEE DWG. F-145579-36-0024.
   FOR ALL OTHER SUPPORTS SEE DRAWINGS F-145579-00-P-0001 TO -0004.
8. SEE BRANCH REINFORCEMENT DETAIL ON DWG. F-145579-36-V-0023 FOR FITTINGS SHOWN SHADED.



ISOMETRIC VIEW LOOKING SOUTHEAST

NOT APPROVED FOR CONSTRUCTION

Rev.	REVISION DESCRIPTION	Date	By	CHK'D	APP'D	CLIENT APPROVAL
H	ISSUED FOR CH2M REVIEW/ REVIEW (AREA 36 ONLY)	25 MAR 06	SW	JM	JL	JSG
G	ISSUED FOR DOE'S DESIGN REPORT	24 FEB 06	RRB	JM	SRB	JSG
F	ISSUED FOR DESIGN	16/12/05	RRB		FWS	JDS
E	REISSUED FOR CH2M HILL REVIEW/SDR REPORT (AREA 36 ONLY)	26/04/05	JCH	PCF	FWS	SC
D	ISSUED FOR CH2M HILL REVIEW/SDR REPORT (AREA 36 ONLY)	15/03/05	JCH	PCF	FWS	TH
C	ISSUED FOR CH2M HILL REVIEW/SMR REPORT (ICV SYSTEM)	02/03/05	JCH	PCF	CJ	TH
B	ISSUED FOR INTERNAL APPROVAL	17/12/04	JCH	AP	FWS	TH
A	ISSUED FOR REVIEW	05/11/04	JCH	AP	FWS	TH

AMEC DRAWING NO: F-145579-36-V-0005 REV: H

amec

AMEC PROJECT: 145579-FINAL DBVS DESIGN

U.S. DEPARTMENT OF ENERGY
Office of River Protection

BULK VITRIFICATION
OFF-GAS TREATMENT
MELT & DRYER UPPER PLAN

NAME	DATE	COMPANY REVIEW	AMEC
DRAWN BY JCH			
DESIGNED BY			
CHECKED BY			
LEAD / AREA LEAD			
DISCIPLINE MANAGER			
PROJECT MANAGER			
DESIGN AUTHORITY			

REV F | SCALE 1/4"=1'-0" | SHEET of

DWG NO	TITLE
-	

DRAWING TRACEABILITY LIST

REF NUMBER	TITLE
-	

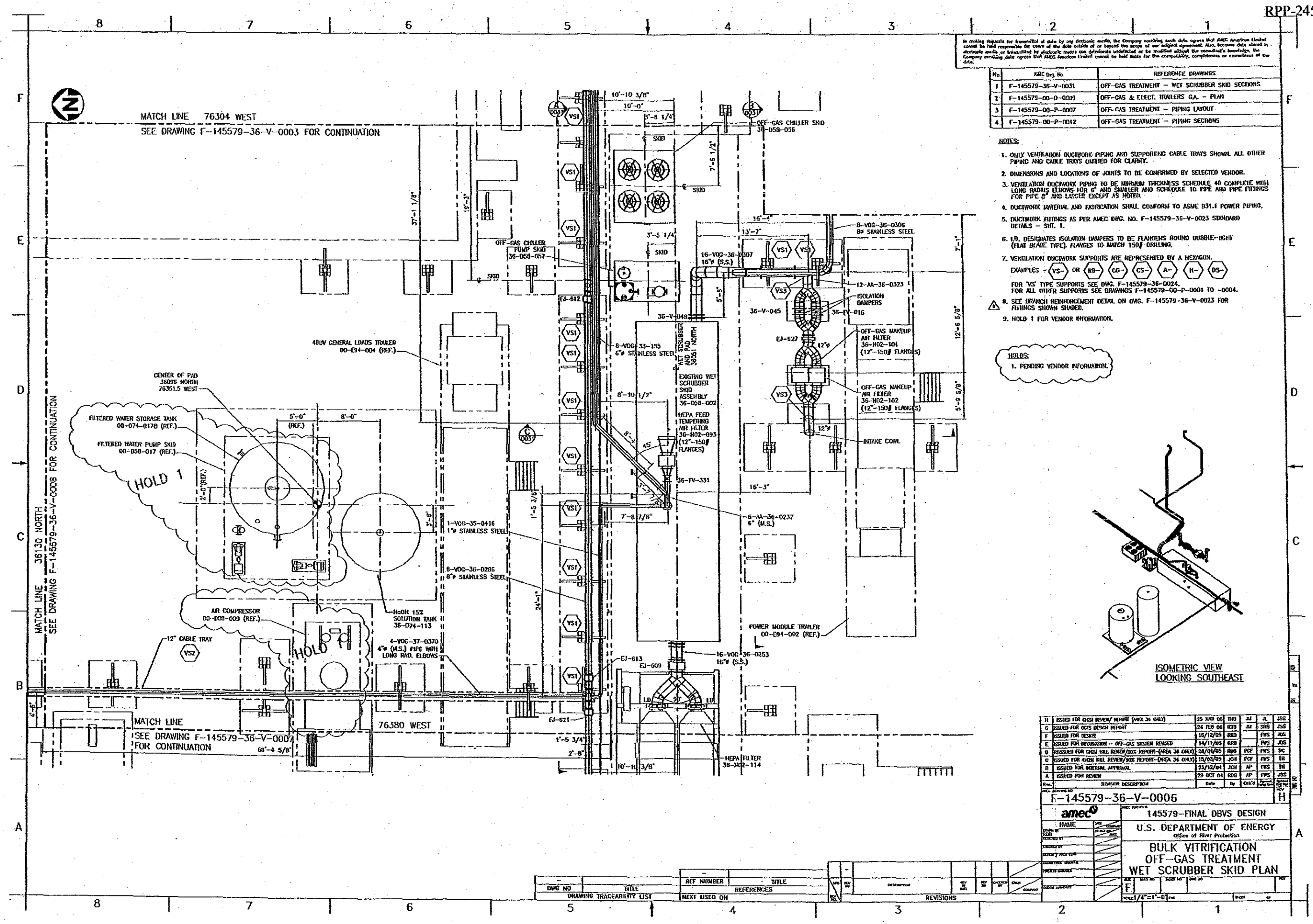
REFERENCES — NEXT USED ON

NO	REV NO	DESCRIPTION	REV BY	REV DT	CHECKED BY	CHK	COMPANY
-							

REVISIONS

145579-V-CA-005 Revision 1

Attachment 1



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No	AMEC Dwg. No.	REFERENCE DRAWINGS
1	F-145579-36-V-0031	OFF-GAS TREATMENT – WET SCRUBBER SKID SECTIONS
2	F-145579-00-D-0009	OFF-GAS & ELECT. TRAILERS G.A. – PLAN
3	F-145579-00-P-0007	OFF-GAS TREATMENT – PIPING LAYOUT
4	F-145579-00-P-0012	OFF-GAS TREATMENT – PIPING SECTIONS

NOTES:

1. ONLY VENTILATION DUCTWORK PIPING AND SUPPORTING CABLE TRAYS SHOWN. ALL OTHER PIPING AND CABLE TRAYS OMITTED FOR CLARITY.
2. DIMENSIONS AND LOCATIONS OF JOINTS TO BE CONFIRMED BY SELECTED VENDOR.
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6. I.D. DESIGNATES ISOLATION DAMPERS TO BE FLANGERS ROUND BUBBLE-TIGHT (FLAT BLADE TYPE). FLANGES TO MATCH 150# DRILLING.
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   FOR 'VS' TYPE SUPPORTS SEE DWG. F-145579-36-0024.
   FOR ALL OTHER SUPPORTS SEE DRAWINGS F-145579-00-P-0001 TO -0004.
8. SEE BRANCH REINFORCEMENT DETAIL ON DWG. F-145579-36-V-0023 FOR FITTINGS SHOWN SHADED.
9. HOLD 1 FOR VENDOR INFORMATION.

HOLDS:
1. PENDING VENDOR INFORMATION.

ISOMETRIC VIEW LOOKING SOUTHEAST

Rev.	REVISION DESCRIPTION	Date	By	Chk'd			
H	ISSUED FOR CIGN REVIEW/ REPORT (AREA 36 ONLY)	25 MAR 06	TRB	JM	JL	JSG	
G	ISSUED FOR OGTS DESIGN REPORT	24 FEB 06	RDB	JM	SRB	JSG	
F	ISSUED FOR DESIGN	16/12/05	RBB		FWS	JGS	
E	ISSUED FOR INFORMATION – OFF-GAS SYSTEM REVISED	14/11/05	RBB		FWS	JGS	
D	REISSUED FOR CIGN HAZ. REVIEW/OGTS REPORT-(AREA 36 ONLY)	28/04/05	RDB	PCF	FWS	SC	
C	ISSUED FOR CIGN HAZ. REVIEW/OGTS REPORT-(AREA 36 ONLY)	15/03/05	JCH	PCF	FWS	TH	
B	ISSUED FOR INTERIM APPROVAL	23/12/04	JCH	AP	FWS	TH	
A	ISSUED FOR REVIEW	29 OCT 04	RDB	AP	FWS	JGS	

F-145579-36-V-0006 — REV H

amec

145579-FINAL DBVS DESIGN

U.S. DEPARTMENT OF ENERGY
Office of River Protection

BULK VITRIFICATION
OFF-GAS TREATMENT
WET SCRUBBER SKID PLAN

SIZE F — SCALE 1/4"=1'-0"

DWG NO	TITLE
DRAWING TRACEABILITY LIST	

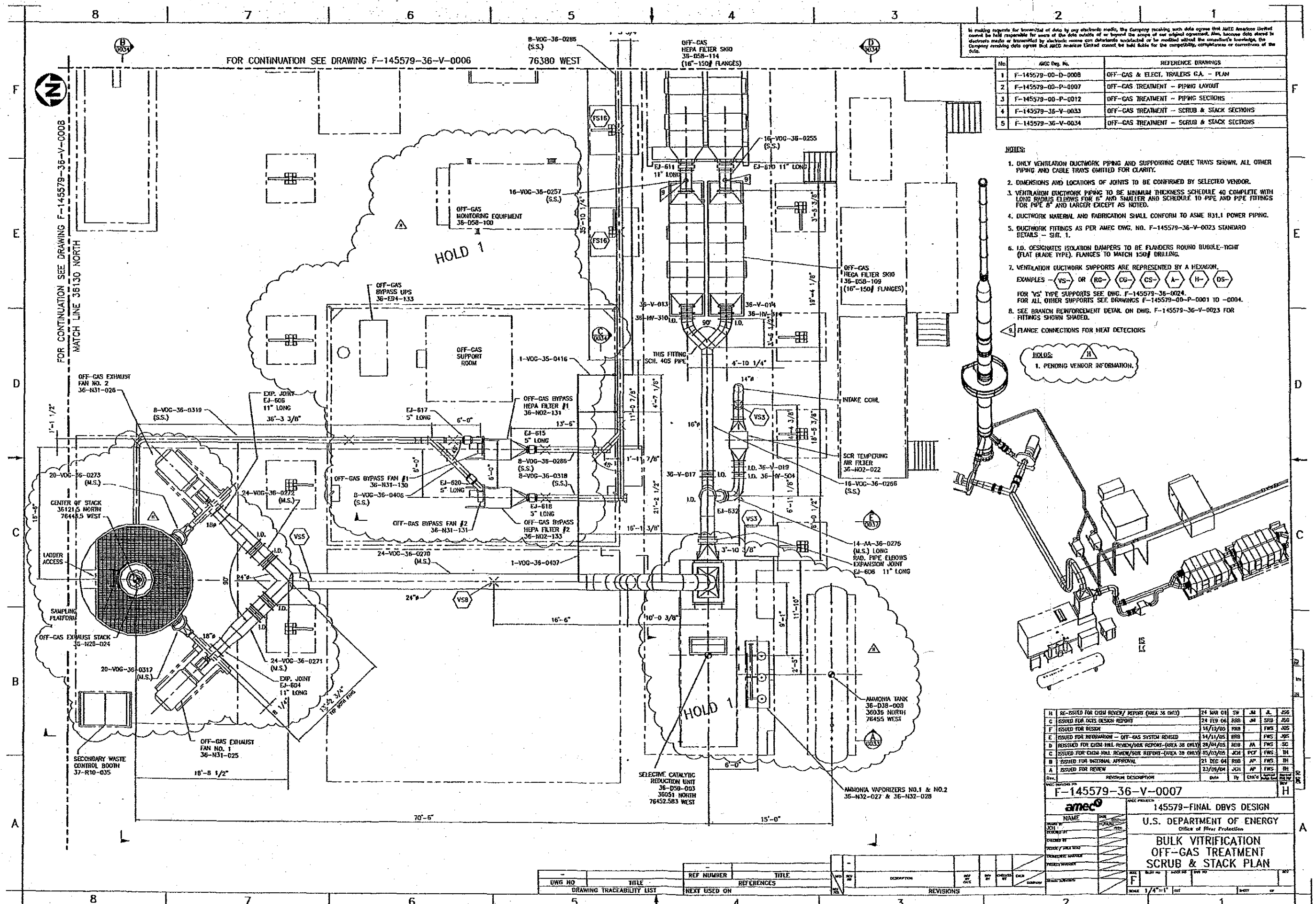
REF NUMBER	TITLE
REFERENCES	

NEXT USED ON

REVISIONS

145579-V-CA-005 Revision 1

Attachment 1



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No.	AMEC Dwg. No.	REFERENCE DRAWINGS
1	F-145579-00-D-0008	OFF-GAS & ELECT. TRAILERS G.A. - PLAN
2	F-145579-00-P-0007	OFF-GAS TREATMENT - PIPING LAYOUT
3	F-145579-00-P-0012	OFF-GAS TREATMENT - PIPING SECTIONS
4	F-145579-36-V-0033	OFF-GAS TREATMENT - SCRUB & STACK SECTIONS
5	F-145579-36-V-0034	OFF-GAS TREATMENT - SCRUB & STACK SECTIONS

NOTES:

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   FOR ALL OTHER SUPPORTS SEE DRAWINGS F-145579-00-P-0001 TO -0004.
8. SEE BRANCH REINFORCEMENT DETAIL ON DWG. F-145579-36-V-0023 FOR FITTINGS SHOWN SHADED.
9. FLANGE CONNECTIONS FOR HEAT DETECTORS

HOLD: H
1. PENDING VENDOR INFORMATION.

Rev.	REVISION DESCRIPTION	Date	By	Chk'd	Appr'd	Reg Eng	Reg Mgr
H	RE-ISSUED FOR CHM REVIEW/ REPORT (AREA 36 ONLY)	24 MAR 06	SW	JM	JL		JSG
G	ISSUED FOR DOE DESIGN REPORT	24 FEB 06	RBB	JM	SRB		JSG
F	ISSUED FOR DESIGN	16/12/05	RBB		FWS		JGS
E	ISSUED FOR INFORMATION - OFF-GAS SYSTEM REVISED	14/11/05	BBB		FWS		JGS
D	REISSUED FOR CHM HAL REVIEW/BOX REPORT-(AREA 38 ONLY)	28/04/05	RBB	AA	FWS		SC
C	ISSUED FOR CHM HAL REVIEW/BOX REPORT-(AREA 38 ONLY)	15/03/05	JCH	PCF	FWS		TH
B	ISSUED FOR INTERNAL APPROVAL	21 DEC 04	RBB	AP	FWS		TH
A	ISSUED FOR REVIEW	23/09/04	JCH	AP	FWS		TH

AMEC DRAWING NO. F-145579-36-V-0007 REV H

amec

AMEC PROJECT 145579-FINAL DBVS DESIGN

U.S. DEPARTMENT OF ENERGY
Office of River Protection

BULK VITRIFICATION
OFF-GAS TREATMENT
SCRUB & STACK PLAN

REV F | SCALE 1/4"=1' | ref | SHEET OF

DWG NO	TITLE
DRAWING TRACEABILITY LIST	

REF NUMBER	TITLE
NEXT USED ON	REFERENCES

REV	DESCRIPTION	REV BY	CHECKED BY	CHK'D
	REVISIONS			

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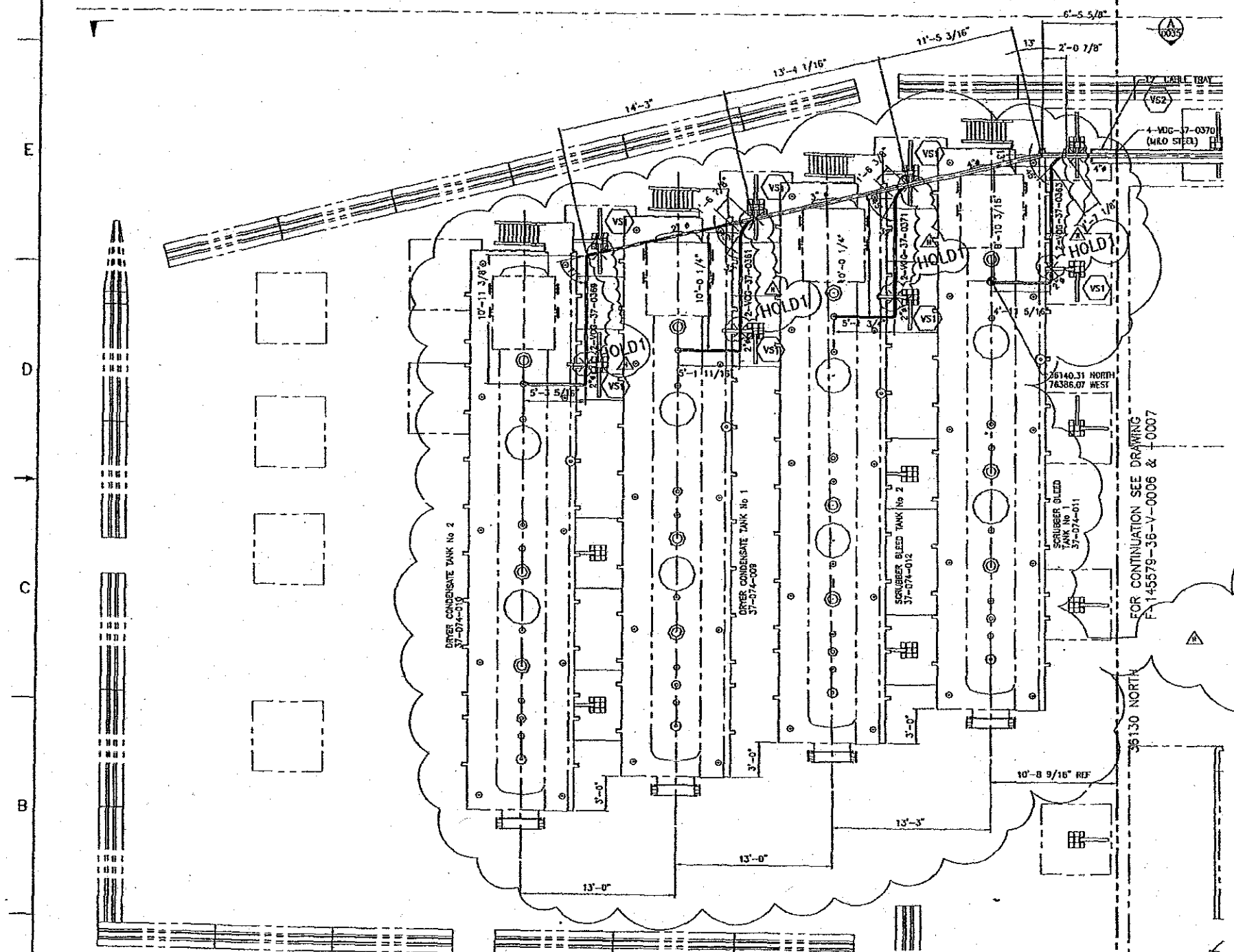
No.	AMEC Dwg. No.	REFERENCE DRAWINGS
1	F-145579-36-V-0035	OFF-GAS TREATMENT – SECONDARY WASTE AREA SECTION 'A'
2	F-145579-00-D-0005	SECONDARY WASTE AREA G.A. – PLAN
3	F-145579-00-D-0016	SECONDARY WASTE AREA G.A. – SECTIONS
4	F-145579-00-P-0008	SECONDARY WASTE STORAGE – PIPING LAYOUT
5	F-145579-00-P-0013	SECONDARY WASTE STORAGE – PIPING SECTIONS



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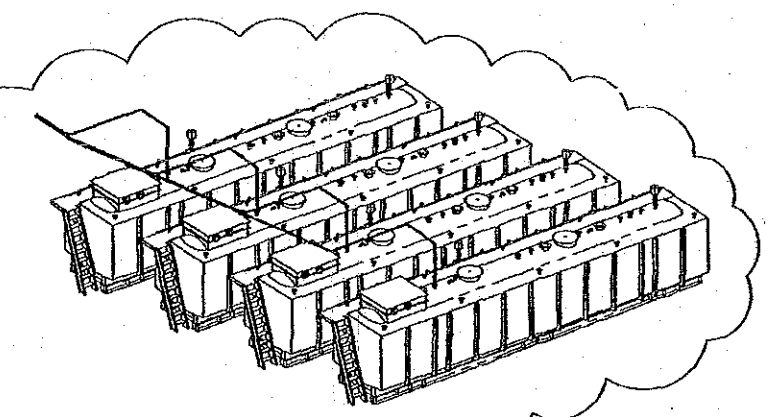
   FOR ALL OTHER SUPPORTS SEE DRAWINGS F-145579-00-P-0001 TO -0004.
8. SEE BRANCH REINFORCEMENT DETAIL ON DWG. F-145579-36-V-0023 FOR FITTINGS SHOWN SHADED.

HOLD1: STRUCTURAL STEEL FOR PIPE RACKS TO BE MODIFIED TO MATCH OFF-GAS VENT LINE MODIFICATIONS



ISOMETRIC VIEW
LOOKING SOUTHWEST

NOT APPROVED FOR CONSTRUCTION

Rev.	REVISION DESCRIPTION	Date	By	CHK'D	Approved By	Approved By
H	ISSUED FOR CH2M APPROVAL AND WBS DESIGN REPORT	19 MAR 06	RBB	JM	JL	JJ
G	ISSUED FOR OGTS DESIGN REPORT	24 FEB 06	RBB	JM	SRB	JSG
F	ISSUED FOR DESIGN	16 DEC 05	RBB		FWS	JOS
E	REISSUED FOR CH2M HILL REVIEW/WBS REPORT (AREA 36 ONLY)	28 APR 05	RDB	PCF	FWS	SC
D	ISSUED FOR CH2M HILL REVIEW/WBS REPORT (AREA 36 ONLY)	15 MAR 05	RDB	PCF	FWS	TH
C	ISSUED FOR CH2M HILL REVIEW/WBS REPORT (AREA 37 ONLY)	09 FEB 05	RDB	PCF	FWS	TH
B	ISSUED FOR INTERNAL APPROVAL	13 DEC 04	RDB	AP	FWS	TH
A	ISSUED FOR REVIEW	18 OCT 04	RDB	AP	FWS	JOS

AMEC DRAWING NO: F-145579-36-V-0008 REV: H

amec

NAME

AMEC PROJECT: 145579–FINAL DBVS DESIGN

U.S. DEPARTMENT OF ENERGY
Office of River Protection

BULK VITRIFICATION
OFF-GAS TREATMENT
SECONDARY WASTE AREA PLAN

SIZE F

DWG NO	TITLE	REF NUMBER	TITLE
DRAWING TRACEABILITY LIST		REFERENCES	
		NEXT USED ON	

REV NO	DESCRIPTION	REV BY DATE	REV BY	CHECKED BY	DATE	COMPANY
REVISIONS						

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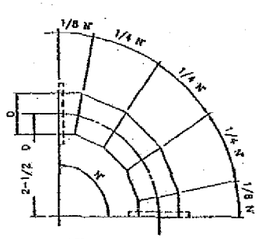
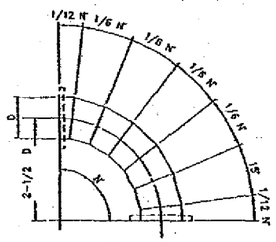
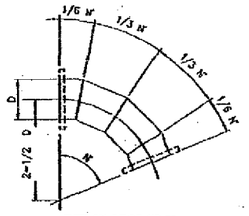


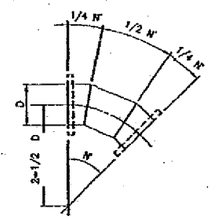
OVER 67.5° BENDS UP TO 90°
BENDS 4"ø TO 6"ø – 5 SECTIONS



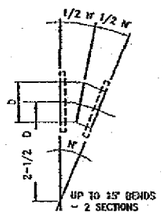
OVER 67.5° BENDS UP TO 90°
BENDS OVER 6"ø – 7 SECTIONS



OVER 30° BENDS UP TO 67.5° BENDS – 4 SECTIONS



OVER 15° BENDS UP TO 30° BENDS – 3 SECTIONS

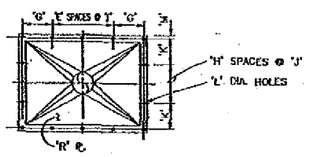


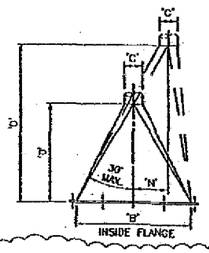
UP TO 15° BENDS – 2 SECTIONS

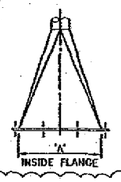
NOTES:

1. CENTERLINE RADIUS 2-1/2 TIMES THE NOMINAL DIAMETER OF PIPE FOR PROCESS VENTILATION DUCTING. MAXIMUM SECTION ANGLE 22-1/2°.
2. FLANGES SHOWN AT MINIMUM DISTANCE FROM ELBOW.
3. EXTRA STRAIGHT LENGTH MAY BE ADDED.
4. LONG RADIUS PIPE ELBOWS (CENTERLINE RADIUS 1 1/2 TIMES THE NOMINAL PIPE DIAMETER) SHALL BE USED FOR TANK VENT LINES AND OUTSIDE AIR INTAKES.

CIRCULAR DUCT ELBOW CONSTRUCTION 4"ø AND GREATER.
UP TO 3"ø USE LONG RADIUS PIPE ELBOWS



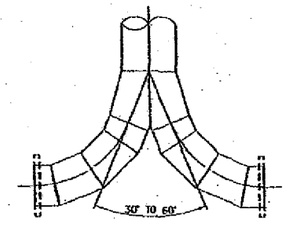


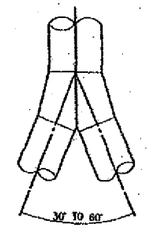


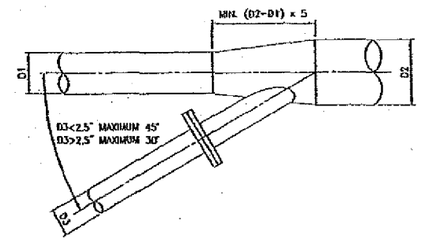
RECT. SIZE A x B	DUCT O.D. C	DIMENSION D	E	F	G	H	J	K	L	M	N	P	Q	R	NO. OF BOLTS
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

HOLD FOR EQUIPMENT INFORMATION

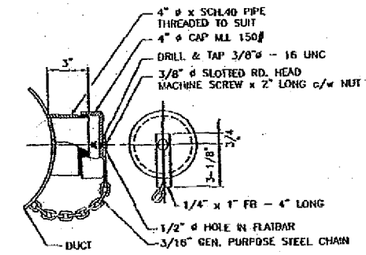
RECTANGULAR TO ROUND TRANSITION



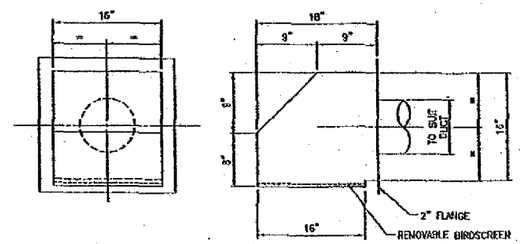




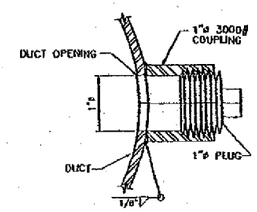
BRANCH ENTRY



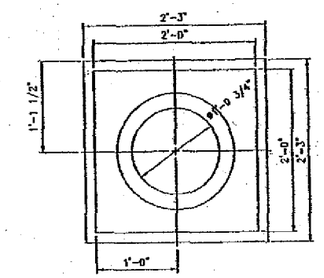
SAMPLE PORT

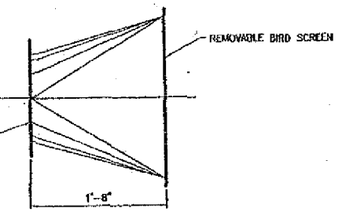


AIR INTAKE HOOD



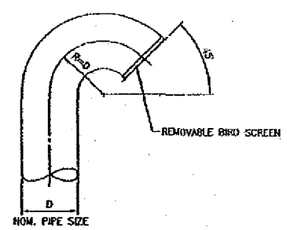
TESTING PORT



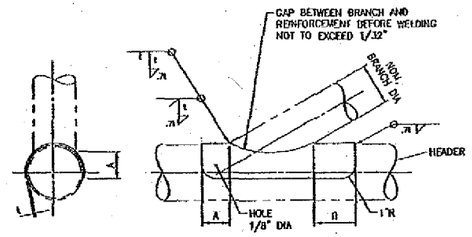


AIR INTAKE HOOD

FOR 36-N02-093
HEPA FEED TEMPERING
AIR FILTER



INTAKE COWL



BRANCH REINFORCEMENT

NOM. BRANCH DIA	6"	8	4"	10"	20"
A	2 1/2"	2 1/2"	2"	3"	4"
B	3 1/2"	3 1/2"	3"	4 1/2"	7 1/2"
t	MATCH HEADER THICKNESS		MATCH BRANCH THICKNESS		

EXPANSION JOINT SCHEDULE

ITEM No.	MANUFACTURER (OR APPROVED EQUAL)	PART NUMBER	RATED SIZE	RATED STIFFNESS AX. (lbs/in)	LAT. (lbs/in)	TORS. (in-lbs/deg)
EJ1	SENIOR FLEX. PATH	4-MO-FT-25-26 3/8-L-316	266	7	13000
EJ2	SENIOR FLEX. PATH	8-MO-FT-25-27 1/8-L-316	316	21	40000
EJ3	SENIOR FLEX. PATH	6-MO-FT-25-26 5/8-L-316	266	7	13000
EJ4	SENIOR FLEX. PATH	4-MO-FT-25-26 5/8-L-316	266	7	13000
EJ5	SENIOR FLEX. PATH	8-AS-FF-50-20-L-304	266	7	13000
EJ6	SENIOR FLEX. PATH	8-AS-FF-50-20-L-304	266	7	13000
EJ7	SENIOR FLEX. PATH	20-AS-FT-50-12-L-304	266	7	13000
EJ8	SENIOR FLEX. PATH	10-AS-FT-50-8-L-304	266	7	13000
EJ9	SENIOR FLEX. PATH	10-AS-FT-50-10-L-304	266	7	13000
EJ10	SENIOR FLEX. PATH	12-AS-FT-50-10-L-304	266	7	13000
EJ11	SENIOR FLEX. PATH	12-AS-FT-50-16-L-304	266	7	13000
EJ12	SENIOR FLEX. PATH	22-AS-FF-50-12-L-304	266	7	13000
EJ13	SENIOR FLEX. PATH	22-AS-FF-50-12-L-304	266	7	13000

NOTE: FLANGE AND PIPE SPOOL MATERIAL TO MATCH CONNECTING PIPE

NOT APPROVED FOR CONSTRUCTION

Rev.	REVISION DESCRIPTION	Date	By	Chk'd	Appr'd	Appr'd Cust. Rep.
E	ISSUED FOR CHM REVIEW / REPORT (AREA 36 ONLY)	25 MAR 05	SW	JM	JL	JSG
D	ISSUED FOR OGTS DESIGN REPORT	24 FEB 05	RHB	JM	SRB	JSG
C	ISSUED FOR CHM BILL REVIEW/WPR REPORT (AREA 36 ONLY)	15 MAR 05	RDB	PCF	FWS	TH
B	ISSUED FOR INTERNAL APPROVAL	31 JAN 05	RDB	AP	FWS	TH
A	ISSUED FOR REVIEW	10/11/04	JCH	AP	CJ	TH

PROJ. DRAWING NO. F-145579-36-V-0023 REV. E

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PROJ. PROJECT 145579-FINAL DBVS DESIGN

U.S. DEPARTMENT OF ENERGY
Office of River Protection

BULK VITRIFICATION
OFF-GAS TREATMENT
STANDARD DETAILS-SHT.1

SIZE F SCALE N.T.S.

DWG NO	TITLE
DRAWING TRACEABILITY LIST	

REF. NUMBER	TITLE
NEXT USED ON	REFERENCES

HOLD

UNDER REVIEW

REVISIONS

145579-V-CA-005 Revision 1

Attachment 1

9 of 19

A5-778

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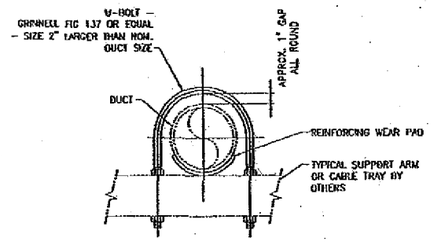
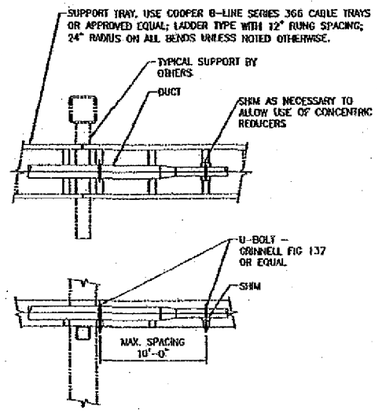


TYPICAL DUCT SUPPORT WITH CLAMPED GUIDE

VS1

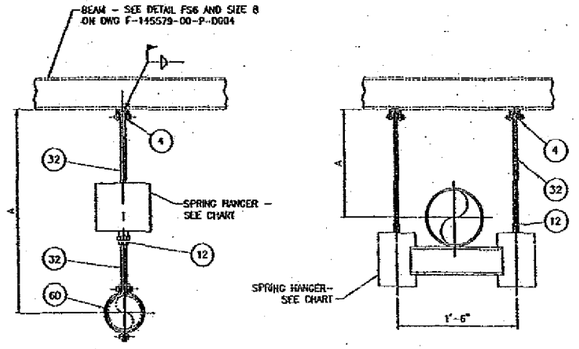


TYPICAL DUCT SUPPORT ON CABLE TRAY

VS2

INTAKE SUPPORT
1/2"=1'-0"

VS3



TYPICAL DUCT SUPPORT WITH SPRING HANGER TYPE A

TYPICAL DUCT SUPPORT WITH SPRING HANGER TYPE G

VS4

SUPPORT NUMBER	A	SPRING HANGER (GRINNELL OR EQUAL)			LOAD (LBS)	
		FIG	TYPE	SIZE	COLD	HOT
VS4.1	14 3/16"	82	B	3	161	187
VS4.2	14 3/16"	82	C	7	543	691
VS4.3	37 15/16"	98	A	5	291	358
VS4.4	16 13/16"	82	C	5	259	284
VS4.5	40 5/32"	88	A	3	178	203
VS4.6	16 13/16"	82	C	6	318	389

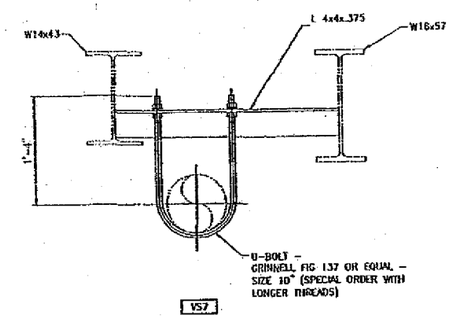
11 25/32"

NOTES:

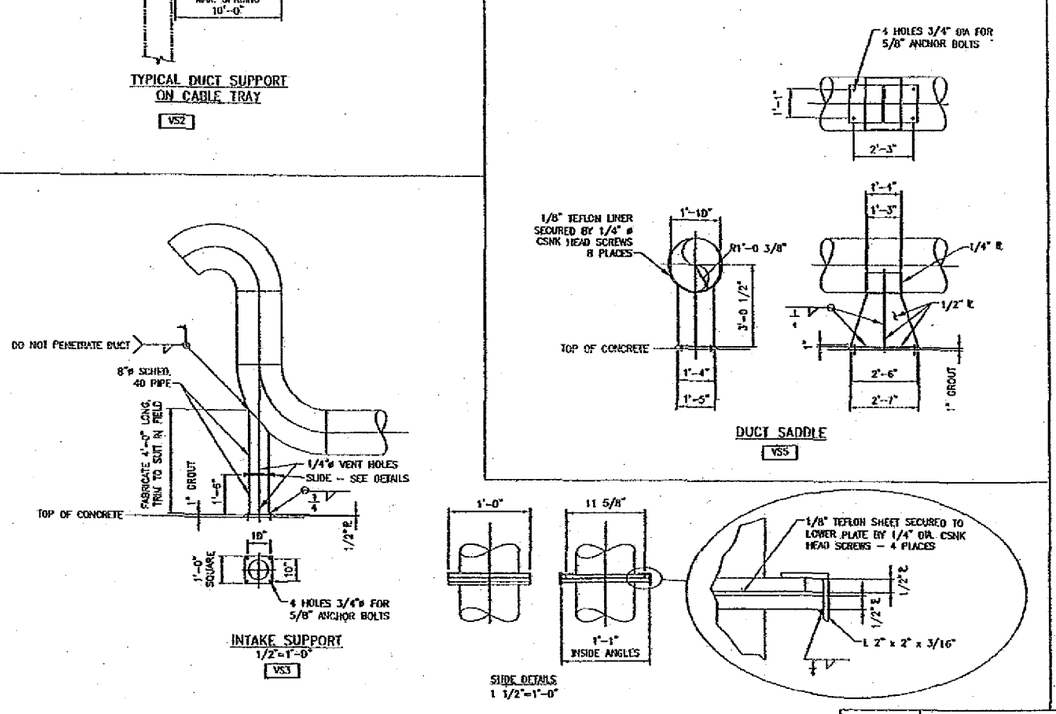
1. SEE DWG F-145579-00-P-0003 FOR DETAILS OF NUMBERED ITEMS.
2. PIPE CLAMP (ITEM 60) TO BE SIMILAR MATERIAL TO DUCT.

VS6

NOTE. WHERE S.S. DUCTING IS CLAMPED, WRAP CLAMP WITH 1/8" THERMOFAB CLOTH LINER BY ALBON INDUSTRIAL PRODUCTS.



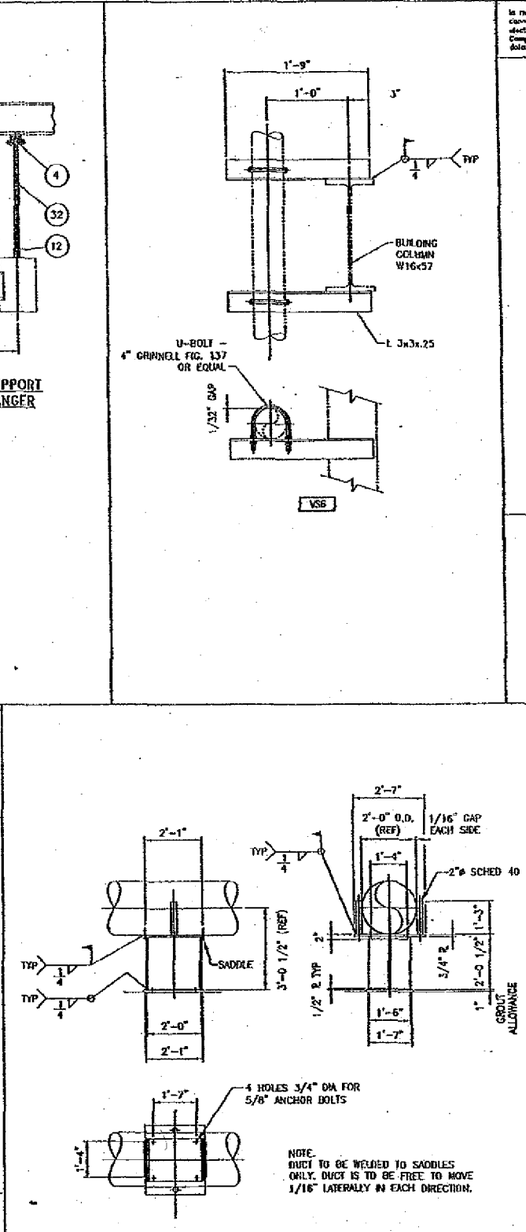
VS7



DUCT SADDLE

VS5

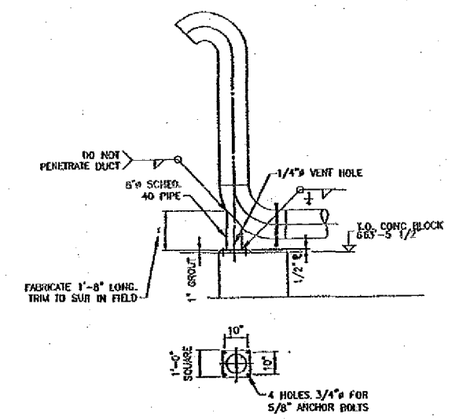
SIDE DETAILS
1 1/2"=1'-0"



NOTE.
DUCT TO BE WELDED TO SADDLES ONLY. DUCT IS TO BE FREE TO MOVE 1/16" LATERALLY IN EACH DIRECTION.

LIMIT STOP

VS8



VS9
1/2"=1'-0"

NOT APPROVED FOR CONSTRUCTION

REV	REVISION DESCRIPTION	Date	By	CHK'D	APPR'D	PROJ MGR	DWG ID
D	ISSUED FOR 60% DESIGN REPORT	24 FEB 06	RRD	JM	SRB	JSG	
C	ISSUED FOR 15% INT. REVIEW/60% REPORT (AREA 35 ONLY)	15 MAY 05	BDB	PCF	FWS	TH	
B	ISSUED FOR INTERNAL APPROVAL	31 JAN 05	RRB	AP	FWS	TH	
A	ISSUED FOR REVIEW	13 JAN 05	BDB	AP	FWS	TH	

AMEC DRAWING NO: F-145579-36-V-0024 REV: D

amec

NAME	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
DESIGN LEAD	
CONSTRUCTION REPRESENTATIVE	
PROJECT MANAGER	
REGIONAL REPRESENTATIVE	

AMEC PROJECT: 145579-FINAL DBVS DESIGN

U.S. DEPARTMENT OF ENERGY
Office of River Protection

BULK VITRIFICATION OFF-GAS TREATMENT DUCT SUPPORT DETAILS

SIZE: F | SCALE: NTS | SHEET OF

DWG No	TITLE	REF NUMBER	TITLE
DRAWING TRACEABILITY LIST		NEXT USED ON	REFERENCES

REVISIONS

145579-V-CA-005 Revision 1

Attachment 1

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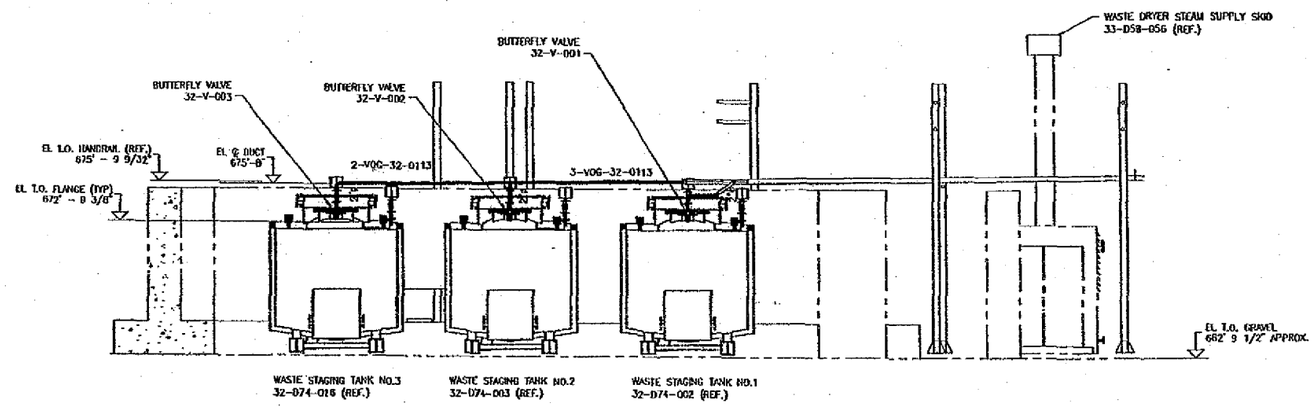
No.	AMEC Dwg. No.	REFERENCE DRAWINGS
1	F-145579-36-V-0002	OFF-GAS TREATMENT WASTE RECEIPT AREA – PLAN
2	F-145579-00-D-0011	WASTE RECEIPT & DRYER AREA G.A. – PLAN
3	F-145579-00-P-0005	DRYER PIPING LAYOUT
4	F-145579-00-P-0010	DRYER PIPING SECTIONS

NOTES:
SEE NOTES ON DWG F-145579-36-V-0002



SECTION A 0002
1/4"=1'-0"

NOT APPROVED FOR CONSTRUCTION

Rev.	Revision Description	Date	By	Chk'd	Appr'd	Appr'd
F	ISSUED FOR CDR REVIEW/ REPORT (AREA 36 ONLY)	25 MAR 06	TMB	JM	JL	JDS
E	ISSUED FOR DESIGN	16 DEC 05	RDB		EWS	JDS
D	ISSUED FOR CDR2 HOL REVIEW/BOK REPORT – (AREA 36 ONLY)	15 MAR 05	RDB	PCF	EWS	TH
C	ISSUED FOR CDR2 HOL REVIEW/BOK REPORT	26 JAN 05	RDB	PCF	EWS	TH
B	ISSUED FOR INTERNAL APPROVAL	13 DEC 04	RDB	AP	EWS	TH
A	ISSUED FOR REVIEW	21/10/04	RDB	AP	EWS	JDS

AMEC DRAWING NO: F-145579-36-V-0026 REV: F

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AMEC PROJECT: 145579-FINAL DBVS DESIGN

U.S. DEPARTMENT OF ENERGY
Office of River Protection

BULK VITRIFICATION
OFF-GAS TREATMENT
WASTE RECEIPT AREA SECTION 'A'

SCALE: 1/4"=1'-0" SIZE: F

DWG NO	TITLE
DRAWING TRACEABILITY LIST	

REF NUMBER	TITLE
REFERENCES	

NEXT USED ON

REVISIONS

NOTES:

1. ONLY VENTILATION DUCTWORK PIPING AND SUPPORTING CABLE TRAYS SHOWN. ALL OTHER PIPING AND CABLE TRAYS OMITTED FOR CLARITY.
2. DIMENSIONS AND LOCATIONS OF JOINTS TO BE CONFIRMED BY SELECTED VENDOR.
3. VENTILATION DUCTWORK PIPING TO BE MINIMUM THICKNESS SCHEDULE 40 COMPLETE WITH LONG RADIUS ELBOWS FOR 6" AND SMALLER AND SCHEDULE 10 PIPE AND PIPE FITTINGS FOR PIPE 8" AND LARGER EXCEPT AS NOTED.
4. DUCTWORK MATERIAL AND FABRICATION SHALL CONFORM TO ASME B31.1 POWER PIPING.
5. DUCTWORK FITTINGS AS PER AMEC DWG. NO. F-145579-36-V-0023 STANDARD DETAILS – SHT. 1.
6. I.D. DESIGNATES ISOLATION DAMPERS TO BE FLANGERS ROUND BUBBLE-TIGHT (FLAT BLADE TYPE), FLANGES TO MATCH 150# DRILLING.
7. VENTILATION DUCTWORK SUPPORTS ARE REPRESENTED BY A HEXAGON.
   EXAMPLES – VS– OR RG– CG– CS– A– H– DS–
   FOR 'VS' TYPE SUPPORTS SEE DWG. F-145579-36-0024.
   FOR ALL OTHER SUPPORTS SEE DRAWINGS F-145579-00-P-0001 TO -0004.
8. SEE BRANCH REINFORCEMENT DETAIL ON DWG. F-145579-36-V-0023 FOR FITTINGS SHOWN SHADED.

HOLDS:
1. PENDING VENDOR INFORMATION.

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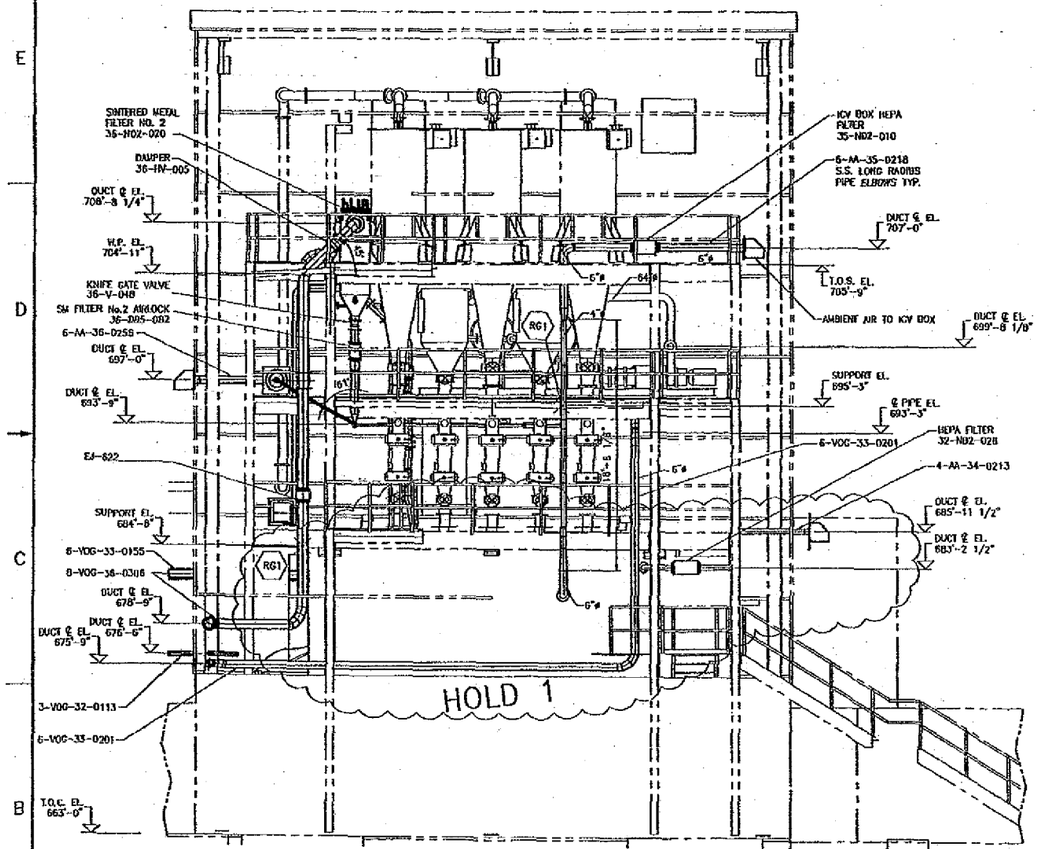
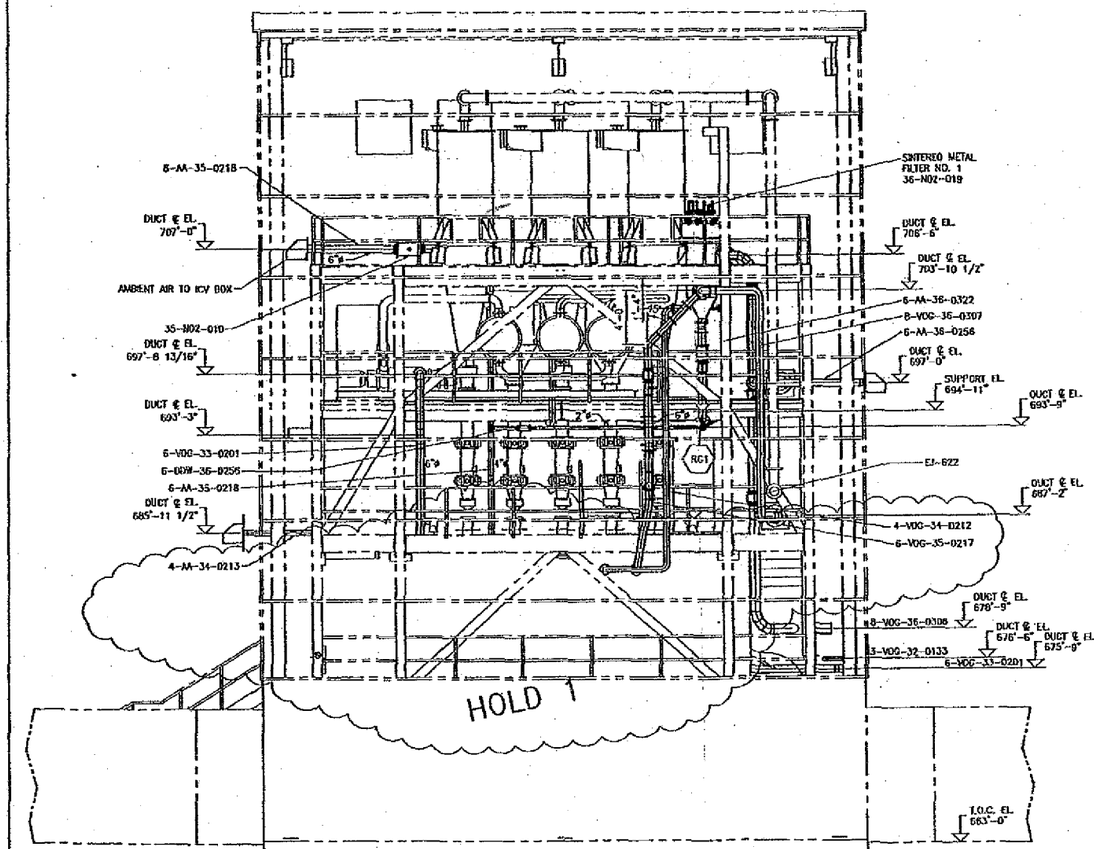
No	AMEC Dwg. No.	REFERENCE DRAWINGS
1	F-145579-00-G-0041	MELT AREA G.A. ELEVATIONS NORTH AND WEST
2	F-145579-00-G-0051	MELT AREA G.A. PLAN VIEWS
3	F-145579-36-V-0003	OFF-GAS TREATMENT MELT & DRYER LOWER PLAN
4	F-145579-36-V-0004	OFF-GAS TREATMENT MELT & DRYER MIDDLE PLAN
5	F-145579-36-V-0005	OFF-GAS TREATMENT MELT & DRYER UPPER PLANS
6	F-145579-36-V-0028	OFF-GAS TREATMENT MELT & DRYER SECTION C
7	F-145579-36-V-0029	OFF-GAS TREATMENT MELT & DRYER SECTION D
8	F-145579-36-V-0030	OFF-GAS TREATMENT MELT & DRYER SECTION E



SECTION 1/4"=1'-0" A0003 A0004 A0005



SECTION 1/4"=1'-0" B0003 B0004 B0005

NOT APPROVED FOR CONSTRUCTION

Rev.	REVISION DESCRIPTION	Date	By	Ch'd			
H	RE-ISSUED FOR OGTS DESIGN REPORT	24 MAR 06	SW	JM	JL	JSG	
G	ISSUED OGTS DESIGN REPORT	24 FEB 06	RRB	JM	SRB	JSG	
F	ISSUED FOR DESIGN	18/12/05	RRB		FWS	JSG	
E	REISSUED FOR CH2M HILL REVIEW/BOX REPORT (AREA 36 ONLY)	28/04/05	JCH	PCF	FWS	SC	
D	ISSUED FOR CH2M HILL REVIEW/BOX REPORT (AREA 36 ONLY)	10/03/05	RDB	PCF	FWS	TH	
C	ISSUED FOR CH2M HILL REVIEW/BOX REPORT (DCV SYSTEM)	02/03/05	RDB	PCF	CJ	TH	
B	ISSUED FOR INTERNAL APPROVAL	17/12/04	RDB	AP	FWS	TH	
A	ISSUED FOR REVIEW	05/11/04	RDB	AP	FWS	TH	

AMEC DRAWING No. F-145579-36-V-0027 REV H

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PROJECT 145579-FINAL DBVS DESIGN

U.S. DEPARTMENT OF ENERGY
Office of River Protection

BULK VITRIFICATION
OFF-GAS TREATMENT
MELT & DRYER SECTIONS A & B

SCALE 1/4"=1'-0" REV F

DWG NO	TITLE	REF NUMBER	TITLE
DRAWING TRACEABILITY LIST		NEXT USED ON	REFERENCES

REVISIONS

In making requests for transmittal of data by any electronic media, the Company receiving such data agrees that AMEC Americas Limited cannot be held responsible for issues of the data outside of or beyond the scope of our original agreement, data, because data stored in electronic media or transmitted by electronic means can deteriorate undetected or be modified without the consultant's knowledge. The Company receiving data agrees that AMEC Americas Limited cannot be held liable for the compatibility, completeness or correctness of the data.

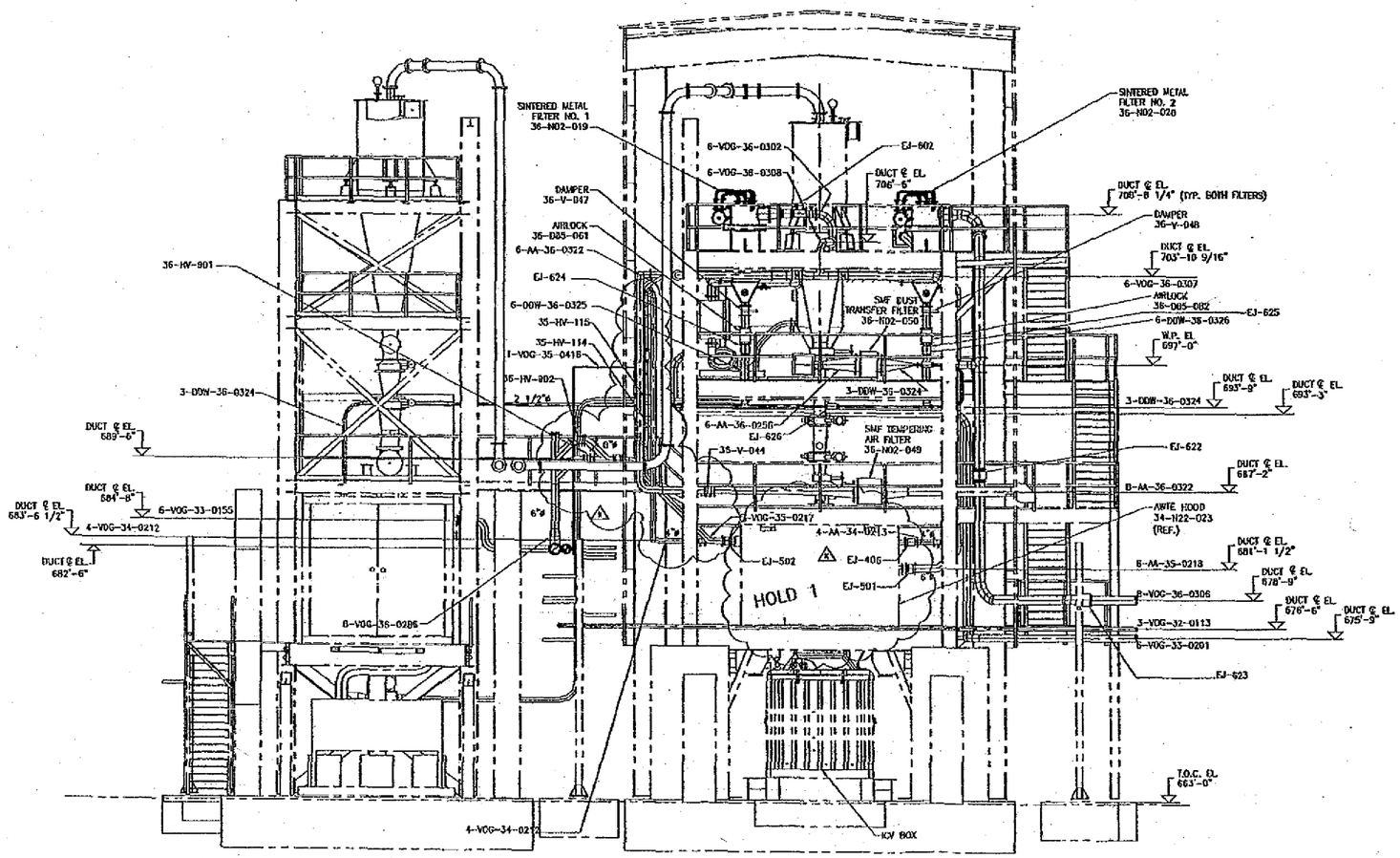
No.	AMEC Dwg. No.	REFERENCE DRAWINGS
1	F-145579-00-D-0041	MELT AREA G.A. ELEVATIONS NORTH AND WEST
2	F-145579-00-D-0051	MELT AREA G.A. PLAN VIEWS
3	F-145579-36-V-0003	OFF-GAS TREATMENT MELT & DRYER LOWER PLAN
4	F-145579-36-V-0004	OFF-GAS TREATMENT MELT & DRYER MIDDLE PLAN
5	F-145579-36-V-0005	OFF-GAS TREATMENT MELT & DRYER UPPER PLANS
6	F-145579-36-V-0027	OFF-GAS TREATMENT MELT & DRYER SECTIONS A & B
7	F-145579-36-V-0029	OFF-GAS TREATMENT MELT & DRYER SECTION D
8	F-145579-36-V-0030	OFF-GAS TREATMENT MELT & DRYER SECTION E

NOTES:

1. ONLY VENTILATION DUCTWORK PIPING AND SUPPORTING CABLE TRAYS SHOWN. ALL OTHER PIPING AND CABLE TRAYS OMITTED FOR CLARITY.
2. DIMENSIONS AND LOCATIONS OF JOINTS TO BE CONFIRMED BY SELECTED VENDOR.
3. VENTILATION DUCTWORK PIPING TO BE MINIMUM THICKNESS SCHEDULE 40 COMPLETE WITH LONG RADIUS ELBOWS FOR 8" AND SMALLER AND SCHEDULE 10 PIPE AND PIPE FITTINGS FOR PIPE 8" AND LARGER EXCEPT AS NOTED.
4. DUCTWORK MATERIAL AND FABRICATION SHALL CONFORM TO ASME B31.1 POWER PIPING.
5. DUCTWORK FITTINGS AS PER AMEC DWG. NO. F-145579-36-V-0023 STANDARD DETAILS - SHT. 1.
6. I.O. DESIGNATES ISOLATION DAMPERS TO BE FLANGED ROUND BUBBLE-TIGHT (FLAT BLADE TYPE). FLANGES TO MATCH 150# DRILLING.
7. VENTILATION DUCTWORK SUPPORTS ARE REPRESENTED BY A HEXAGON.
   EXAMPLES - VS- OR RG- CG- CS- A- H- DS-
   FOR "VS" TYPE SUPPORTS SEE DWG. F-145579-36-0024.
   FOR ALL OTHER SUPPORTS SEE DRAWINGS F-145579-00-P-0001 TO -0004.
8. SEE BRANCH REINFORCEMENT DETAIL ON DWG. F-145579-36-V-0023 FOR FITTINGS SHOWN SHADED.

HOLDS: K
1. PENDING VENDOR INFORMATION.

NOT APPROVED FOR CONSTRUCTION



SECTION 1/4"=1'-0" (C 0003) (C 0004) (C 0005)

Rev.	REVISION DESCRIPTION	Date	By	Chk'd	Approved	Approved
K	RE-ISSUED FOR OGTS DESIGN PACKAGE	24 MAR 05	SW	JM	JL	VSC
J	ISSUED FOR OGTS DESIGN REVIEW	28 FEB 05	RRB	JM	SRB	VSC
H	ISSUED FOR DESIGN	16/12/05	RRB		FWS	JDS
G	ISSUED FOR INFORMATION - OFF-GAS SYSTEM REVISED	19/11/05	RDB		FWS	JDS
F	REISSUED FOR CH2M HILL REVIEW/90% REPORT(AREA 36 ONLY)	26/04/05	RDB	PCF	FWS	SC
E	ISSUED FOR CH2M HILL REVIEW/90% REPORT (AREA 36 ONLY)	15/03/05	RDB	PCF	FWS	TH
D	ISSUED FOR CH2M HILL REVIEW/60% REPORT (BOF SYSTEM)	07/03/05	RDB	PCF	GJ	TH
C	ISSUED FOR CH2M HILL REVIEW/30% REPORT (AREA 35 ONLY)	24/01/05	RDB	PCF	FWS	TH
B	ISSUED FOR INTERNAL APPROVAL	17/12/04	RDB	AP	FWS	TH
A	ISSUED FOR REVIEW	06/11/04	RDB	AP	FWS	TH

F-145579-36-V-0028 — K

amec

145579-FINAL DBVS DESIGN

U.S. DEPARTMENT OF ENERGY
Office of River Protection

BULK VITRIFICATION
OFF-GAS TREATMENT
MELT & DRYER SECTION 'C'

F — 1/4"=1'-0"

DWG NO	TITLE	REF NUMBER	TITLE
DRAWING TRACEABILITY LIST		NEXT USED ON	REFERENCES

REVISIONS

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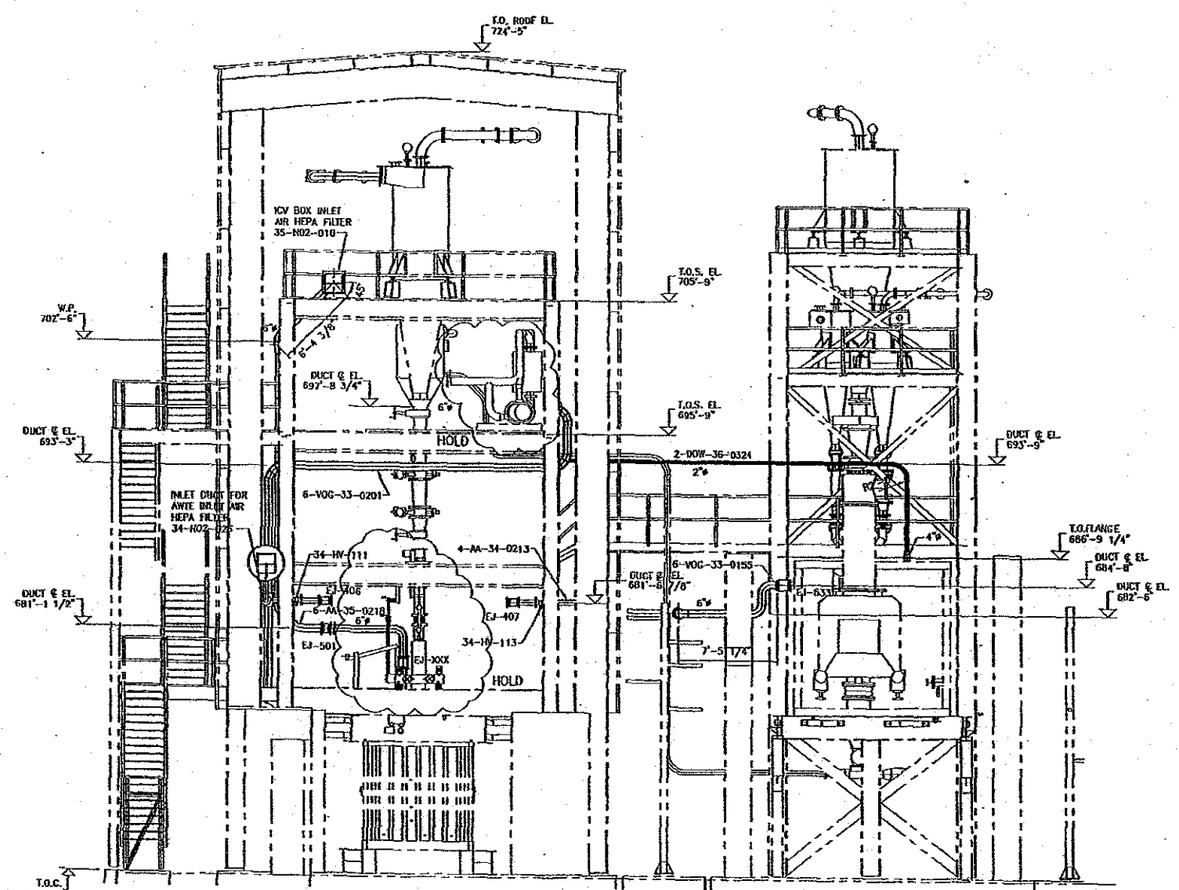
No.	AMEC Drg. No.	REFERENCE DRAWINGS
1	F-145579-00-0-0041	MELT AREA G.A. ELEVATIONS NORTH AND WEST
2	F-145579-00-0-0051	MELT AREA G.A. PLAN VIEWS
3	F-145579-36-V-0003	OFF-GAS TREATMENT MELT & DRYER LOWER PLAN
4	F-145579-36-V-0004	OFF-GAS TREATMENT MELT & DRYER MIDDLE PLAN
5	F-145579-36-V-0005	OFF-GAS TREATMENT MELT & DRYER UPPER PLANS
6	F-145579-36-V-0027	OFF-GAS TREATMENT MELT & DRYER SECTIONS A & B
7	F-145579-36-V-0028	OFF-GAS TREATMENT MELT & DRYER SECTION C
8	F-145579-36-V-0030	OFF-GAS TREATMENT MELT & DRYER SECTION E

NOTES:

1. ONLY VENTILATION DUCTWORK PIPING AND SUPPORTING CABLE TRAYS SHOWN. ALL OTHER PIPING AND CABLE TRAYS OMITTED FOR CLARITY.
2. DIMENSIONS AND LOCATIONS OF JOINTS TO BE CONFIRMED BY SELECTED VENDOR.
3. VENTILATION DUCTWORK PIPING TO BE MINIMUM THICKNESS SCHEDULE 40 COMPLETE WITH LONG RADIUS ELBOWS FOR 6" AND SMALLER AND SCHEDULE 10 PIPE AND PIPE FITTINGS FOR PIPE 8" AND LARGER EXCEPT AS NOTED.
4. DUCTWORK MATERIAL AND FABRICATION SHALL CONFORM TO ASME B31.1 POWER PIPING.
5. DUCTWORK FITTINGS AS PER AMEC DWG. NO. F-145579-36-V-0023 STANDARD DETAILS – SHT. 1.
6. I.D. DESIGNATES ISOLATION DAMPERS TO BE FLANGED ROUND BUBBLE-TIGHT (FLAT BLADE TYPE). FLANGES TO MATCH 150# DRILLING.
7. VENTILATION DUCTWORK SUPPORTS ARE REPRESENTED BY A HEXAGON.
   EXAMPLES – VS– OR RG– CG– CS– A– H– DS–
   FOR 'VS' TYPE SUPPORTS SEE DWG. F-145579-36-0024.
   FOR ALL OTHER SUPPORTS SEE DRAWINGS F-145579-00-P-0001 TO -0004.
8. SEE BRANCH REINFORCEMENT DETAIL ON DWG. F-145579-36-V-0023 FOR FITTINGS SHOWN SHADED.

HOLDS:
1. PENDING VENDOR INFORMATION.



SECTION D 0003 D 0004 D 0005
1/4"=1'-0"

DWG NO	TITLE
DRAWING TRACEABILITY LIST	

REF NUMBER	TITLE
NEXT USED ON	REFERENCES

REV NO	DESCRIPTION	REV DATE	REV BY	CHECKED BY	APVD	COMPANY
REVISIONS						

NOT APPROVED FOR CONSTRUCTION

Rev.	REVISION DESIGNATION	Date	By	CHK'd	Approved for Const.	Approved for Const.
J	ISSUED FOR CH2M REVIEW/REPORT (AREA 36 ONLY)	25 MAR 06	THB	JM	JL	JSG
H	ISSUED FOR OGTS DESIGN REPORT	24 FEB 06	RRB	JM	SRB	JSG
G	ISSUED FOR DESIGN	16/12/05	RRB		FWS	JOS
F	REISSUED FOR CH2M HILL REVIEW/90% REPORT (AREA 36 ONLY)	26/04/05	JCH	PCF	FWS	SC
E	ISSUED FOR CH2M HILL REVIEW/90% REPORT (AREA 36 ONLY)	18/03/05	JCH	PCF	FWS	TH
D	ISSUED FOR CH2M HILL REVIEW/90% REPORT – (ICV SYSTEM)	03/03/05	JCH	PCF	GJ	TH
C	ISSUED FOR CH2M HILL REVIEW/90% REPORT – (AREA 33 ONLY)	31/01/05	JCH	PCF	FWS	TH
B	ISSUED FOR INTERNAL APPROVAL	17/12/04	RRB	AP	FWS	TH
A	ISSUED FOR REVIEW	10/11/04	RRB	AP	GJ	TH

DWG. DRAWING NO: F-145579-36-V-0029 REV: J

amec

DWG. PROJECT: 145579-FINAL DBVS DESIGN

	NAME	DATE
DRAWN BY	JCH	
DESIGNED BY		
CHECKED BY		
CONCURRENCE		
PROJECT MANAGER		
DESIGN AUTHORITY		

U.S. DEPARTMENT OF ENERGY
Office of River Protection

BULK VITRIFICATION
OFF-GAS TREATMENT
MELT & DRYER SECTION 'D'

SIZE F | CODE NO | DWG NO | REV

SCALE 1/4"=1'-0" | SHEET | OF

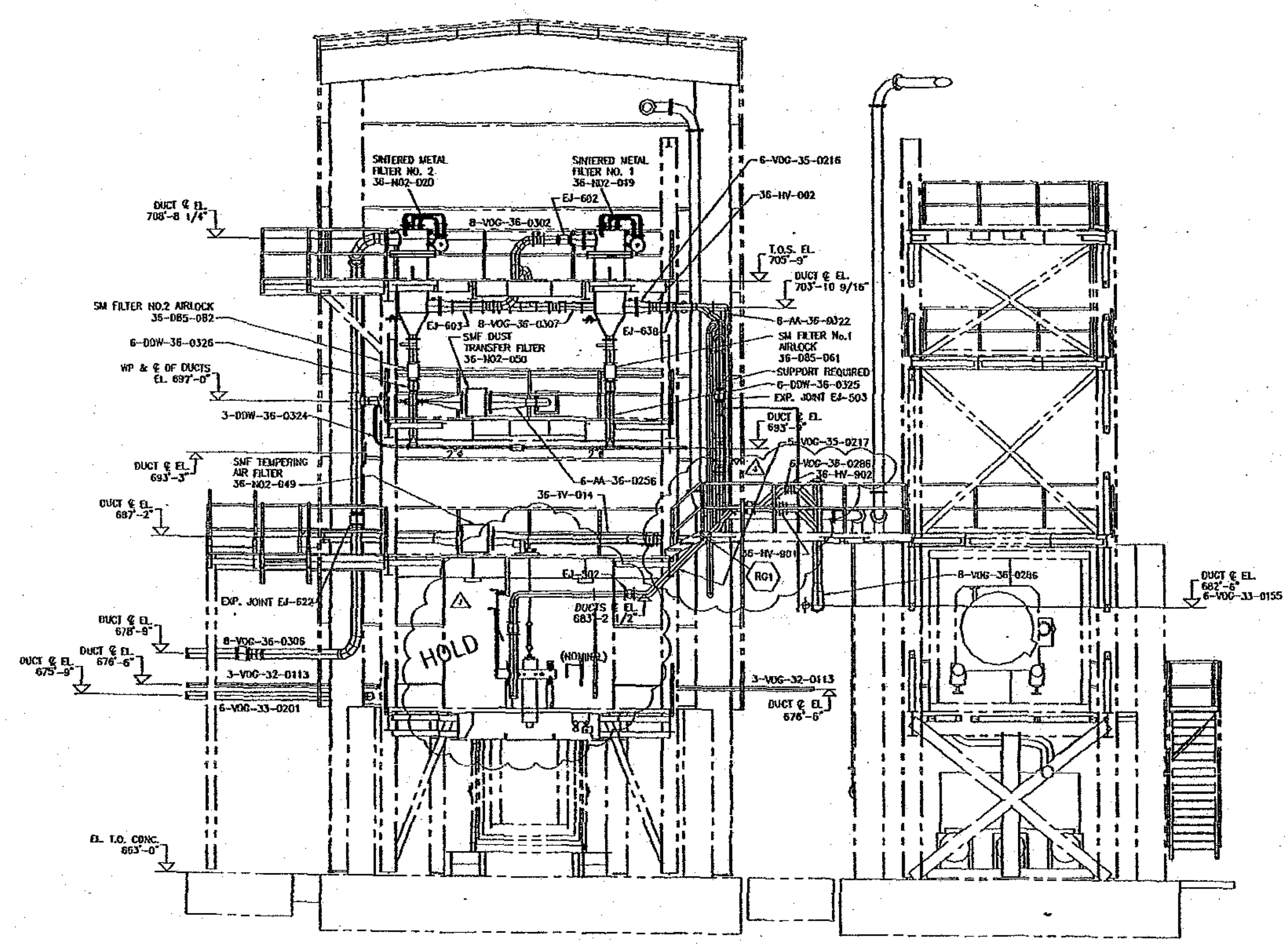
In making requests for transmittal of data by any electronic media, the Company receiving such data agrees that AMEC Americas Limited cannot be held responsible for users of the data outside of or beyond the scope of our original agreement. Also, because data stored in electronic media or transmitted by electronic means can deteriorate undetected or be modified without the consultant's knowledge, the Company receiving data agrees that AMEC Americas Limited cannot be held liable for the compatibility, completeness or correctness of the data.

No.	AMEC Dwg. No.	REFERENCE DRAWINGS
1	F-145579-00-0-0041	MELT AREA G.A. ELEVATIONS NORTH AND WEST
2	F-145579-00-D-0051	MELT AREA G.A. PLAN VIEWS
3	F-145579-36-V-0003	OFF-GAS TREATMENT MELT & DRYER LOWER PLAN
4	F-145579-36-V-0004	OFF-GAS TREATMENT MELT & DRYER MIDDLE PLAN
5	F-145579-36-V-0005	OFF-GAS TREATMENT MELT & DRYER UPPER PLANS
5	F-145579-36-V-0027	OFF-GAS TREATMENT MELT & DRYER SECTIONS A & B
6	F-145579-36-V-0028	OFF-GAS TREATMENT MELT & DRYER SECTION C
7	F-145579-36-V-0029	OFF-GAS TREATMENT MELT & DRYER SECTION D

NOTES:

1. ONLY VENTILATION DUCTWORK PIPING AND SUPPORTING CABLE TRAYS SHOWN, ALL OTHER PIPING AND CABLE TRAYS OMITTED FOR CLARITY.
2. DIMENSIONS AND LOCATIONS OF JOINTS TO BE CONFIRMED BY SELECTED VENDOR.
3. VENTILATION DUCTWORK PIPING TO BE MINIMUM THICKNESS SCHEDULE 40 COMPLETE WITH LONG RADIUS ELBOWS FOR 6" AND SMALLER AND SCHEDULE 10 PIPE AND PIPE FITTINGS FOR PIPE 8" AND LARGER EXCEPT AS NOTED.
4. DUCTWORK MATERIAL AND FABRICATION SHALL CONFORM TO ASME B31.1 POWER PIPING.
5. DUCTWORK FITTINGS AS PER AMEC DWG. NO. F-145579-36-V-0023 STANDARD DETAILS - SHT. 1.
6. I.D. DESIGNATES ISOLATION DAMPERS TO BE FLANDERS ROUND BUBBLE-TIGHT (FLAT BLADE TYPE). FLANGES TO MATCH 150# DRILLING.
7. VENTILATION DUCTWORK SUPPORTS ARE REPRESENTED BY A HEXAGON.
   EXAMPLES - (VS-) OR (RG-) (CG-) (CS-) (A-) (H-) (DS-)
   FOR 'VS' TYPE SUPPORTS SEE DWG. F-145579-36-0024.
   FOR ALL OTHER SUPPORTS SEE DRAWINGS F-145579-60-P-0001 TO -0004.
8. SEE BRANCH REINFORCEMENT DETAIL ON DWG. F-145579-36-V-0023 FOR FITTINGS SHOWN SHADED.

HOLDS: (J)
1. PENDING VENDOR INFORMATION.



SECTION E/0003 E/0004 E/0005
1/4"=1'-0"

NOT APPROVED FOR CONSTRUCTION

Rev.	Revision Description	Date	By	Chk'd		
J	RE-ISSUED FOR OCTS DESIGN REPORT	25 MAR 06	TBB	JH	JL	JSG
H	ISSUED FOR OCTS DESIGN REPORT	24 FEB 06	BRB	JH	SRB	JSG
G	ISSUED FOR DESIGN	16/12/05	BRB		FWS	JDS
F	ISSUED FOR INFORMATION - OFF-GAS SYSTEM REVISED	14/11/05	RDB		FWS	JDS
E	REISSUED FOR CH2M HILL REVIEW/90% REPORT (AREA 36 ONLY)	23/09/05	JCH	PCF	FWS	SC
D	ISSUED FOR CH2M HILL REVIEW/90% REPORT (AREA 36 ONLY)	15/03/05	JCH	PCF	FWS	TH
C	ISSUED FOR CH2M HILL REVIEW/90% REPORT (DCF SYSTEM)	02/03/05	JCH	PCF	CJ	TH
B	ISSUED FOR CH2M HILL REVIEW/90% REPORT (AREA 33 ONLY)	31/01/05	RDB	PCF	FWS	TH
A	ISSUED FOR INTERNAL APPROVAL	17/12/04	RDB	AP	FWS	TH

F-145579-36-V-0030 J

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145579-FINAL DBVS DESIGN

U.S. DEPARTMENT OF ENERGY
Office of River Protection

BULK VITRIFICATION
OFF-GAS TREATMENT
MELT & DRYER SECTION 'E'

F

SCALE 1/4"=1'-0"

DWG NO | TITLE — DRAWING TRACEABILITY LIST

REF NUMBER | TITLE — REFERENCES — NEXT USED ON

REVISIONS

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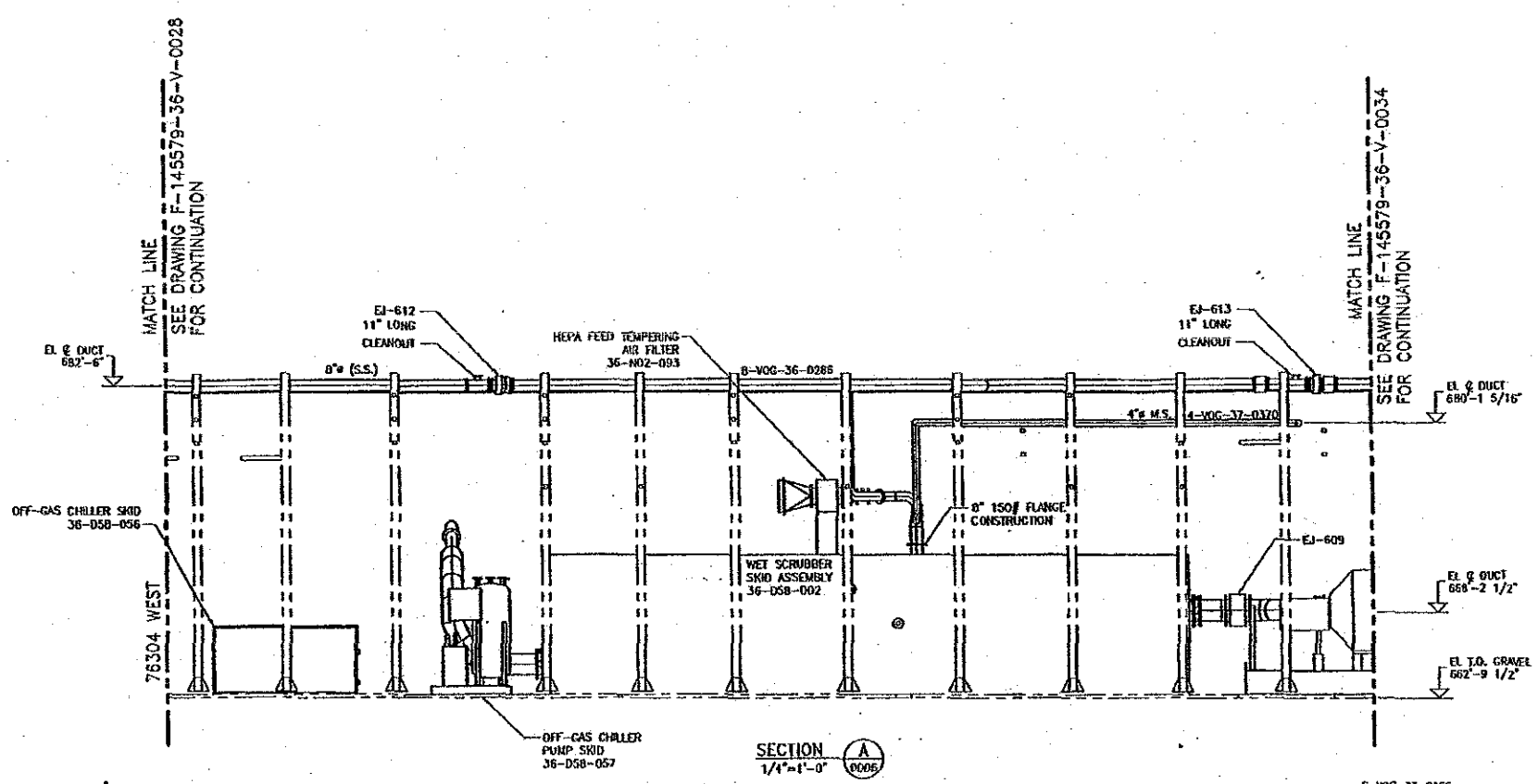
No.	AMEC Dwg. No.	REFERENCE DRAWINGS
1	F-145579-36-V-0006	OFF-GAS TREATMENT – WET SCRUBBER SKID PLAN

NOTES.

1. SUPPORTS FOR EQUIPMENT PER VENDORS DETAILS
2. FOR PIPING SUPPORTS SEE DWG F-145579-36-V-0024
4. PIPING AND CABLE TRAYS OMITTED FOR CLARITY
5. ALL VALVES SHOWN ON PIPING ARE TO BE "BUBBLE TIGHT" TYPE



SECTION A 0006
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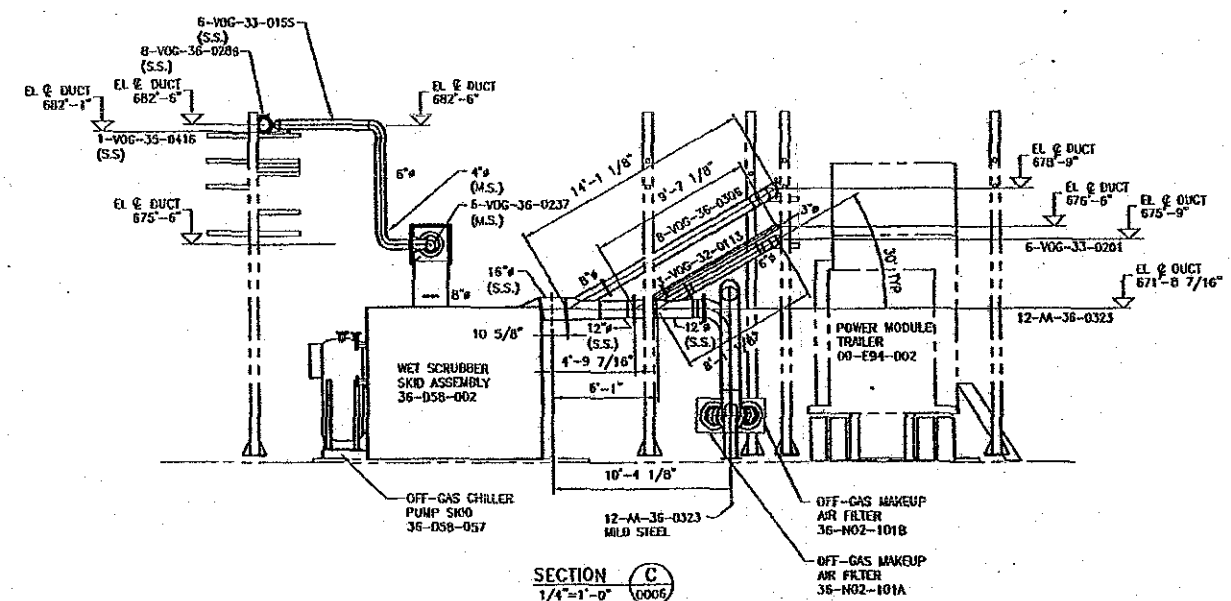
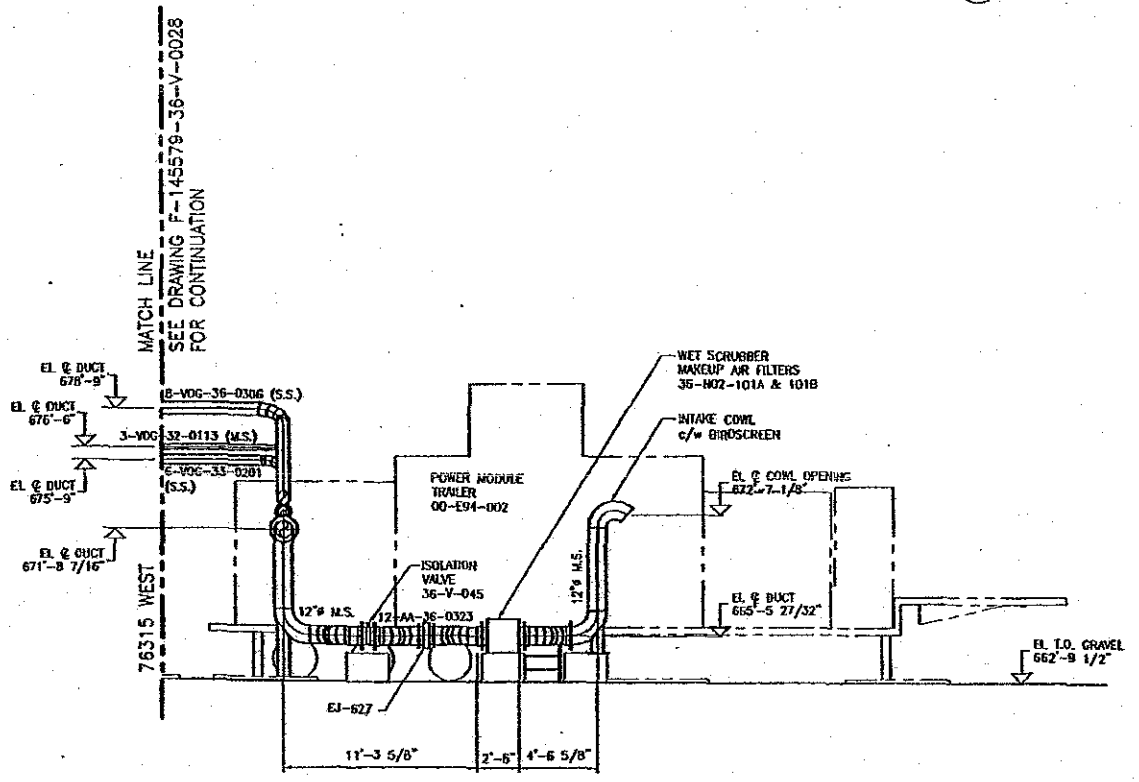


SECTION C 0006
1/4"=1'-0"



SECTION B 0006
1/4"=1'-0"

Rev.	REVISION DESCRIPTION	Date	By	Ch'k'd			
G	ISSUED FOR CDR REVIEW/REPORT (AREA 36 ONLY)	25 MAR 05	THB	JM	JL	JSG	
F	ISSUED FOR OCS DESIGN REPORT	24 FEB 06	RKB	JM	SRG	JSG	
E	ISSUED FOR DESIGN	16/12/05	RKB		FWS	JDS	
D	ISSUED FOR INFORMATION – OFF-GAS SYSTEM REVISED	14/11/05	RDB		FWS	JDS	
C	ISSUED FOR CDR/HAZ REVIEW/30 % REPORT – (AREA 36 ONLY)	15 MAR 05	RDB	PDF	FWS	TH	
B	ISSUED FOR INTERNAL APPROVAL	21 DEC 04	JCH	AP	FWS	TH	
A	ISSUED FOR REVIEW	29 OCT 04	RDB	AP	FWS	JDS	

AREA DRAWING NO: F-145579-36-V-0031 REV: G

amec

AMEC PROJECT: 145579-FINAL DBVS DESIGN

U.S. DEPARTMENT OF ENERGY
Office of River Protection

BULK VITRIFICATION
OFF-GAS TREATMENT
WET SCRUBBER SKID SECTIONS

NAME	DATE
DRAWN BY RDB	
DESIGNED BY	
CHECKED BY	
DESIGN / PROC LEAD	
DECOMMISSIONING ENGINEER	
PROJECT ENGINEER	
DESIGN AUTHORITY	

SIZE F | AREA NO | AREA DWG NO | DWG NO | REV | SCALE 1/4"=1'-0" | SHEET OF

DWG NO	TITLE	REF NUMBER	TITLE
DRAWING TRACEABILITY LIST		REFERENCES	
		NEXT USED ON	

REV	DESCRIPTION	REV BY	DATE	CHECKED BY	DATE	COMPANY
REVISIONS						

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No.	AMEC Dwg. No.	REFERENCE DRAWINGS
1	F-145579-00-D-0008	OFF-GAS & ELECT. TRAILERS G.A. – PLAN
2	F-145579-00-P-0007	OFF-GAS TREATMENT – PIPING LAYOUT
3	F-145579-00-P-0012	OFF-GAS TREATMENT – PIPING SECTIONS
4	F-145579-36-V-0007	OFF-GAS TREATMENT – SCRUB & STACK PLAN
5	F-145579-36-V-0034	OFF-GAS TREATMENT – SCRUB & STACK SECTIONS
6	F-145579-36-V-0021	OFF-GAS EXHAUST STACK DETAILS

NOTES:

1. ONLY VENTILATION DUCTWORK PIPING AND SUPPORTING CABLE TRAYS SHOWN. ALL OTHER PIPING AND CABLE TRAYS OMITTED FOR CLARITY.
2. DIMENSIONS AND LOCATIONS OF JOINTS TO BE CONFIRMED BY SELECTED VENDOR.
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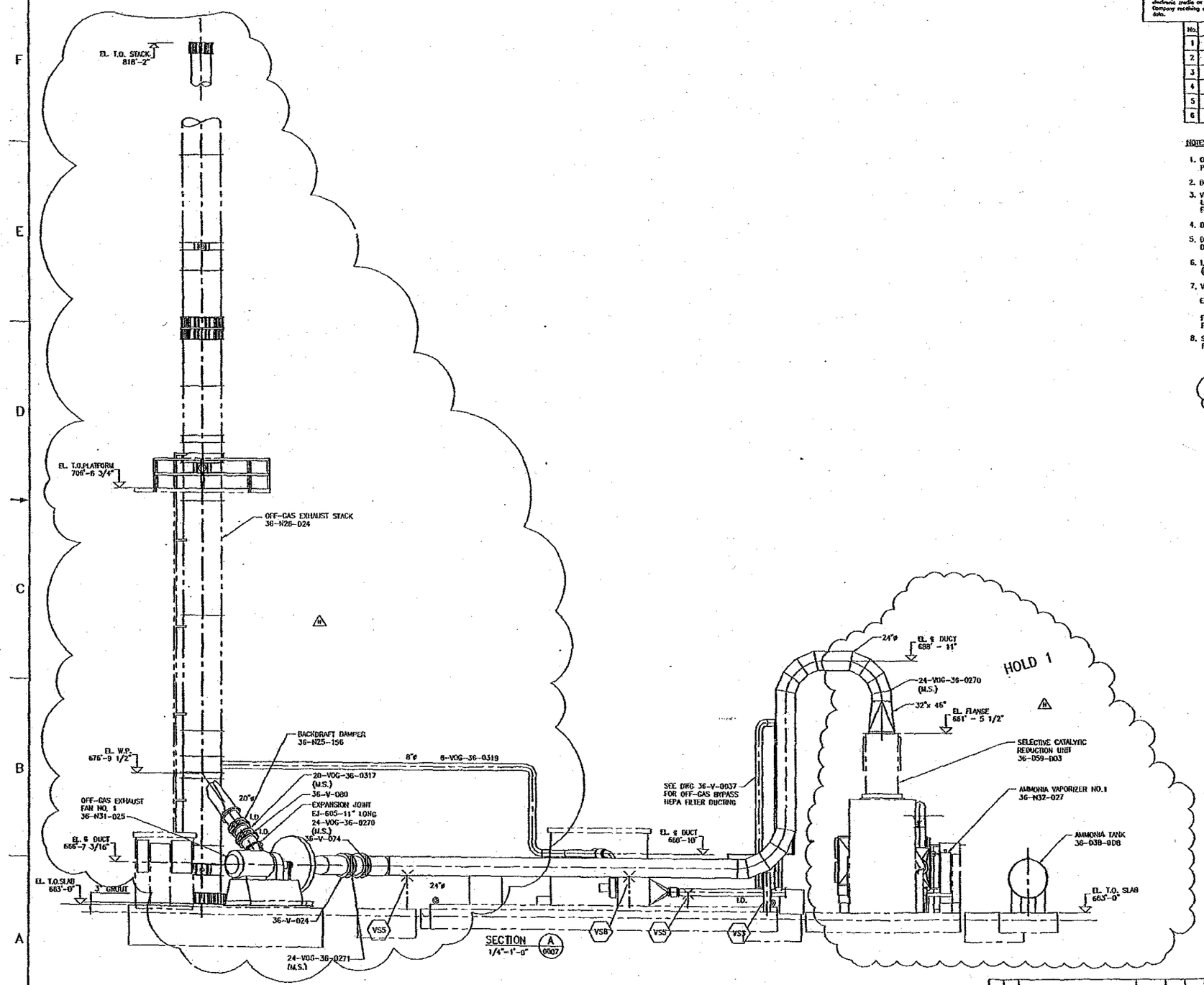
4. DUCTWORK MATERIAL AND FABRICATION SHALL CONFORM TO ASME B31.1 POWER PIPING.
5. DUCTWORK FITTINGS AS PER AMEC DWG. NO. F-145579-36-V-0023 STANDARD DETAILS – SHT. 1.
6. I.D. DESIGNATES ISOLATION DAMPERS TO BE FLANDERS ROUND BUBBLE-TIGHT (FLAT BLADE TYPE). FLANGES TO MATCH 150# DRILLING.
7. VENTILATION DUCTWORK SUPPORTS ARE REPRESENTED BY A HEXAGON.
   EXAMPLES – VS– OR RG– CG– CS– A– H– DS–
   FOR 'VS' TYPE SUPPORTS SEE DWG. F-145579-36-0024.
   FOR ALL OTHER SUPPORTS SEE DRAWINGS F-145579-00-P-0001 TO -0004.
8. SEE BRANCH REINFORCEMENT DETAIL ON DWG. F-145579-36-V-0023 FOR FITTINGS SHOWN SHADED.

HOLDS:
1. PENDING VENDOR INFORMATION.



Rev.	REVISION DESCRIPTION	Date	By	Chk'd	Appr'd	Appr'd
M	RE-ISSUED FOR CH2M REVIEW/ REPORT (AREA 36 ONLY)	25 MAR 06	THB	JM	JL	JSO
G	ISSUED FOR OOTS DESIGN REPORT	24 FEB 06	RRB	JM	SRB	JSO
F	ISSUED FOR DESIGN	10/12/05	RRB		FWS	JDS
E	ISSUED FOR INFORMATION – OFF-GAS SYSTEM REVISED	14/11/05	RDB		FWS	JDS
D	RESSUED FOR CH2M HILL REVIEW/90% REPORT-(AREA 36 ONLY)	28/09/05	RDB	PCF	FWS	SG
C	ISSUED FOR CH2M HILL REVIEW/50% REPORT-(AREA 36 ONLY)	02/03/05	JCH	PCF	FWS	TH
B	ISSUED FOR INTERNAL APPROVAL	21/12/04	RDB	AP	FWS	TH
A	ISSUED FOR REVIEW	23/09/04	JCH	AP	FWS	TH

AMEC DRAWING NO: F-145579-36-V-0033 REV: H

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AMEC PROJECT: 145579-FINAL DBVS DESIGN

U.S. DEPARTMENT OF ENERGY
Office of River Protection

BULK VITRIFICATION
OFF-GAS TREATMENT
SCRUB & STACK SECTION

NAME | DATE | SIGNATURE
DESIGN BY: JCH 21/09/04
DRAWN BY:
CHECKED BY:
DESIGN / MECH LEAD:
ELECTRICAL DESIGNER:
TRADES FOREMAN:
DESIGN APPROVED:

SIZE: F | BLDG NO: | BLOCK NO: | DWG NO: | REV: | SCALE: 1/4"=1' | DIV: | SHEET: OF

DWG NO	TITLE
	DRAWING TRACEABILITY LIST

REF NUMBER	TITLE
NEXT USED ON	REFERENCES

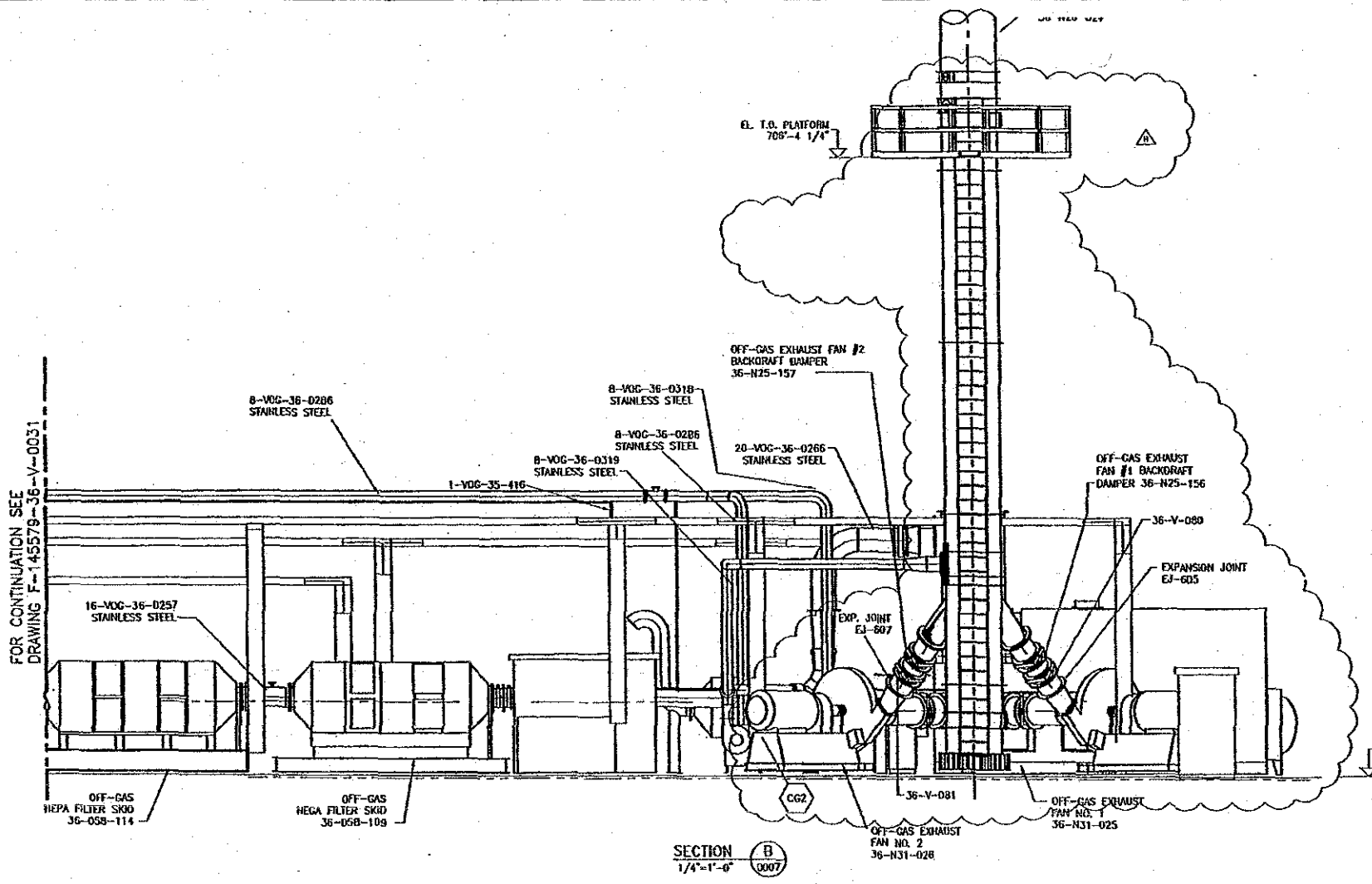
REV	DESCRIPTION	REV BY	REV DATE	CHECKED BY	ENGR	COMPANY
	REVISIONS					

In making requests for transmittal of data by any electronic media, the Company receiving such data agrees that AMEC Americas Limited cannot be held responsible for users of the data outside of or beyond the scope of our original agreement. Also, because data stored in electronic media or transmitted by electronic means can deteriorate undetected or be modified without the consultant's knowledge, the Company receiving data agrees that AMEC Americas Limited cannot be held liable for the compatibility, completeness or correctness of the data.

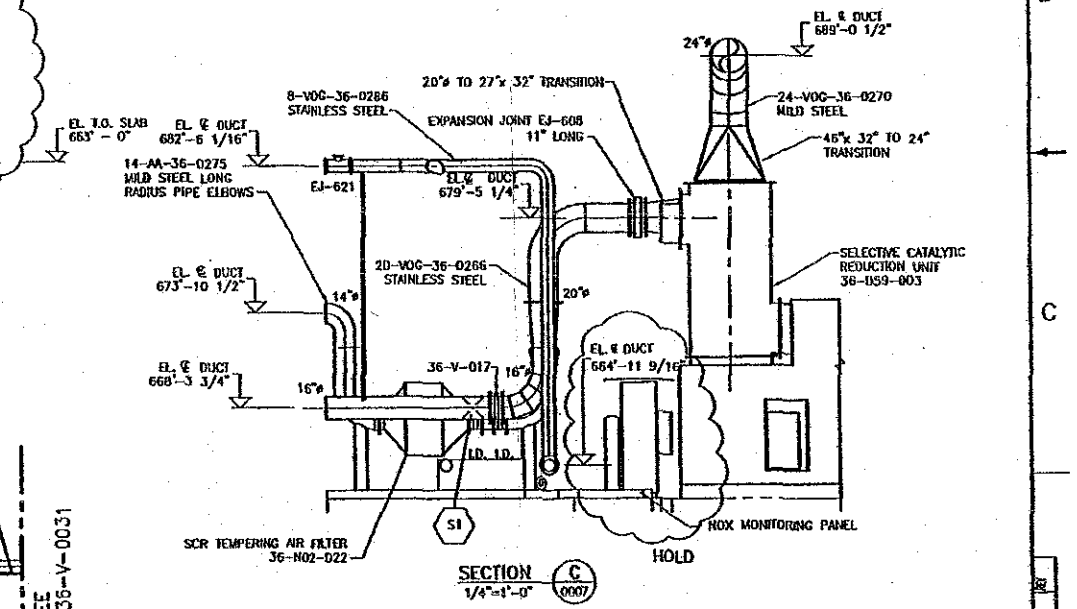
No.	AMEC Dwg. No.	REFERENCE DRAWINGS
1	F-145579-00-0-0008	OFF-GAS & ELECT. TRAILERS C.A. – PLAN
2	F-145579-00-P-0007	OFF-GAS TREATMENT – PIPING LAYOUT
3	F-145579-00-P-0012	OFF-GAS TREATMENT – PIPING SECTIONS
4	F-145579-36-V-0007	OFF-GAS TREATMENT – SCRUB & STACK PLAN
5	F-145579-36-V-0033	OFF-GAS TREATMENT – SCRUB & STACK SECTION
6	F-145579-36-V-0021	OFF-GAS EXHAUST STACK DETAILS

NOTES:

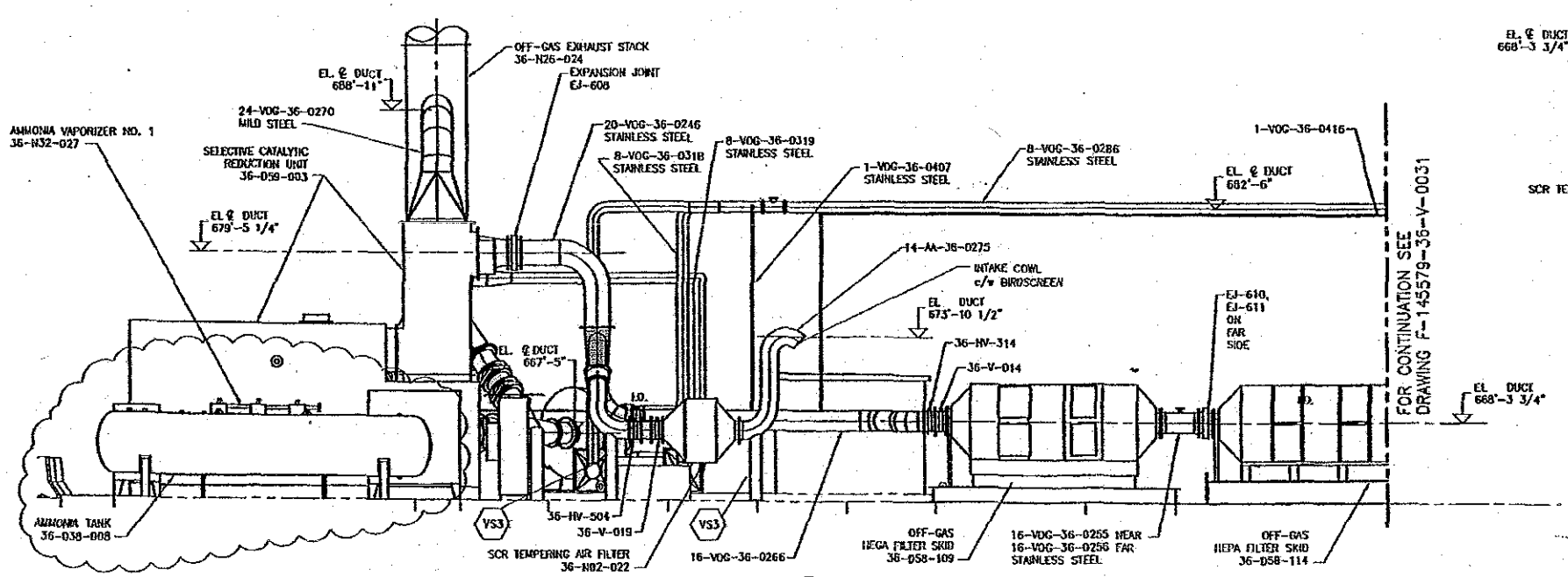
1. ONLY VENTILATION DUCTWORK PIPING AND SUPPORTING CABLE TRAYS SHOWN. ALL OTHER PIPING AND CABLE TRAYS OMITTED FOR CLARITY.
2. DIMENSIONS AND LOCATIONS OF JOINTS TO BE CONFIRMED BY SELECTED VENDOR.
3. VENTILATION DUCTWORK PIPING TO BE MINIMUM THICKNESS SCHEDULE 40 COMPLETE WITH LONG RADIUS FOR PIPE 6" AND SMALLER AND SCHEDULE 10 FOR PIPE 8" AND LARGER EXCEPT AS NOTED.
4. DUCTWORK MATERIAL AND FABRICATION SHALL CONFORM TO ASME B31.1 POWER PIPING.
5. DUCTWORK FITTINGS AS PER AMEC DWG. NO. F-145579-36-V-0023 STANDARD DETAILS – SHT. 1.
6. I.D. DESIGNATES ISOLATION DAMPERS TO BE FLANGERS ROUND BUBBLE-TIGHT (FLAT BLADE TYPE). FLANGES TO MATCH 150# DRILLING.
7. VENTILATION DUCTWORK SUPPORTS ARE REPRESENTED BY A HEXAGON.
   EXAMPLES – VS- OR RG- CG- CS- A- H- DS-
   FOR "VS" TYPE SUPPORTS SEE DWG. F-145579-36-0024.
   FOR ALL OTHER SUPPORTS SEE DRAWINGS F-145579-00-P-0001 TO -0004.
8. SEE BRANCH REINFORCEMENT DETAIL ON DWG. F-145579-36-V-0023 FOR FITTINGS SHOWN SHADED.



SECTION B 1/4"=1'-0" (0007)



SECTION C 1/4"=1'-0" (0007)



SECTION D 1/4"=1'-0" (0007)

DWG NO	TITLE
DRAWING TRACEABILITY LIST	

REF NUMBER	TITLE
NEXT USED ON	REFERENCES

REV	DESCRIPTION	REV BY DATE	REV BY	REVIEWED BY	DATE	COMPANY
REVISIONS						

Rev.	REVISION DESCRIPTION	Date	By	Chk'd	Approved Appr Eng	Approved Proj Mgr
H	ISSUED FOR CH2M REVIEW/ REPORT (AREA 36 ONLY)	25 MAR 06	RHB	JM	JL	JSG
G	ISSUED FOR OGS DESIGN REPORT	24 FEB 06	RHB	JM	SRB	JSG
F	ISSUED FOR DESIGN	16 DEC 05	RHB		FWS	JKS
E	ISSUED FOR INFORMATION – OFF GAS SYSTEM REVISED	16 NOV 05	RHB		FWS	JKS
D	REISSUED FOR CH2M HILL REVIEW/60% REPORT (AREA 36 ONLY)	28 APR 05	RHB	AA	FWS	SC
C	ISSUED FOR CH2M HILL REVIEW/30% REPORT (AREA 36 ONLY)	10/03/05	JCH	PDF	FWS	TH
B	ISSUED FOR INTERNAL APPROVAL	21 DEC 04	RHB	AP	FWS	TH
A	ISSUED FOR REVIEW	23/09/04	JCH	AP	FWS	TH

AMEC PROJECT NO. F-145579-36-V-0034 REV H

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AMEC PROJECT: 145579–FINAL DBVS DESIGN

U.S. DEPARTMENT OF ENERGY
Office of Waste Protection

BULK VITRIFICATION
OFF-GAS TREATMENT
SCRUB & STACK SECTIONS

NAME	DATE	EQUIPMENT NUMBER
DRAWN BY JCH		
DESIGNED BY		
CHECKED BY		
DESIGN / PROJECT LEAD		
COMMISSIONING ENGINEER		
PROJECT MANAGER		

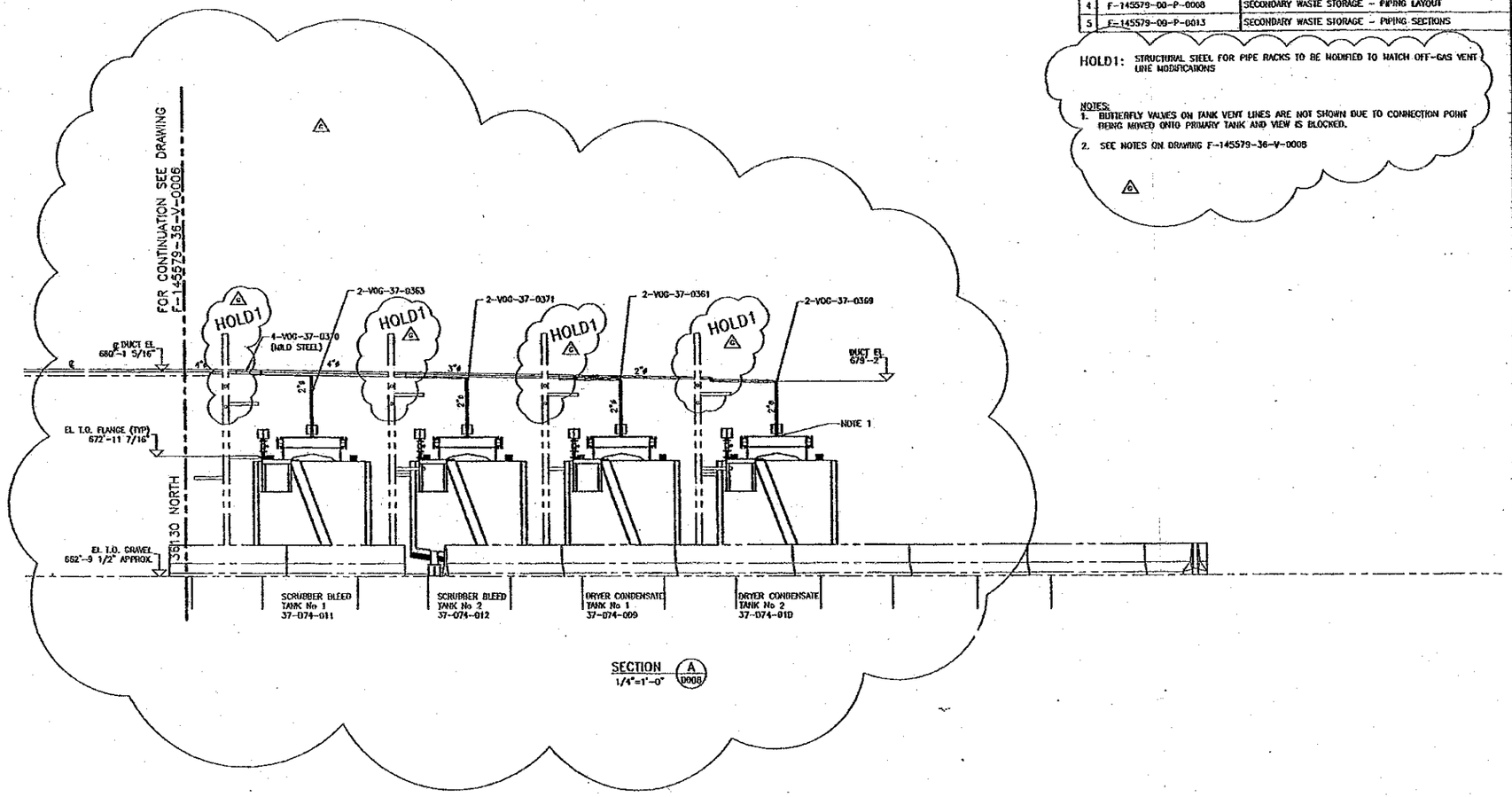
SIZE F | SCALE 1/4"=1" | SHEET OF

In making requests for transmittal of data by any electronic media, the Company receiving such data agrees that AMEC Americas Limited cannot be held responsible for uses at the date outside of or beyond the scope of our original agreement. Also, because data stored in electronic media or transmitted by electronic means can deteriorate undetected or be modified without the consultant's knowledge, the Company receiving data agrees that AMEC Americas Limited cannot be held liable for the compatibility, completeness or correctness of the data.

No.	AMEC Dwg No.	REFERENCE DRAWINGS
1	F-145579-36-V-0008	OFF-GAS TREATMENT – SECONDARY WASTE AREA PLAN
2	F-145579-00-D-0005	SECONDARY WASTE AREA G.A. – PLAN
3	F-145579-00-D-0016	SECONDARY WASTE AREA G.A. – SECTIONS
4	F-145579-00-P-0008	SECONDARY WASTE STORAGE – PIPING LAYOUT
5	F-145579-00-P-0013	SECONDARY WASTE STORAGE – PIPING SECTIONS

HOLD1: STRUCTURAL STEEL FOR PIPE RACKS TO BE MODIFIED TO MATCH OFF-GAS VENT LINE MODIFICATIONS

NOTES:
1. BUTTERFLY VALVES ON TANK VENT LINES ARE NOT SHOWN DUE TO CONNECTION POINT BEING MOVED ONTO PRIMARY TANK AND VIEW IS BLOCKED.
2. SEE NOTES ON DRAWING F-145579-36-V-0008



SECTION A / D008
1/4"=1'-0"

NOT APPROVED FOR CONSTRUCTION

Rev.	REVISION DESCRIPTION	Date	By	CHK'd	Approved	Date Approved	REV Date
G	ISSUED FOR CH2M APPROVAL AND SDR DESIGN REPORT	19 MAR 05	RHB	JM	JL	JS	
F	ISSUED FOR OCTS DESIGN REVIEW	24 FEB 05	RRB	JM	SRB	JSG	
E	ISSUED FOR DESIGN	16 DEC 05	RRB		FWS	JOS	
D	ISSUED FOR CH2M HILL REVIEW/80% REPORT (AREA 36 ONLY)	15 MAR 05	RDB	PCF	FWS	TH	
C	ISSUED FOR CH2M HILL REVIEW/90% REPORT (AREA 37 ONLY)	09 FEB 05	RDB	PCF	FWS	TH	
B	ISSUED FOR INTERNAL APPROVAL	13 DEC 04	RDB	AP	FWS	TH	
A	ISSUED FOR REVIEW	18 OCT 04	RDB	AP	FWS	JOS	

AMEC DRAWING NO: F-145579-36-V-0035 REV G

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AMEC PROJECT: 145579-FINAL DBVS DESIGN

U.S. DEPARTMENT OF ENERGY
Office of River Protection

BULK VITRIFICATION
OFF-GAS TREATMENT
SECONDARY WASTE AREA SECTION 'A'

SIZE F | SCALE 1/4"=1'-0"

NAME	DATE	COMPANY
DESIGN BY RDB		
CHECKED BY		
DESIGN ENGINEER		
DRAWING ENGINEER		
PROJECT MANAGER		
DESIGN AUTHORITY		

DWG NO	TITLE
DRAWING TRACEABILITY LIST	

REF NUMBER	TITLE
NEXT USED ON	REFERENCES

REV	DESCRIPTION	REV BY	CHECKED BY	ENGR	COMPANY
REVISIONS					

amec

CALCULATION SHEET

CALC. NO.:	145579-V-CA-005	REV:	1	DATE:	March 26, 2006
CALC. TITLE:	Off-Gas Treatment System Pipe Stress Analysis				
PROJECT NO.:	145579	PROJECT TITLE:	Final DBVS Design		

Attachment 2: Mechanical Properties for Circular Duct

NOTE: This cover sheet represents the approval signatures of the originator and checker for all pages of this attachment.

ORIGINATOR:	DATE:	CHECKER:	DATE:
Kevin M. Jones KMJ	3/26/06	J. Van Corbach JVC	3/26/06

Mechanical Properties For Circular Duct

Nominal Duct Size	Schedule	Duct Diameter(1)	Material	Nominal Thickness(1)	Permitted Under Wall Thickness(2)	Moment of Inertia(4) $\pi(d^4-d_i^4)/64$	Cross-sectional Area(3)	Cross-sectional Area(4)	Duct Weight per foot(3)	Equivalent Density(5)	Radius of Gyration, k(4)
(in)		(in)		(in)	(in)	(in^4)	(in^2)	(in^2)	(lbf/ft)	(lbf/in^3)	(in)
Stainless Steel											
2	40S	2.375	A312 TP316L	0.154	0.1271	0.57	1.07	0.90	3.74	0.290	0.80
2	80S	2.375	A312 TP316L	0.218	0.1799	0.75	1.48	1.24	5.14	0.290	0.78
2.5	80S	2.875	A312 TP316L	0.276	0.2277	1.67	2.25	1.89	7.84	0.290	0.94
2.5	160S	2.875	A312 TP316L	0.375	0.3094	2.08	2.95	2.49	10.25	0.290	0.91
3	40S	3.5	A312 TP316L	0.216	0.1782	2.57	2.23	1.86	7.76	0.290	1.18
4	40S	4.5	A312 TP316L	0.237	0.1955	6.14	3.17	2.64	11.05	0.290	1.52
5	40S	5.563	A312 TP316L	0.258	0.2129	12.82	4.30	3.58	14.96	0.290	1.89
6	40S	6.625	A312 TP316L	0.280	0.2310	23.74	5.58	4.64	19.42	0.290	2.26
8	10S	8.625	A312 TP316L	0.148	0.1221	29.48	3.94	3.26	13.72	0.290	3.01
12	10S	12.75	A312 TP316L	0.180	0.1485	116.71	7.11	5.88	24.74	0.290	4.46
14	10S	14	A312 TP316L	0.188	0.1551	161.66	8.16	6.75	28.39	0.290	4.90
16	10S	16	A312 TP316L	0.188	0.1551	242.32	9.34	7.72	32.50	0.290	5.60
20	10S	20	A312 TP316L	0.218	0.1799	549.95	13.55	11.20	47.15	0.290	7.01
Carbon Steel											
2	40	2.375	A53	0.154	0.1148	0.52	1.07	0.81	3.74	0.290	0.80
3	40	3.5	A53	0.216	0.1690	2.46	2.23	1.77	7.76	0.290	1.18
4	40	4.5	A53	0.237	0.1874	5.91	3.17	2.54	11.05	0.290	1.53
20	10	20	A53	0.250	0.1988	606.02	15.51	12.36	52.68	0.283	7.00
24	10	24	A53	0.250	0.1988	1052.44	18.65	14.86	63.35	0.283	8.42

(1) - Duct diameter is the outer diameter of the associated nominal pipe size per ASTM A312/A 312M-05, page 10.
(2) - Duct wall thickness per ASTM A312/A 312M-05, page 5 plus an additional 5% for corrosion and erosion. ASTM A53 also uses 12.5% reduction per ASTM A 53/A 53M-02, page 17 plus an additional 0.02" corrosion allowance per Attachment 17. Wall thickness for 2.5 Sch 160S is assumed the same as 2.5 Sch 160.
(3) - Based on Nominal Wall Thickness.
(4) - Based on Manufacturers allowed Under Wall Thickness
(5) - Mark's Standard Handbook for Mechanical Engineers, page 6-44

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CALCULATION SHEET

CALC. NO.:	145579-V-CA-005	REV:	1	DATE:	March 26, 2006
CALC. TITLE:	Off-Gas Treatment System Pipe Stress Analysis				
PROJECT NO.:	145579	PROJECT TITLE:	Final DBVS Design		

Attachment 3: Duct Model Input Data

NOTE: This cover sheet represents the approval signatures of the originator and checker for all pages of this attachment.

ORIGINATOR:	DATE:	CHECKER:	DATE:
Kevin M. Jones KMJ	3/26/06	J. Van Corbach JVC	3/26/06

P&ID F-145579-	Plan F-145579-	Line Number	Dia.	Description	Component	Nodes	Member
MODEL 1							
36-A-0099	36-V-0003	8-AA-36-0322	8	Ambient Air	Inlet	N101	
					36-N02-049	N8, N9	M29
					36-V-044	N12, N106	M86
					36-TV-014	N13, N107	M85
34-A-0101	36-V-0003	4-VOG-34-0212	4	AWTE Hood to SMF	AWTE Interface	N96	
					EJ-407	N95, N96	M21
					34-HV-113	N93	
35-A-0100	36-V-0003 & 36-V-0005	5-VOG-35-0217	5	ICV Container to SMF	ICV Interface	N89	
					EJ-502	N198, N199	M189
					35-HV-114	N88	
					36-HV-115	N85	
					EJ-503	N84, N90	M16
36-A-0099	36-V-0005	5-VOG-36-0307	5	SMF Bypass	EJ-601	N142, N148	M115
36-A-0099	36-V-0005	6-VOG-36-0307	6	SMF Bypass	36-HV-006	N47	
					36-HV-007	N48	
36-A-0099	36-V-0005	6-VOG-35-0216	6	SMF #1 Inlet	36-HV-002	N21	
					EJ-628	N21, N24	M95
36-A-0099	36-V-0005	6-VOG-36-0302	6	SMF #1 Outlet to SMF #2 Inlet	EJ-602	N117, N118	M101
					36-HV-003	N119	
					36-HV-004	N129	
					EJ-603	N127, N128	M98
36-A-0099	36-V-0005	6-VOG-36-0308	6	Bypass Between -0302 and -0307			
36-A-0099	36-V-0005	8-VOG-36-0306	8	SMF #2 Outlet	36-HV-005	N37	
					EJ-622	N208, N209	M201
					EJ-623	N210, N212	M261
36-A-0099	36-V-0003	3-VOG-32-0113	3	Waste Receipt Tanks to Scrubber			
32-A-0101	36-V-0002	2-VOG-32-0113	2	Waste Receipt Tanks to Scrubber			
36-A-0099	36-V-0003 & 36-V-0004	6-VOG-33-0201	6	Waste Feed to Scrubber			
36-A-0099	36-V-0006	12-AA-36-0323	12	Ambient Air	Inlet	N80	
					36-N02-102	N73, N105	M166
					36-N02-101	N70, N104	M167
					36-V-045	N64, N66	M168
					36-FV-016	N63, N65	M169
					EJ-627	N67, N68	M61
36-A-0099	36-V-0006	16-VOG-36-0807	16	Scrubber Inlet	Scrubber Interface	N206	

P&ID F-145579-	Plan F-145579-	Line Number	Dia.	Description	Component	Nodes	Member
MODEL 2							
36-A-0099	36-V-0004	2.5-DDW-36-0324	2.5	SMF to Waste Dryer Skid	Dryer Interface	N1	
					EJ-628	N16, N64	M4
					EJ-629	N69A, N70A	M41
36-A-0099	36-V-0004	2-DDW-36-0324	2	Common Header	EJ-626	N63A, N64A	M36
36-A-0099	36-V-0004	8-DDW-36-0325	8	Bottom Outlet of SMF 36-N-019	36-V-047	N34	
					36-D85-061	N33	
					EJ-624	N33, N73A	M44
36-A-0099	36-V-0004	8-DDW-36-0326	8	Bottom Outlet of SMF 36-N-020	36-V-048	N31	
					36-D85-082	N30	
					EJ-625	N30, N72A	M43
36-A-0099	36-V-0004	6-AA-36-0256	6	Ambient Air	Inlet	N43	
					36-YV-012	N66	
					36-N02-050	N67, N68	M24
MODEL 3							
35-A-0100	36-V-0003	6-AA-35-0218	6	Ambient Air to ICV Container	Inlet	N15	
					35-N02-010	N36, N37	M30
	ICV Interface	N17			EJ-501	N18, N19	M16
					ICV Interface	N17	
34-A-0101	36-V-0003	4-AA-34-0213	4	Ambient Air to AWTE Hood	AWTE Interface	N18	
					34-N02-026	N8, N9	M14
					34-HV-111	N2	
					EJ-406	N17, N1	M1
					Inlet	N41	
MODEL 4							
33-A-0101 & 36-A-0102	36-V-0003 & 36-V-0006	6-VOG-33-0155	6	Dryer to Wet Scrubber Skid	Dryer Interface	N1	
					EJ-630	N132A, N137	M20
					EJ-631	N87, N88	M79
					EJ-633	N1, N131	M1
					Scrubber Interface	N66	
36-A-0102	36-V-0006	6-AA-36-0237	6	Ambient Air to Wet Scrubber Skid	Inlet	N59	
					36-N02-093	N57, N58	M52
					36-FV-331	N56	
36-A-0102	36-V-0006 & 36-V-0008	4-VOG-37-0370	4	Dryer Condensate to Scrubber			
36-A-0102	36-V-0008	2-VOG-37-0370	2	Dryer Condensate to Scrubber			
36-A-0102	36-V-0008	2-VOG-37-0363	2	Scrubber Bleed TK 1 to Scrubber	Tank Interface	N92	
36-A-0102	36-V-0008	2-VOG-37-0371	2	Scrubber Bleed TK 2 to Scrubber	Tank Interface	N116	

P&ID F-145579-	Plan F-145579-	Line Number	Dia.	Description	Component	Nodes	Member
36-A-0102	36-V-0008	2-VOG-37-0361	2	Dryer Condensate TK 1 to Scrubber	Tank Interface	N117	
36-A-0102	36-V-0008	2-VOG-37-0369	2	Dryer Condensate TK 2 to Scrubber	Tank Interface	N118	
MODEL 5							
36-A-0103	36-V-0007	14-AA-36-0275	14	Ambient Air	Inlet	N89	
					36-N02-022	N50, N51	M41
					HV-504	N49	
					36-V-019	N78	
					EJ-632	N79, N80	M34
36-A-0107	36-V-0006	16-VOG-36-0253	16	HEPA Inlet	EJ-609	N100, N108	M89
36-A-0107	36-V-0007	16-VOG-36-0255	16	HEPA to HEGA Spool	EJ-610	N90, N96	M84
				HEPA to HEGA Spool	EJ-611	N91, N97	M85
36-A-0107	36-V-0007	16-VOG-36-0266	16	Inlet of SCR Heat Exchanger	EJ-608	N54, N56	M6
					36-V-017	N66	
36-A-0103	36-V-0007	24-VOG-36-0270	24	Outlet of SCR Heat Exchanger			
36-A-0103	36-V-0007	24-VOG-36-0271	24	Inlet to Fan 36-N31-025	EJ-604	N19, N20	M62
					36-V-074	N18	
					36-V-024	N19	
36-A-0103	36-V-0007	24-VOG-36-0272	24	Inlet to Fan 36-N31-026	EJ-606	N16, N17	M65
					36-V-077	N15	
					36-V-027	N16	
36-A-0103	36-V-0007	20-VOG-36-0273	20	Outlet of Fan 36-N31-026	EJ-607	N4, N5	M60
					36-V-081	N3	
					36-N25-157	N2	
					Stack Interface	N1	
36-A-0103	36-V-0007	20-VOG-36-0317	20	Outlet of Fan 36-N31-025	EJ-605	N9, N10	M56
					36-V-080	N8	
					36-N25-156	N7	
					Stack Interface	N12	

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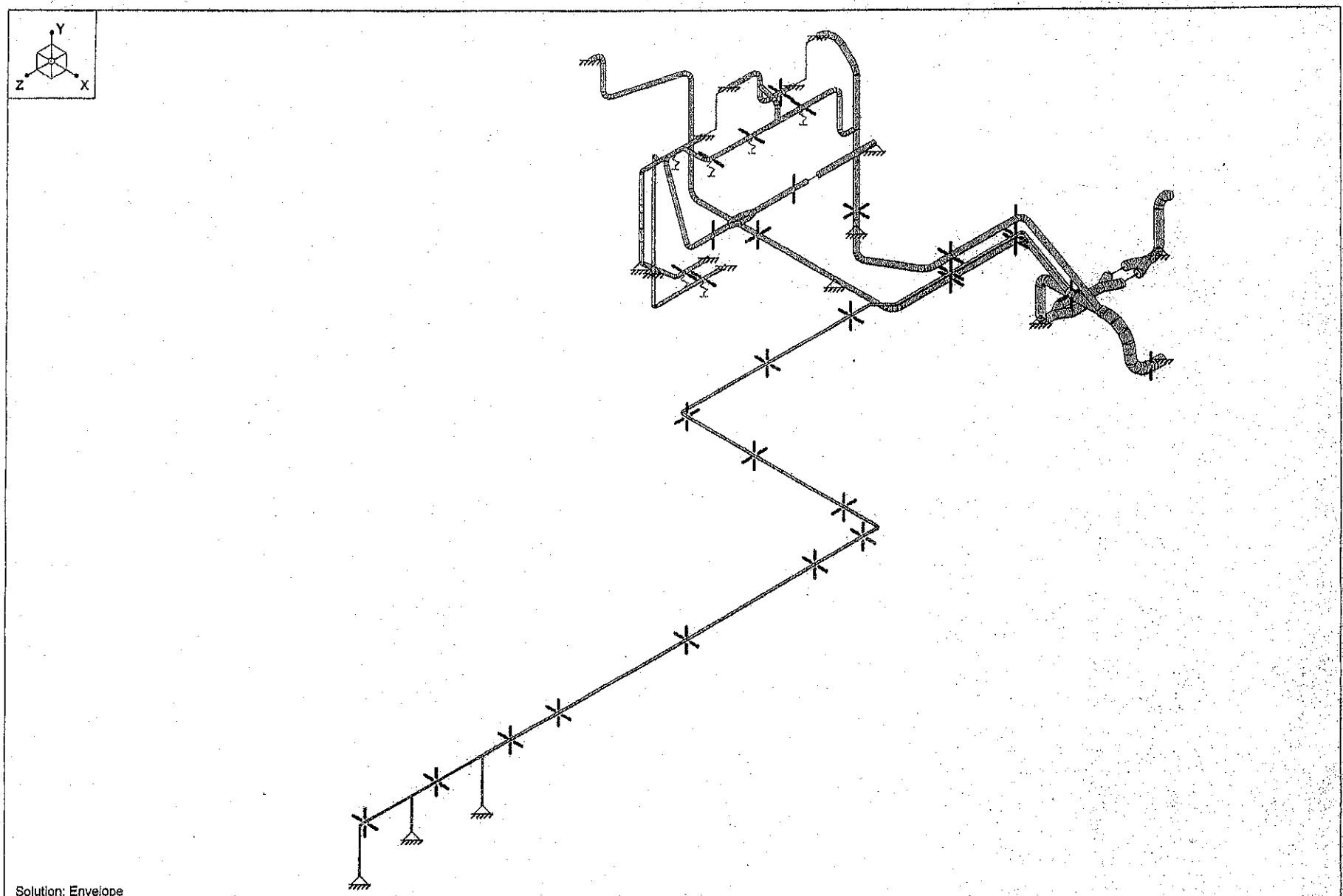
CALCULATION SHEET

CALC. NO.:	145579-V-CA-005	REV:	1	DATE:	March 26, 2006
CALC. TITLE:	Off-Gas Treatment System Pipe Stress Analysis				
PROJECT NO.:	145579	PROJECT TITLE:	Final DBVS Design		

Attachment 4: Model 1 RISA 3D Analysis Input and Output Data

NOTE: This cover sheet represents the approval signatures of the originator and checker for all pages of this attachment.

ORIGINATOR:	DATE:	CHECKER:	DATE:
Kevin M. Jones KMJ	3/26/06	J. Van Corbach JVC	3/26/06



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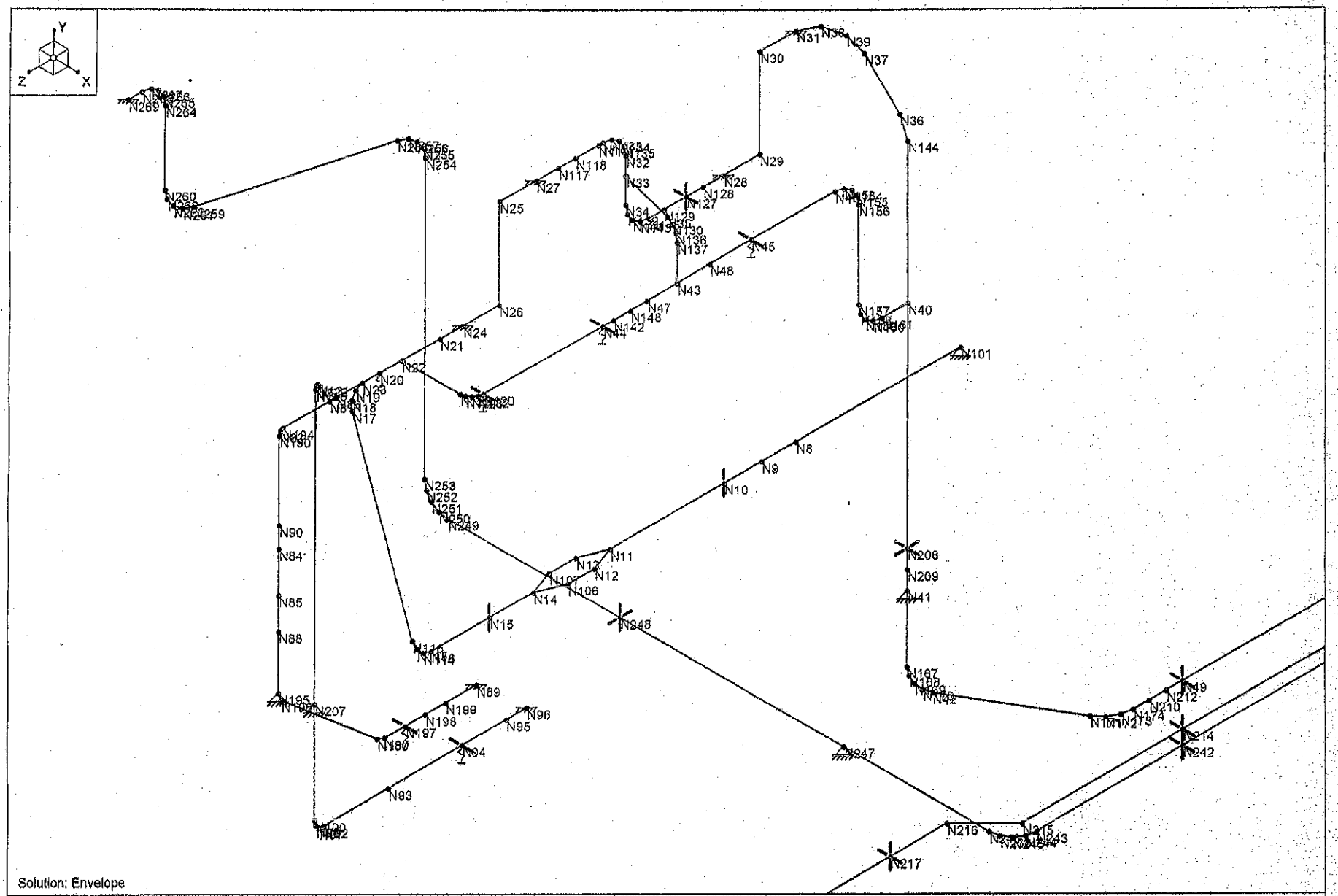
145579-V-CA-005	Rendered Model Geometry	145579-V-CA-005 Model 1.r3d



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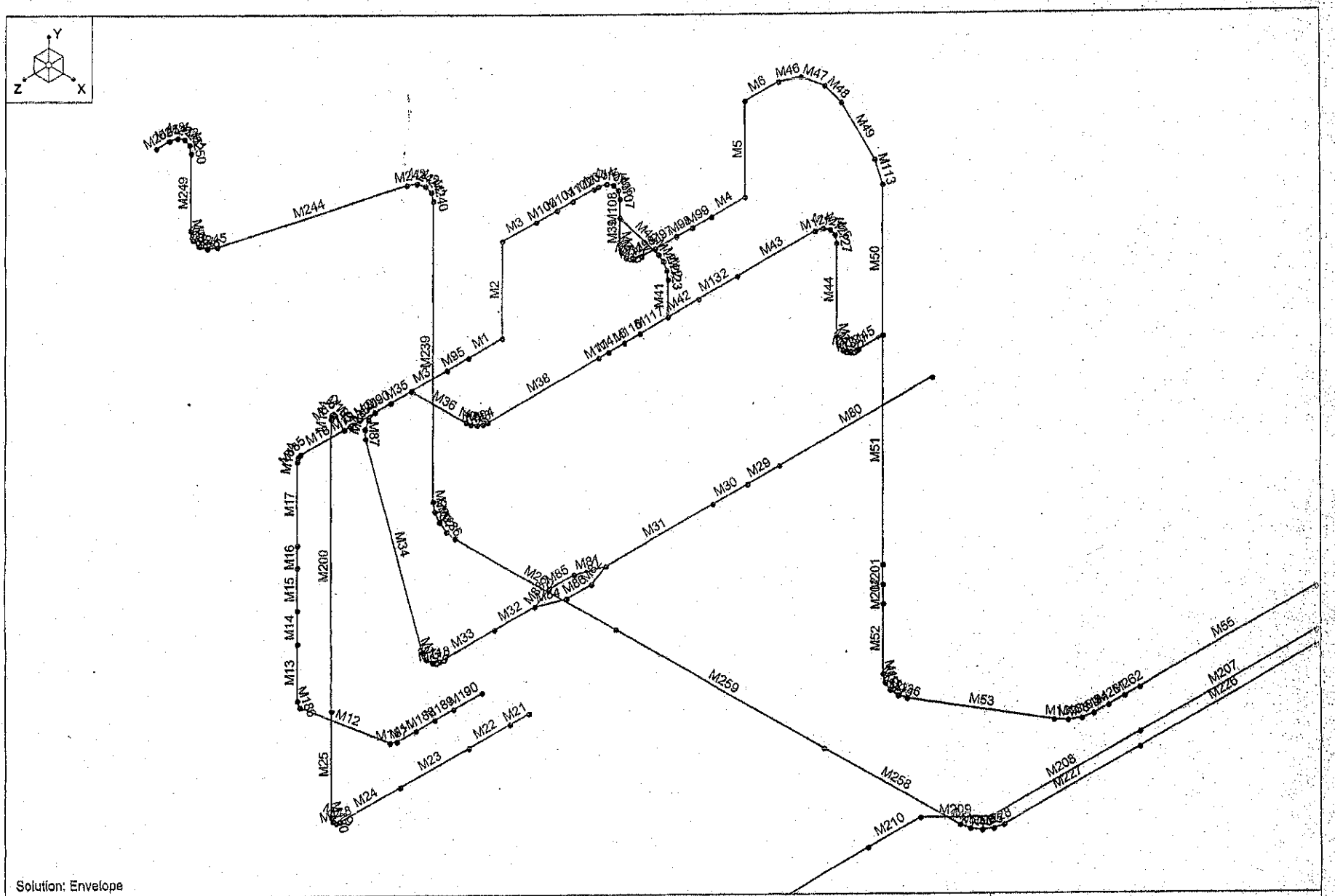
DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Mar 22, 2006 at 9:14 AM
145579-V-CA-005	Nodes and Supports - SMF Area	145579-V-CA-005 Model 1.r3d



Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
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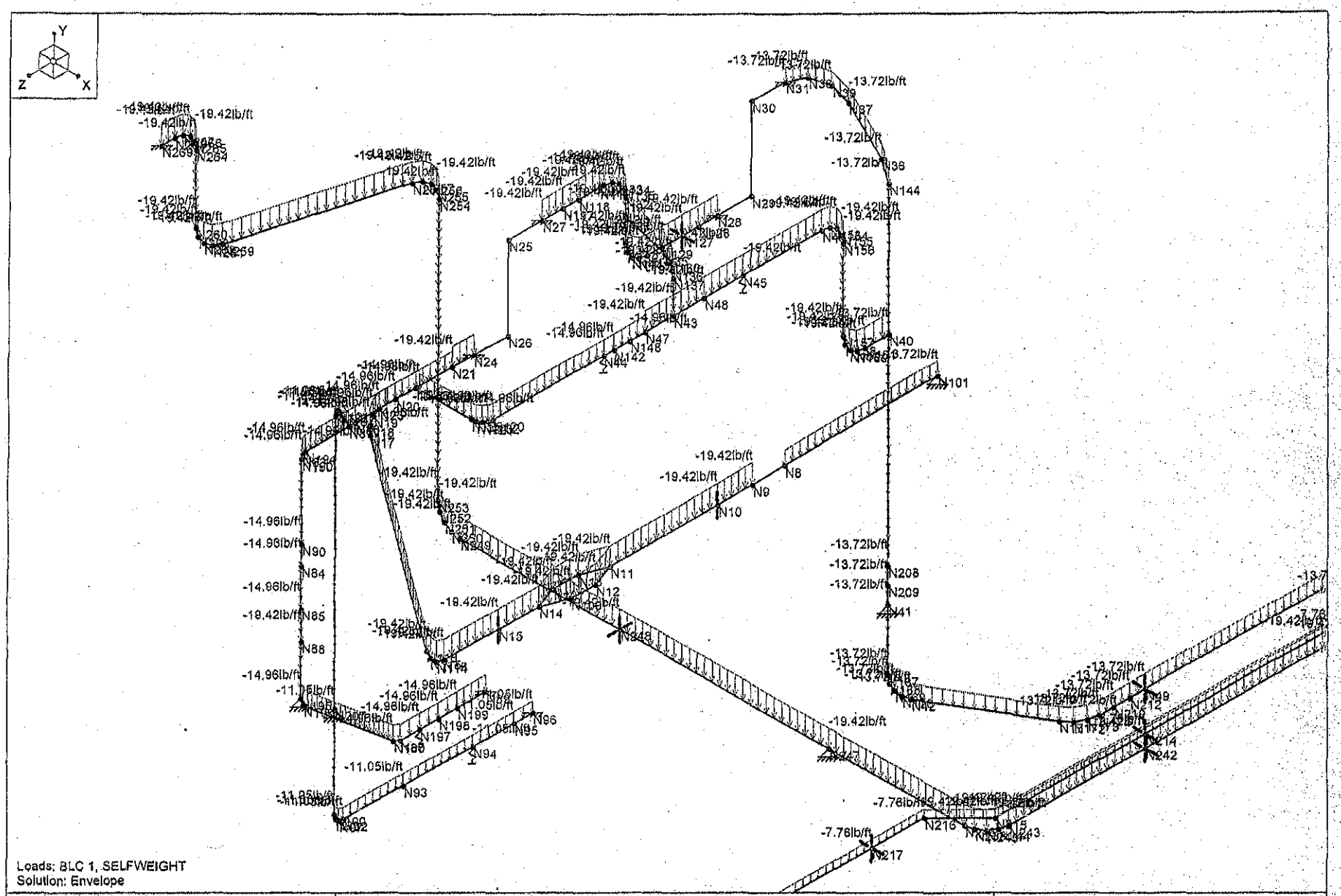
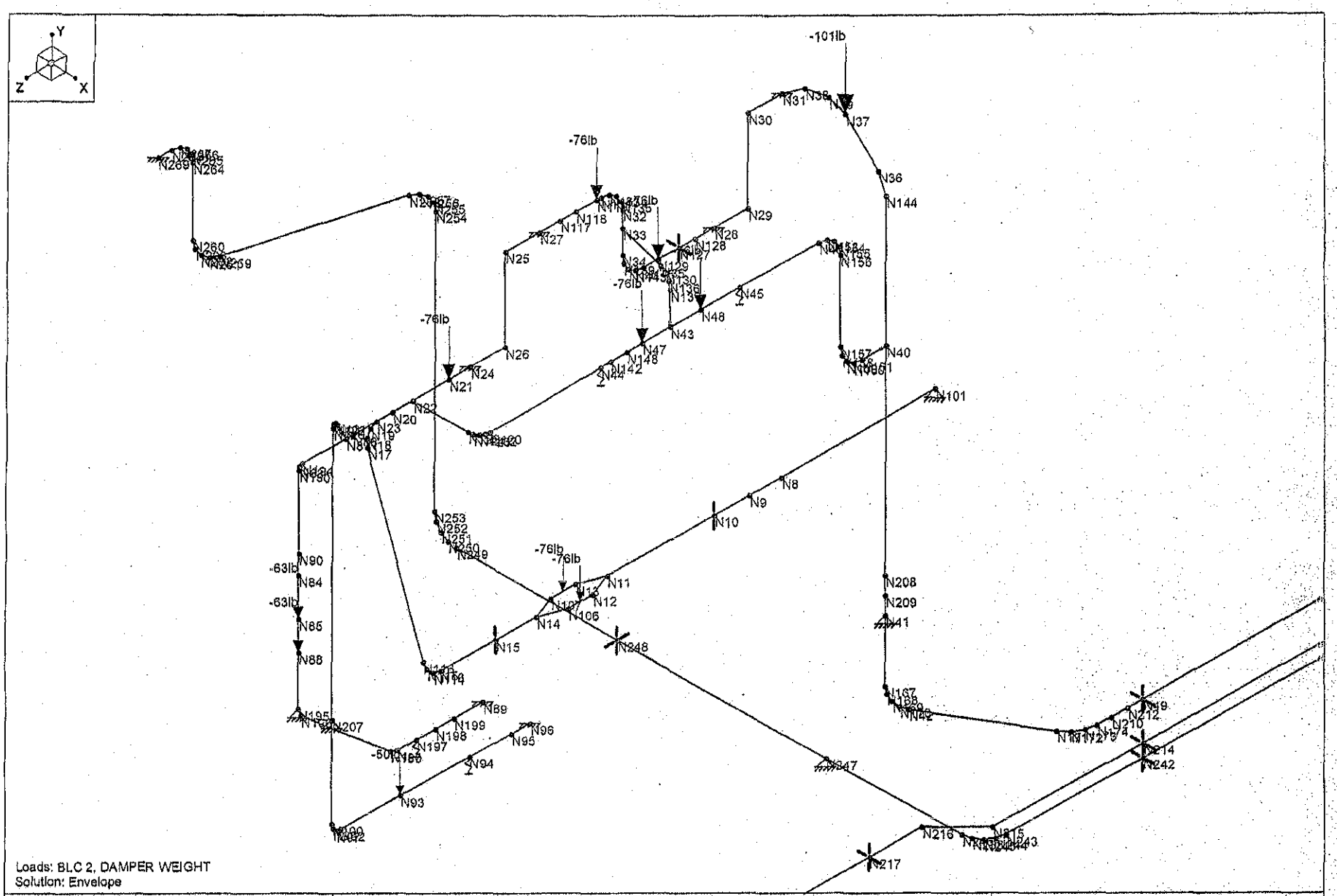
145579-V-CA-005	Members - SMF Area	145579-V-CA-005 Model 1.r3d

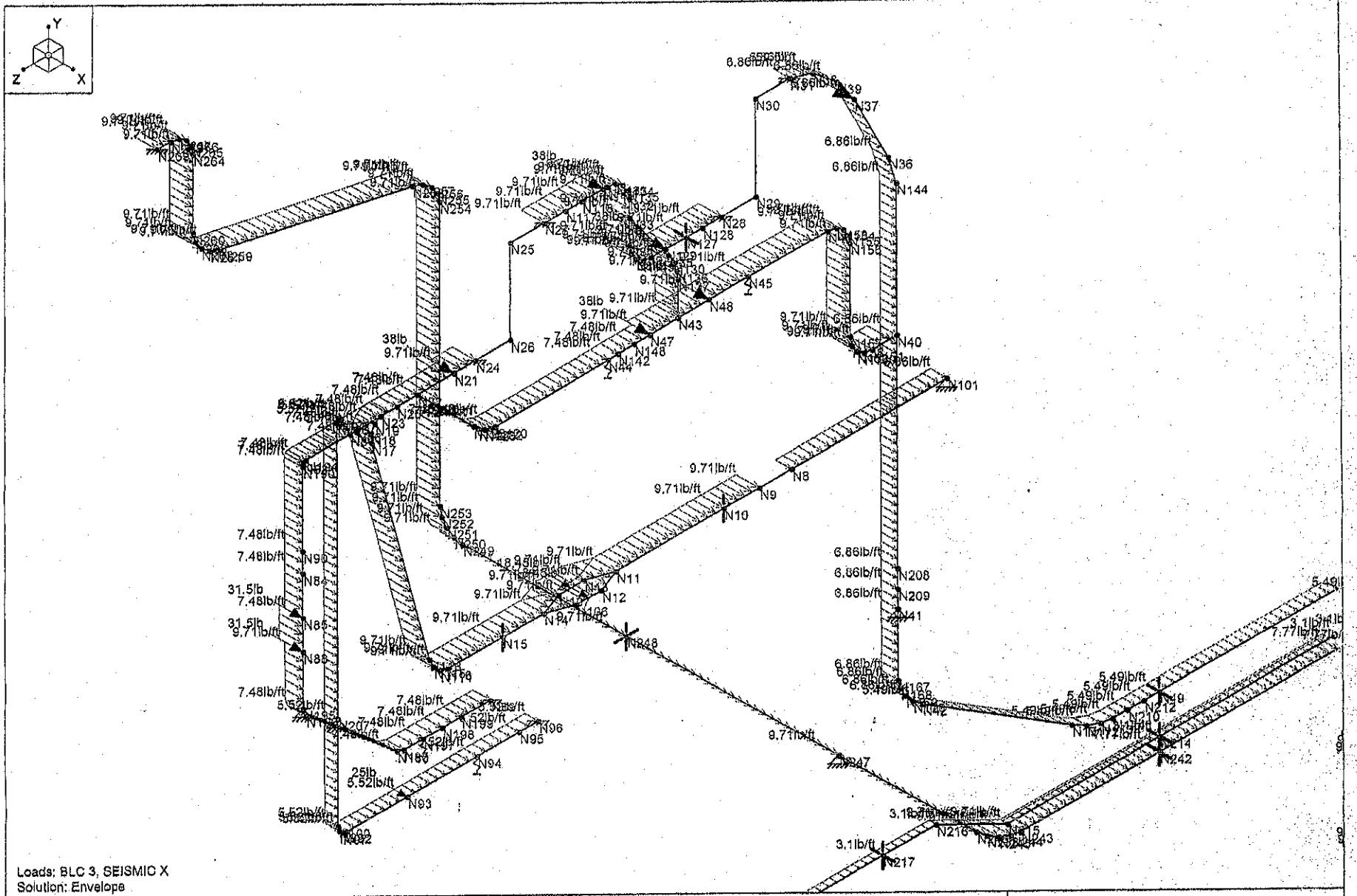


Loads: BLC 1, SELFWEIGHT
Solution: Envelope

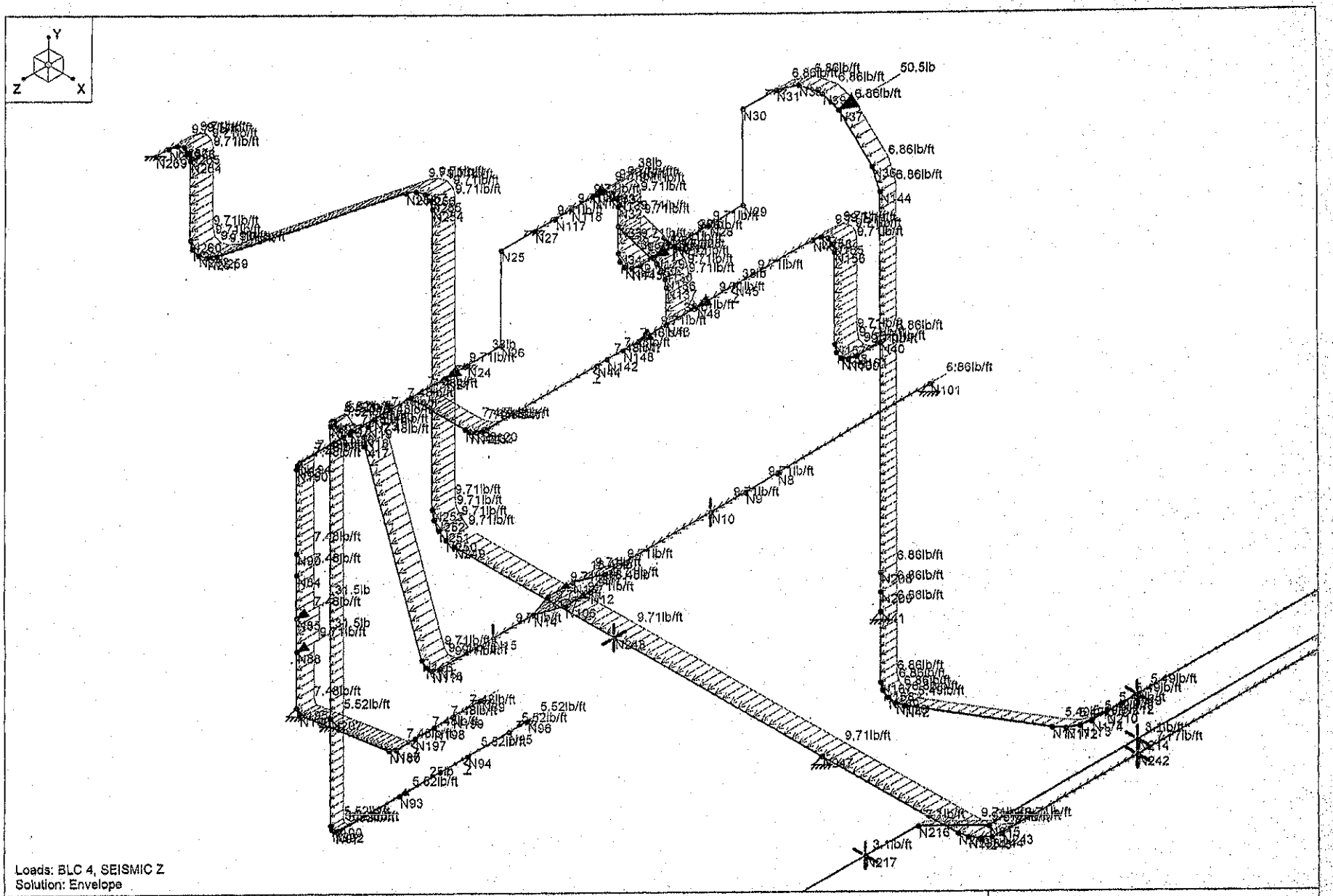
DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Feb 14, 2006 at 4:14 PM
145579-V-CA-005	Selfweight BLC - SMF Area	145579-V-CA-005 Model 1.r3d



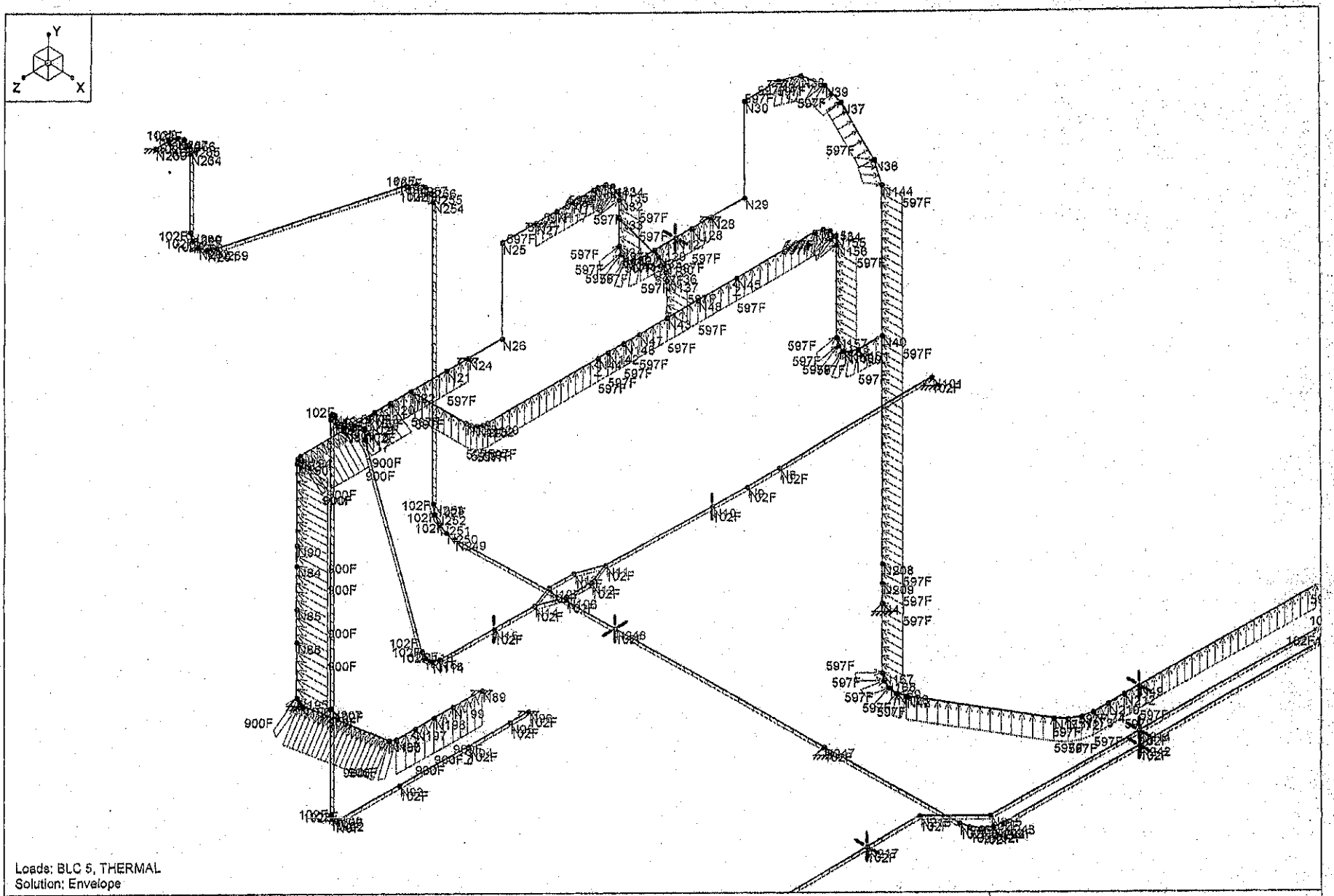
DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Feb 14, 2006 at 4:15 PM
145579-V-CA-005	Damper BLC - SMF Area	145579-V-CA-005 Model 1.r3d



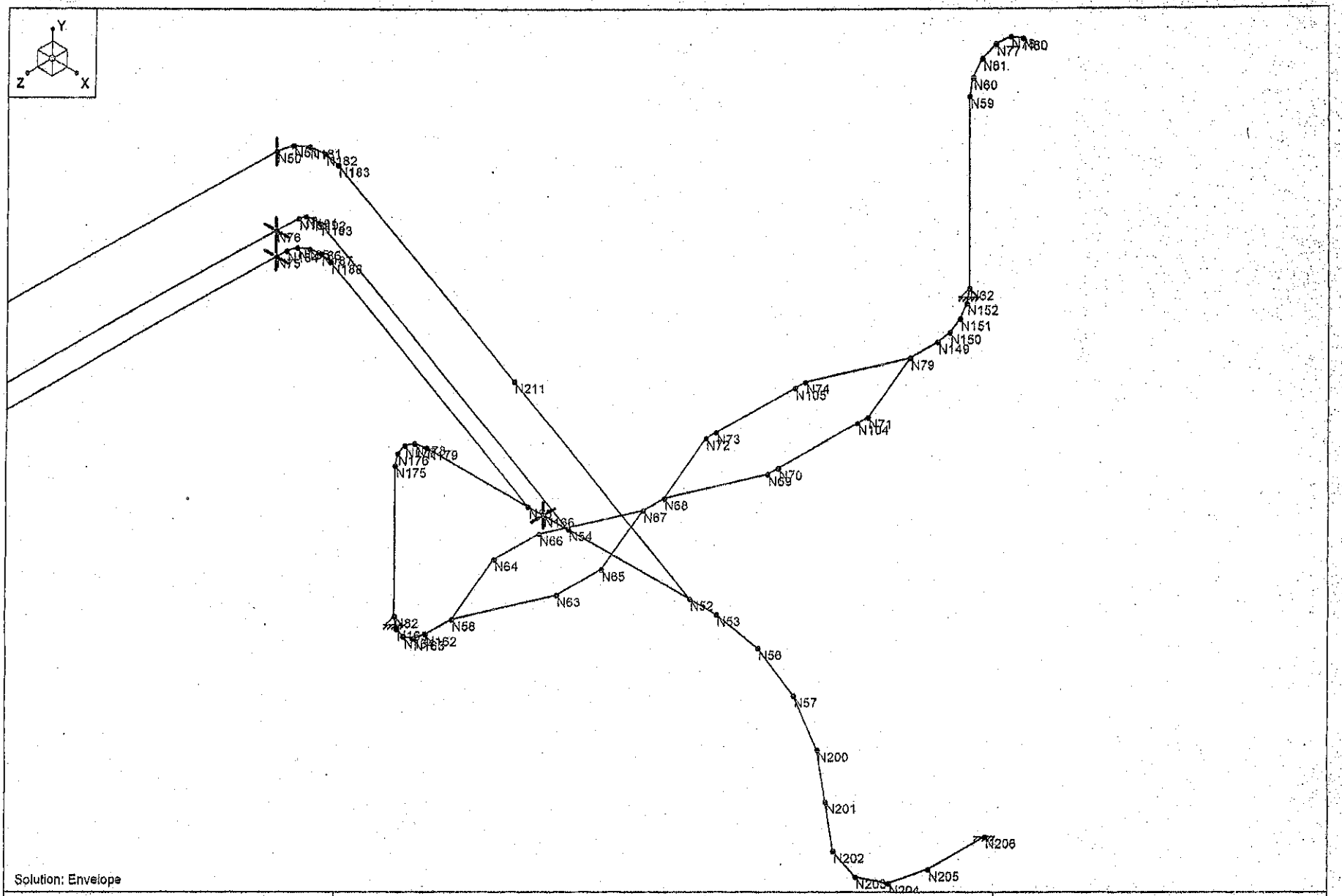
DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Feb 14, 2006 at 4:16 PM
145579-V-CA-005	Seismic X BLC - SMF Area	145579-V-CA-005 Model 1.r3d



DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Feb 14, 2006 at 4:17 PM
145579-V-CA-005	Seismic Z BLC - SMF Area	145579-V-CA-005 Model 1.r3d

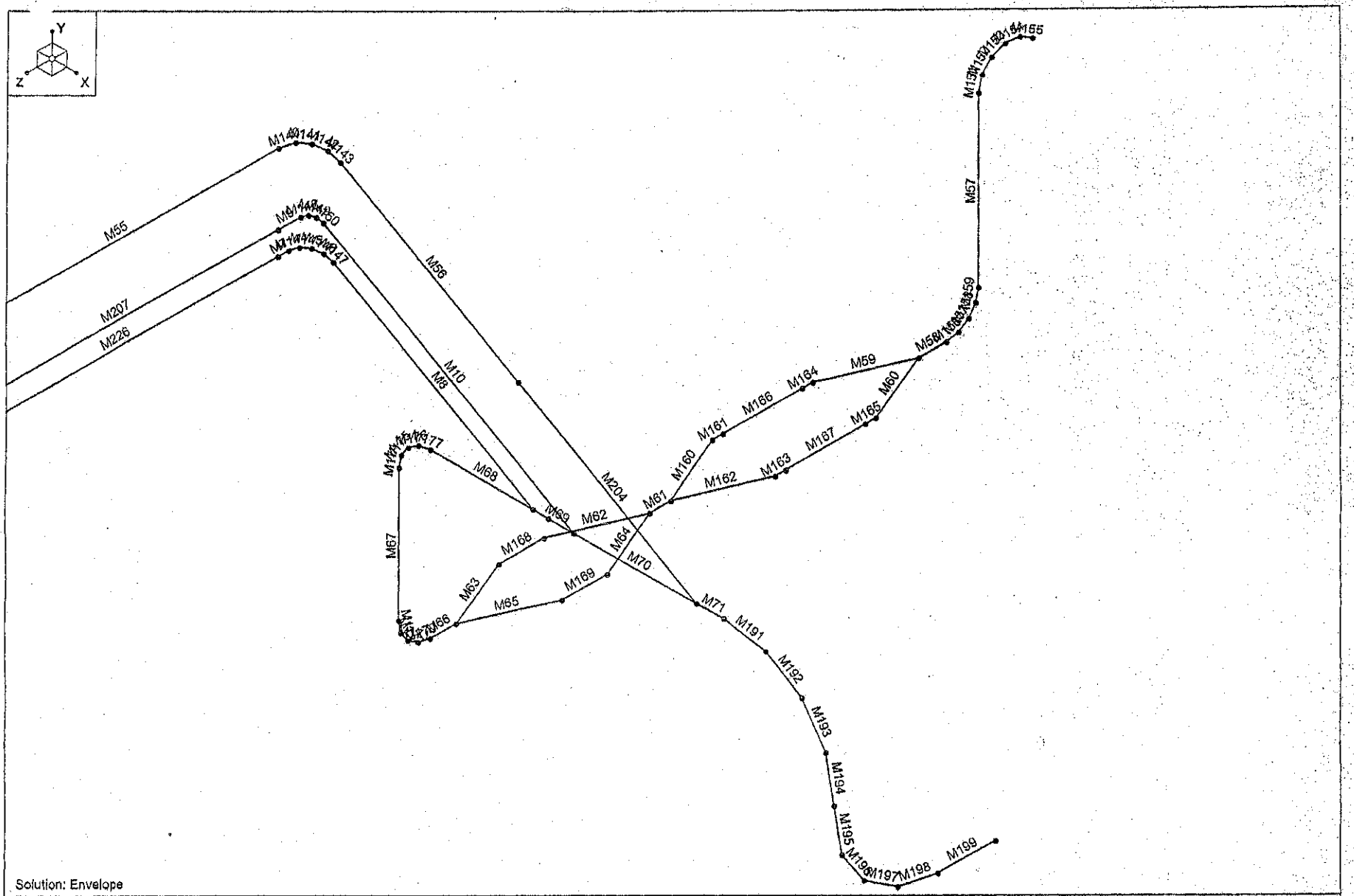


DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Feb 14, 2006 at 4:18 PM
145579-V-CA-005	Thermal BLC - SMF Area	145579-V-CA-005 Model 1.r3d

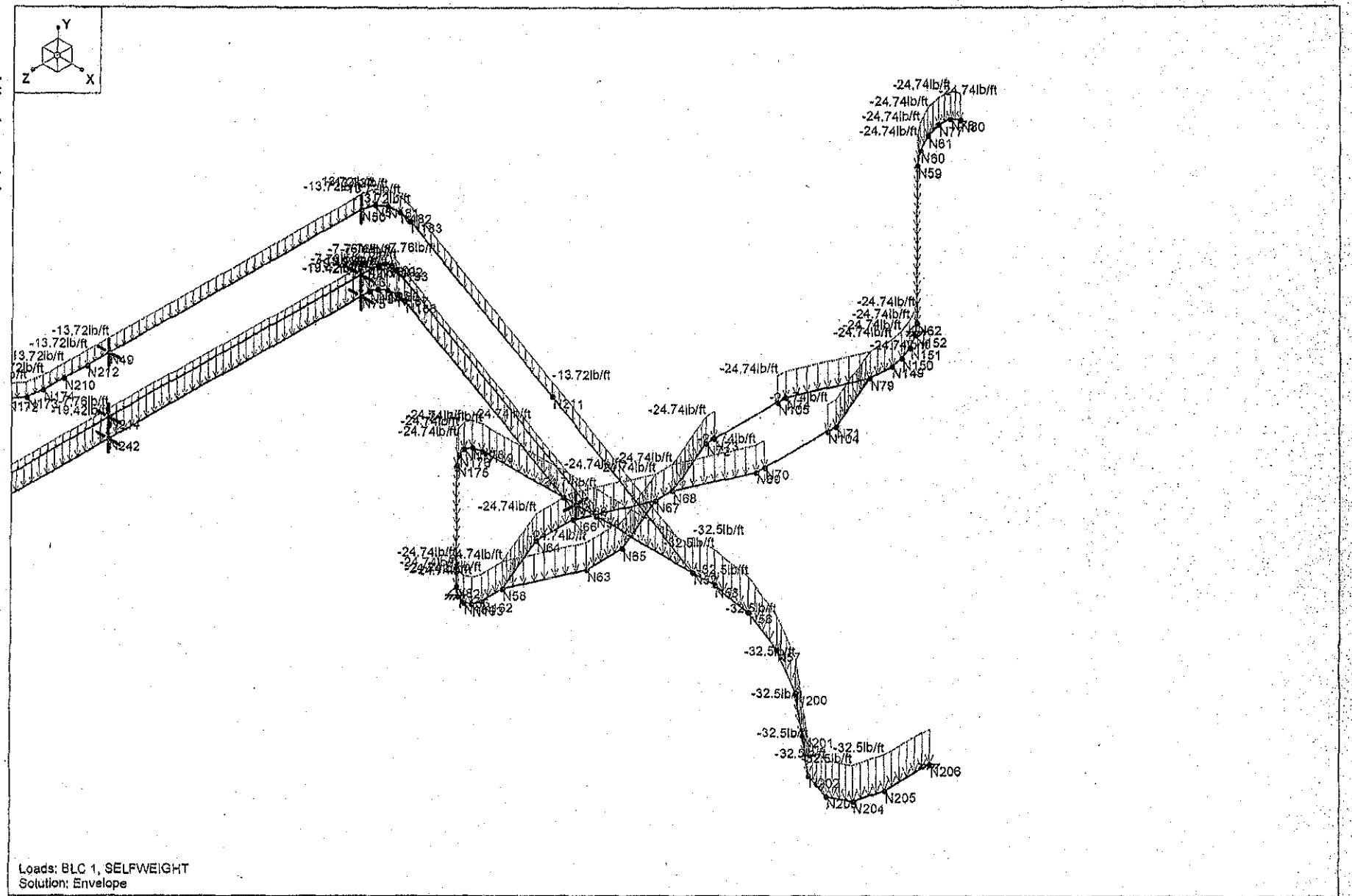


Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Feb 14, 2006 at 4:22 PM
145579-V-CA-005	Nodes and Supports - Wet Scrubber Area	145579-V-CA-005 Model 1.r3d

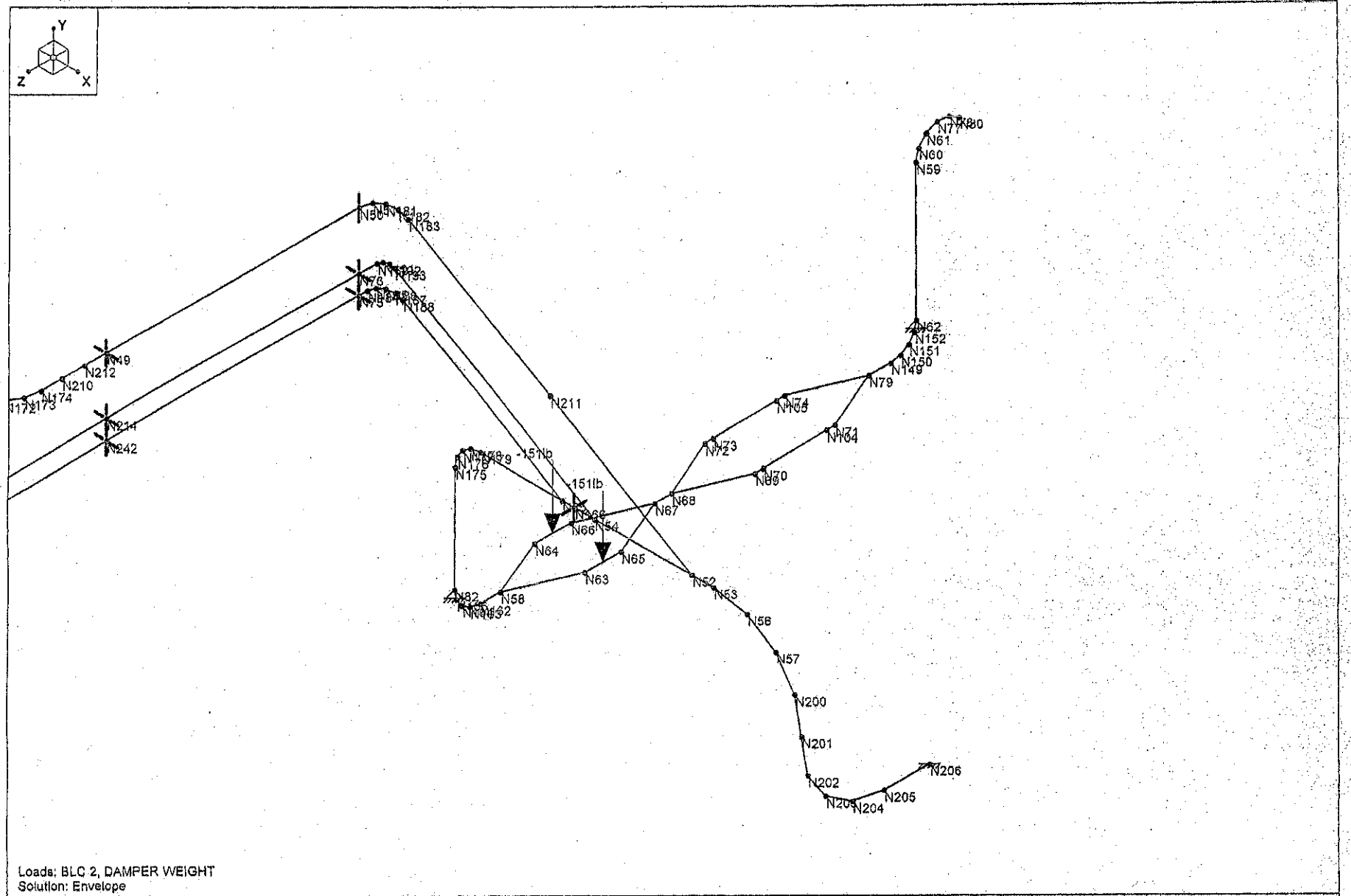


DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Feb 14, 2006 at 4:21 PM
145579-V-CA-005	Members - Wet Scrubber Area	145579-V-CA-005 Model 1.r3d



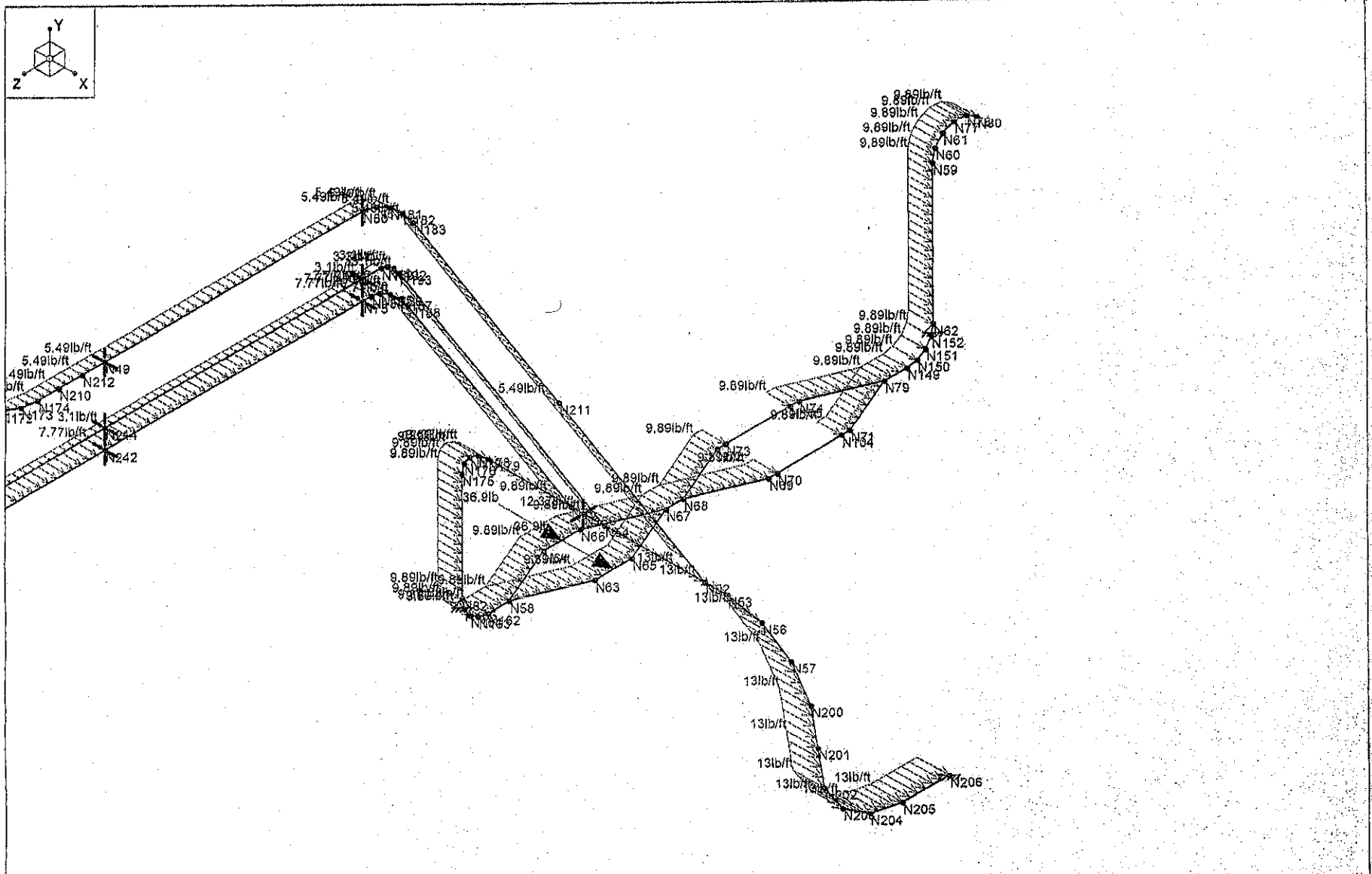
Loads: BLC 1, SELFWEIGHT
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Feb 14, 2006 at 4:25 PM
145579-V-CA-005	Selfweight BLC - Wet Scrubber Area	145579-V-CA-005 Model 1.r3d



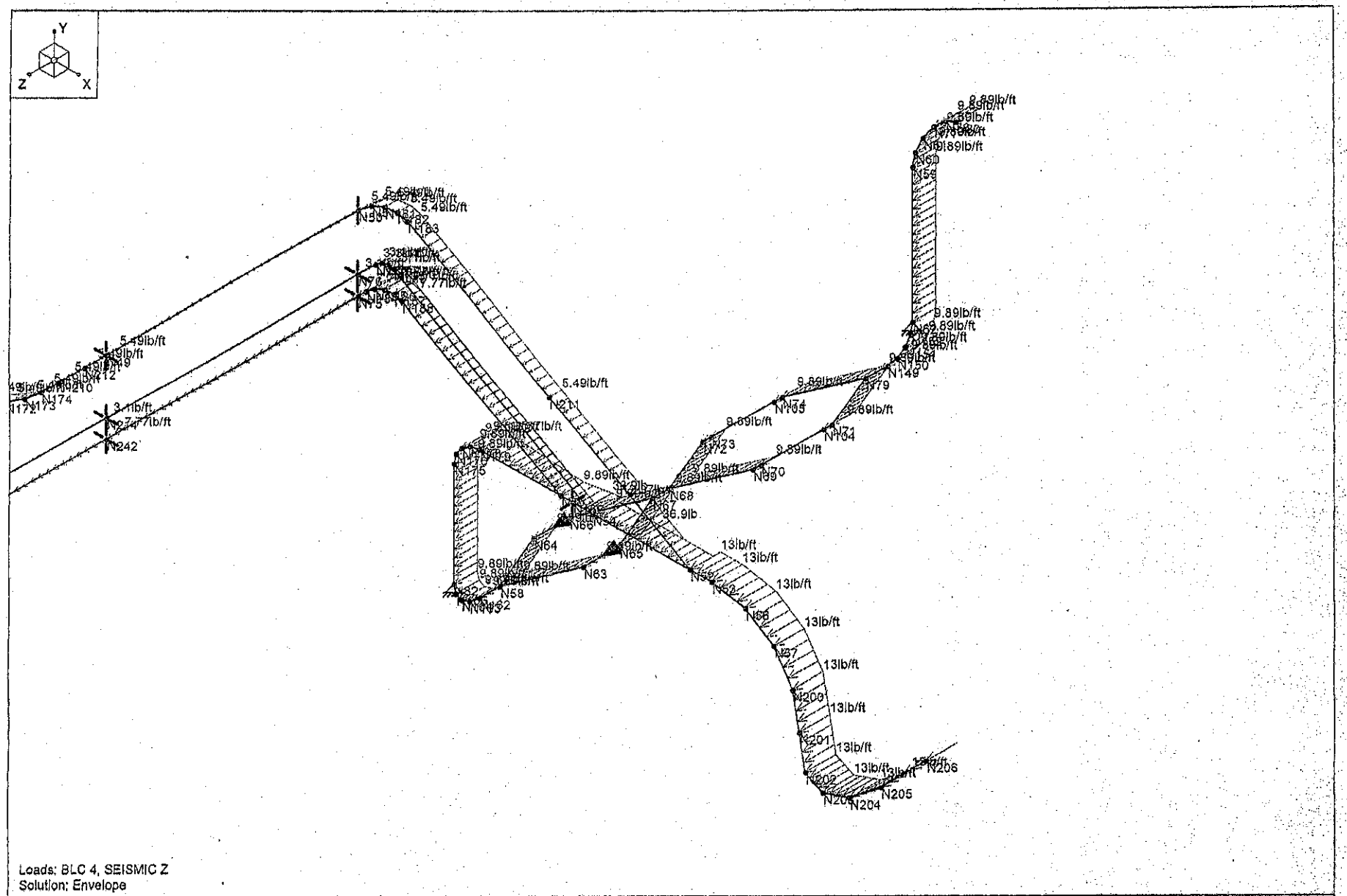
Loads: BLC 2, DAMPER WEIGHT
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Feb 14, 2006 at 4:26 PM
145579-V-CA-005	Damper BLC - Wet Srubber Area	145579-V-CA-005 Model 1.r3d



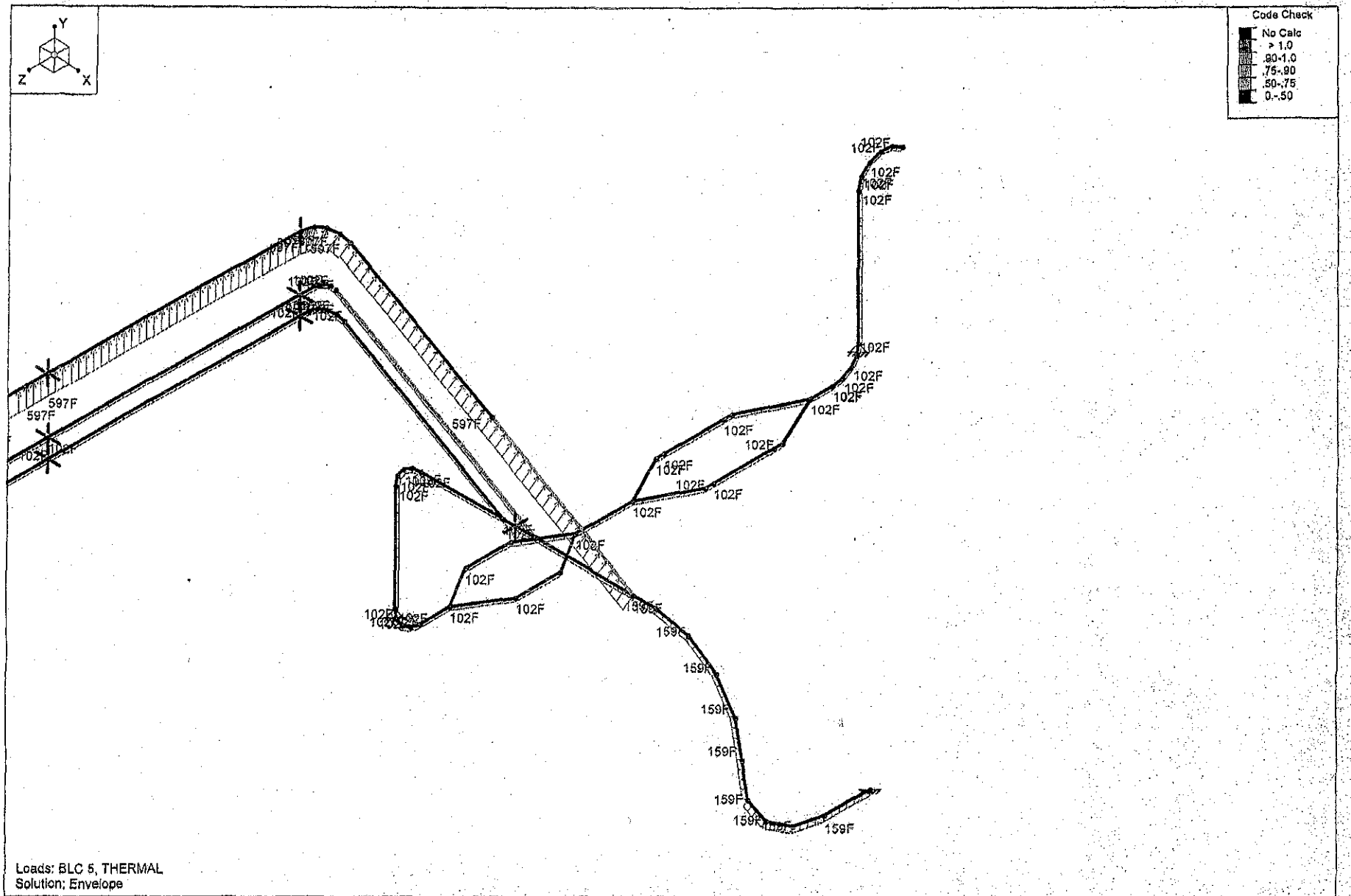
Loads: BLC 3, SEISMIC X
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Feb 14, 2006 at 4:27 PM
145579-V-CA-005	Seismic X BLC - Wet Scrubber Area	145579-V-CA-005 Model 1.r3d



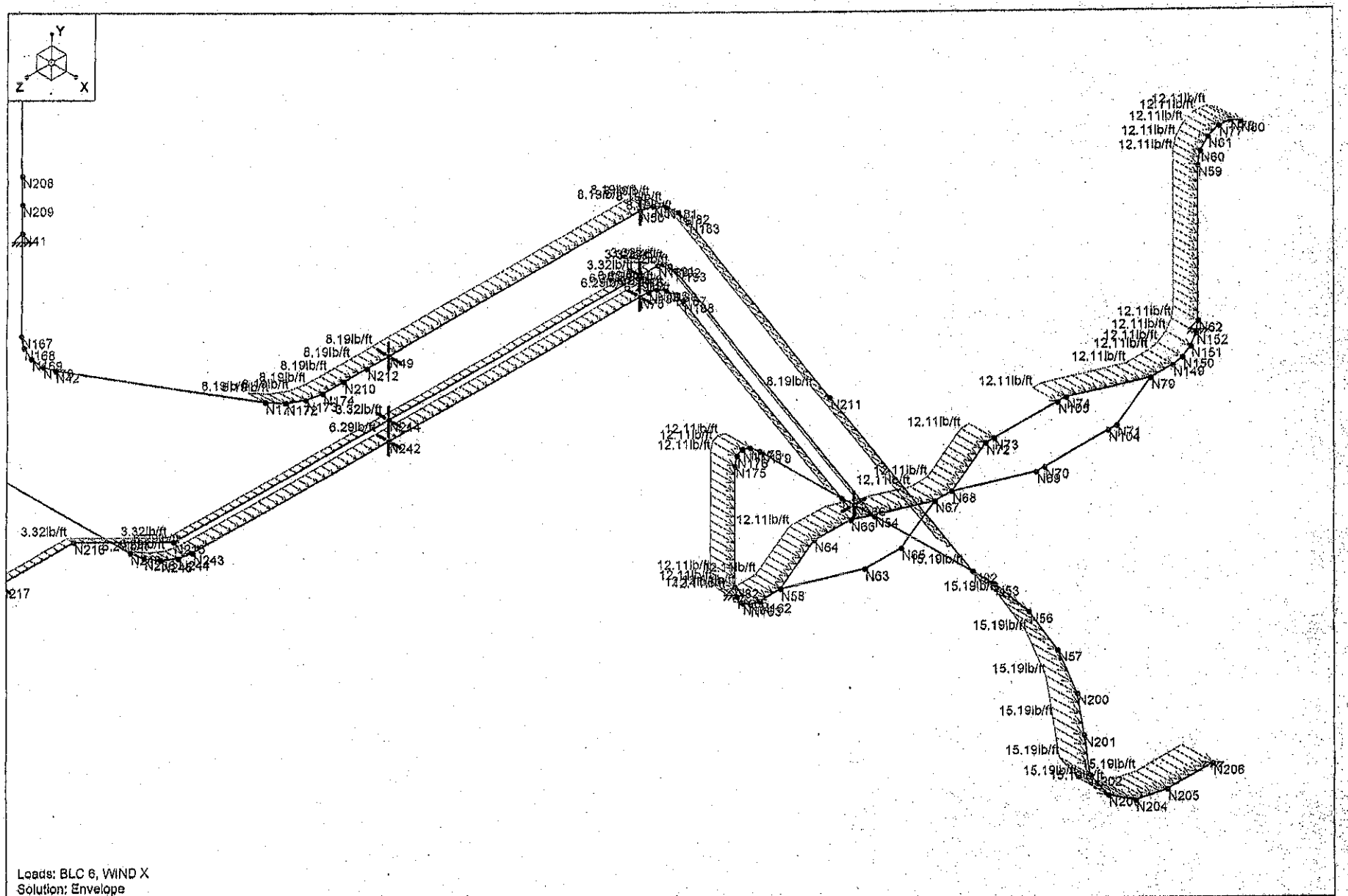
Loads: BLC 4, SEISMIC Z
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Feb 14, 2006 at 4:27 PM
145579-V-CA-005	Seismic Z BLC - Wet Scrubber Area	145579-V-CA-005 Model 1.r3d

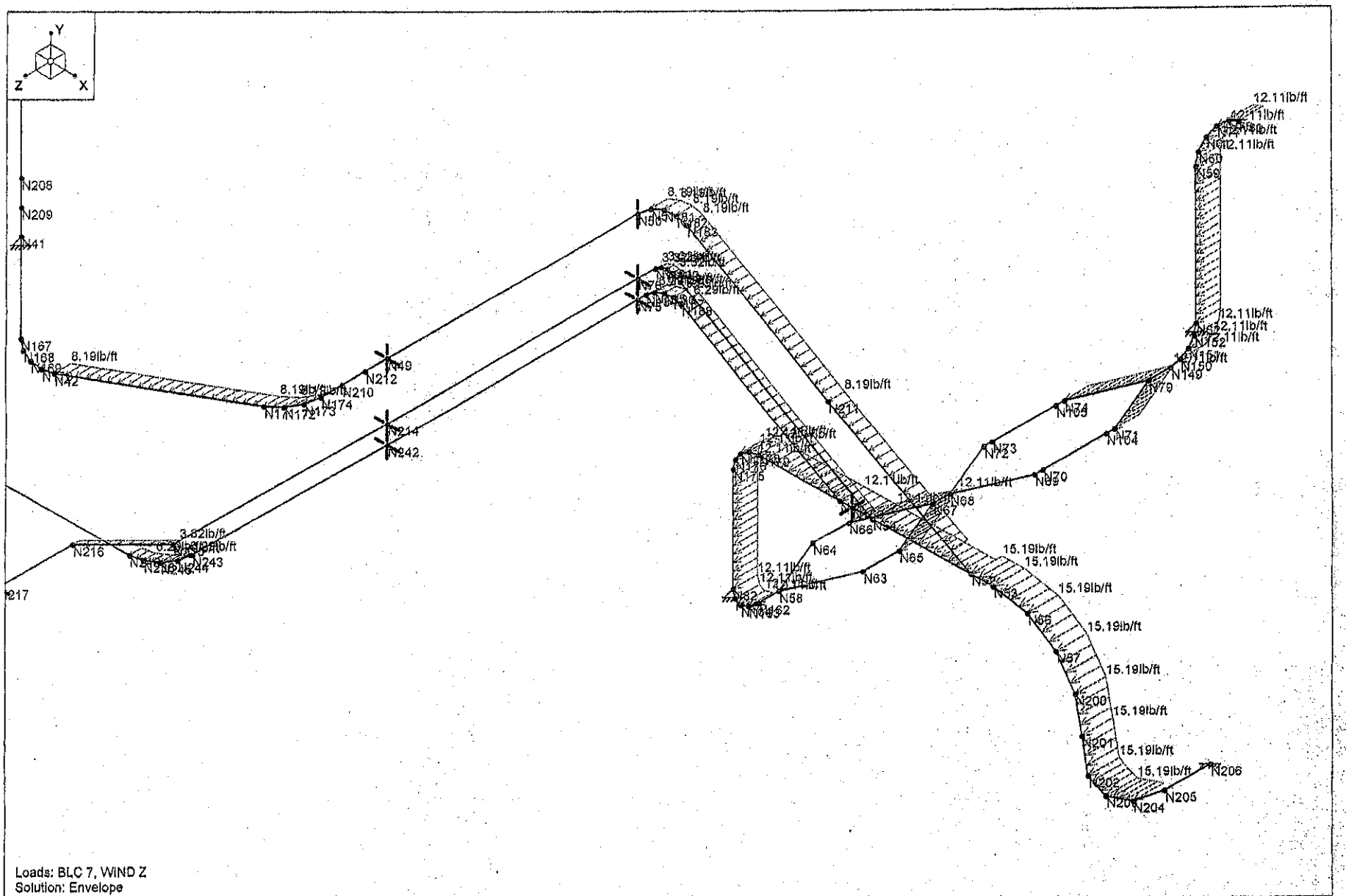


Loads: BLC 5, THERMAL
Solution; Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Feb 24, 2006 at 1:02 PM
145579-V-CA-005	Thermal BLC - Wet Scrubber Area	145579-V-CA-005 Model 1.r3d

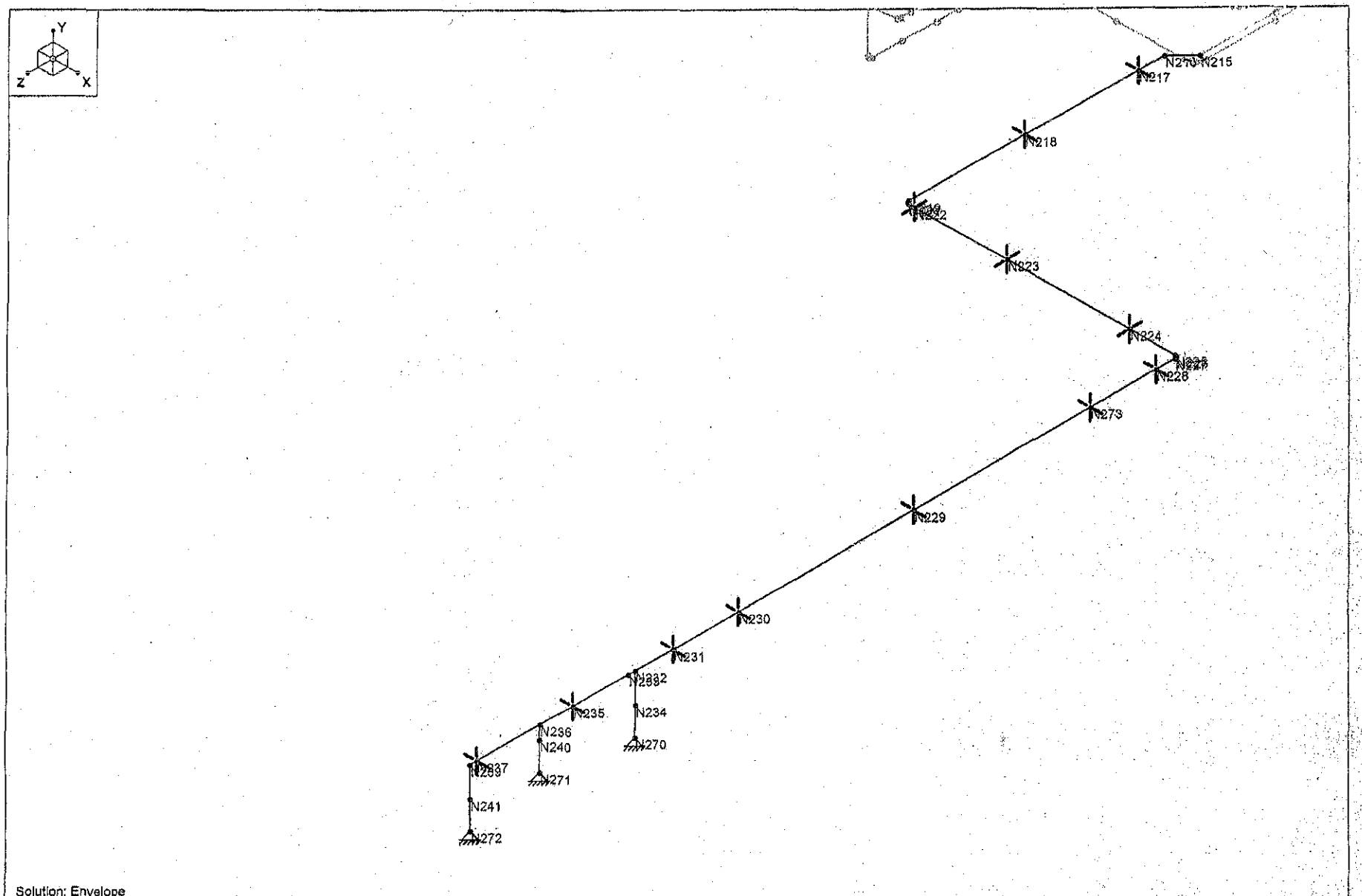


DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Feb 14, 2006 at 4:31 PM
145579-V-CA-005	Wind X BLC - Wet Scrubber Area	145579-V-CA-005 Model 1.r3d



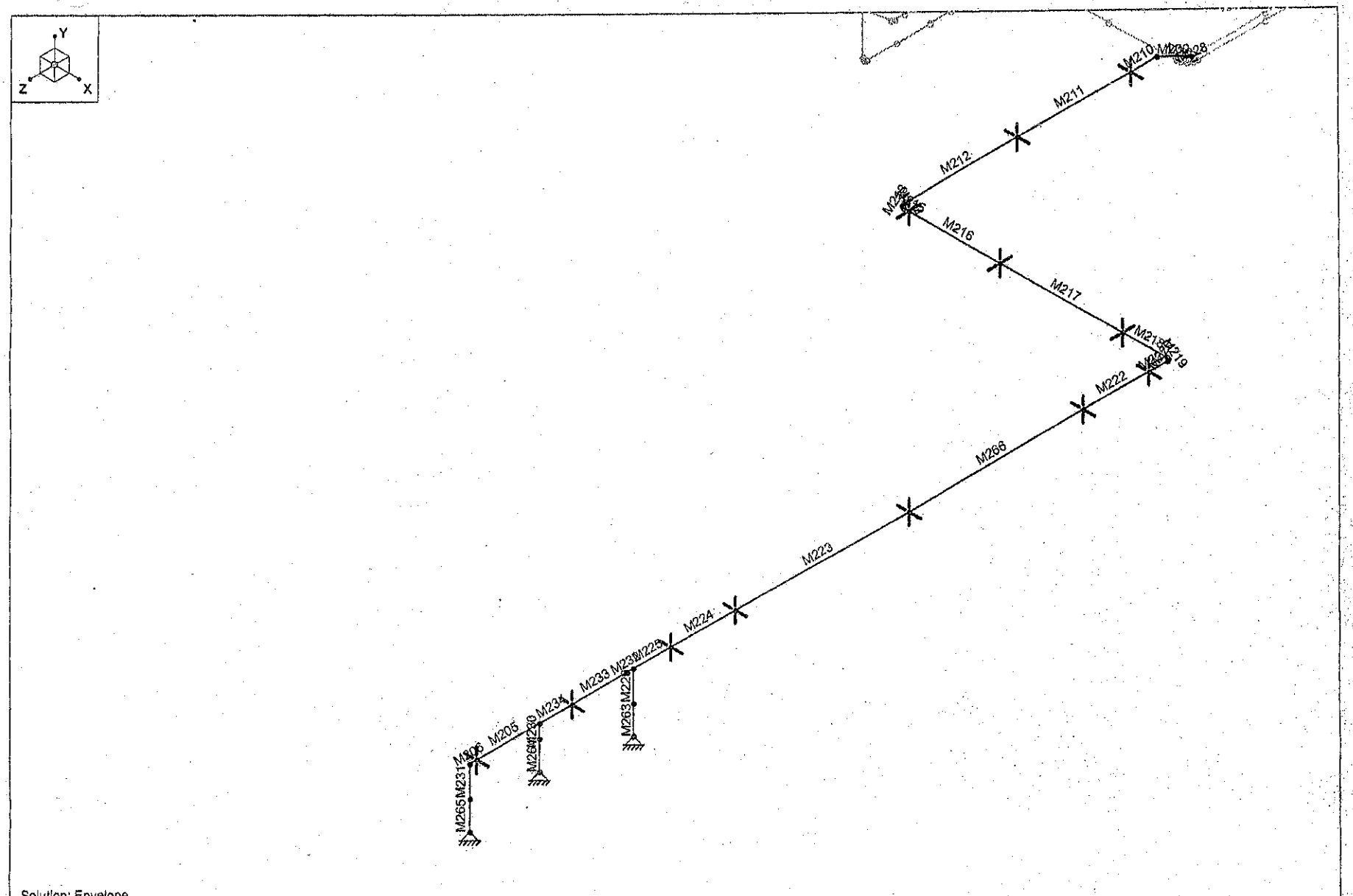
Loads: BLC 7, WIND Z
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Feb 14, 2006 at 4:31 PM
145579-V-CA-005	Wind Z BLC - Wet Scrubber Area	145579-V-CA-005 Model 1.r3d



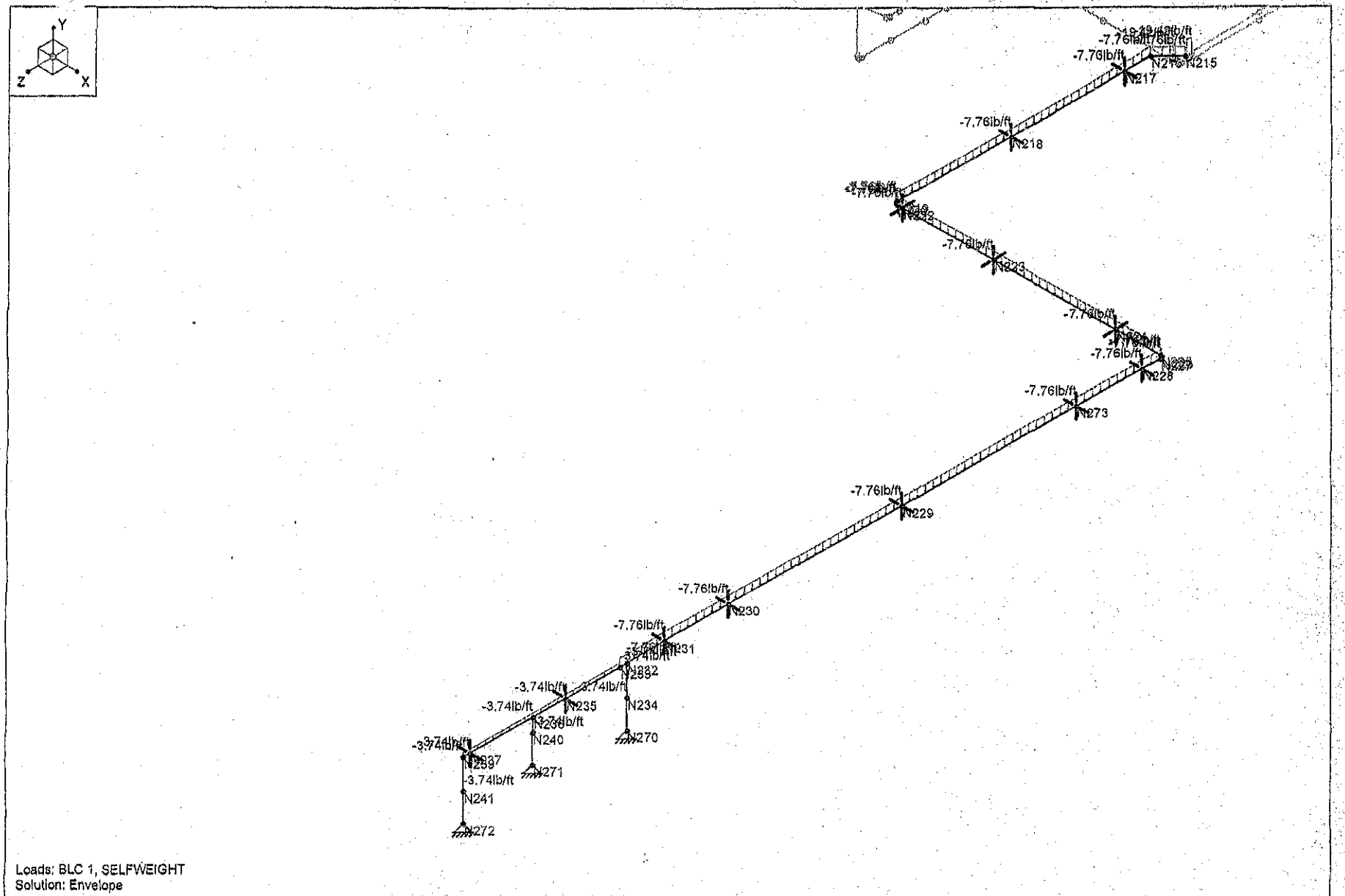
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Mar 26, 2006 at 2:11 PM
145579-V-CA-005	Nodes and Supports - LAW Tank Area	145579-V-CA-005 Model 1.r3d



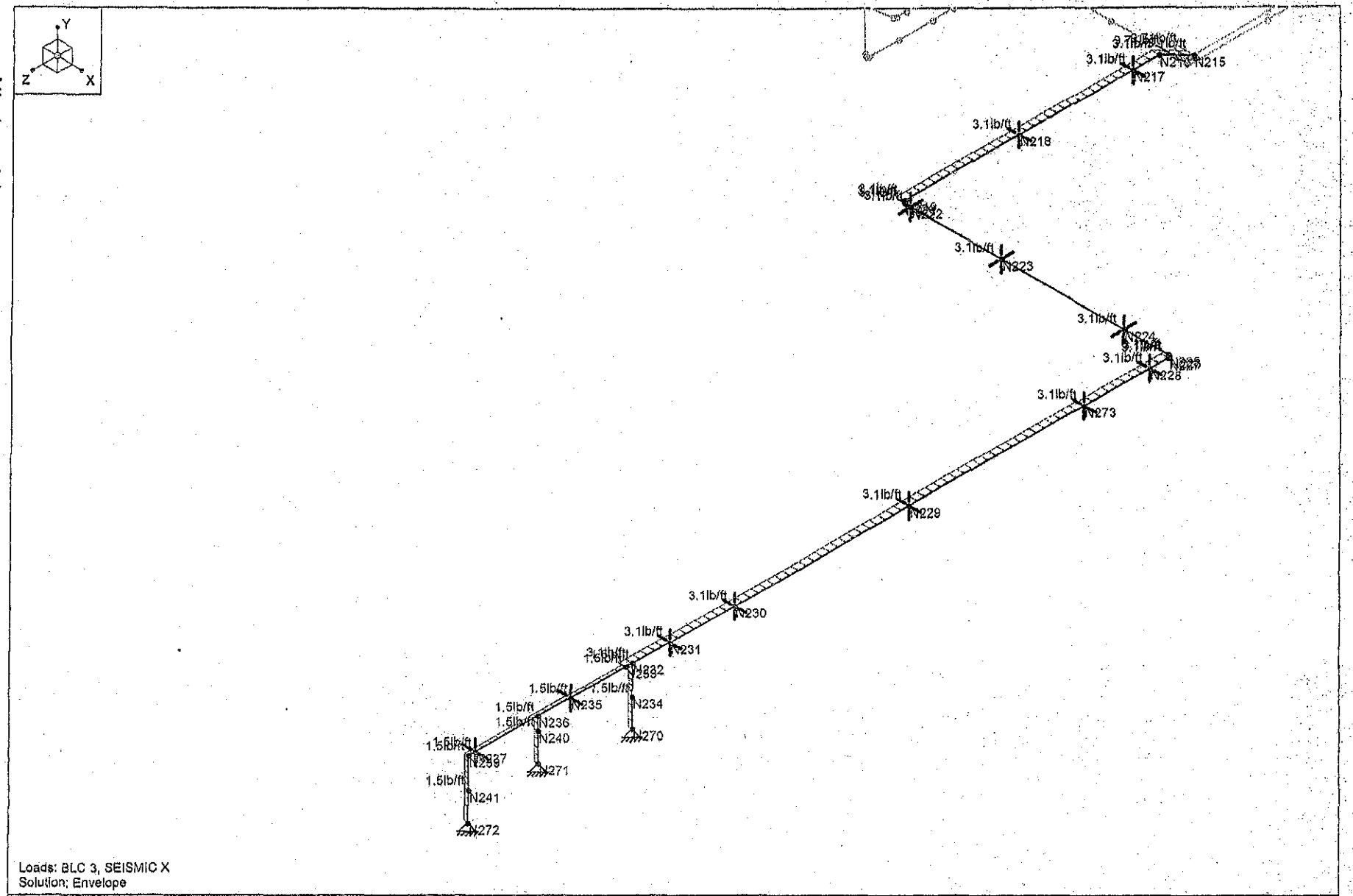
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Mar 26, 2006 at 2:12 PM
145579-V-CA-005	Members - LAW Tank Area	145579-V-CA-005 Model 1.r3d



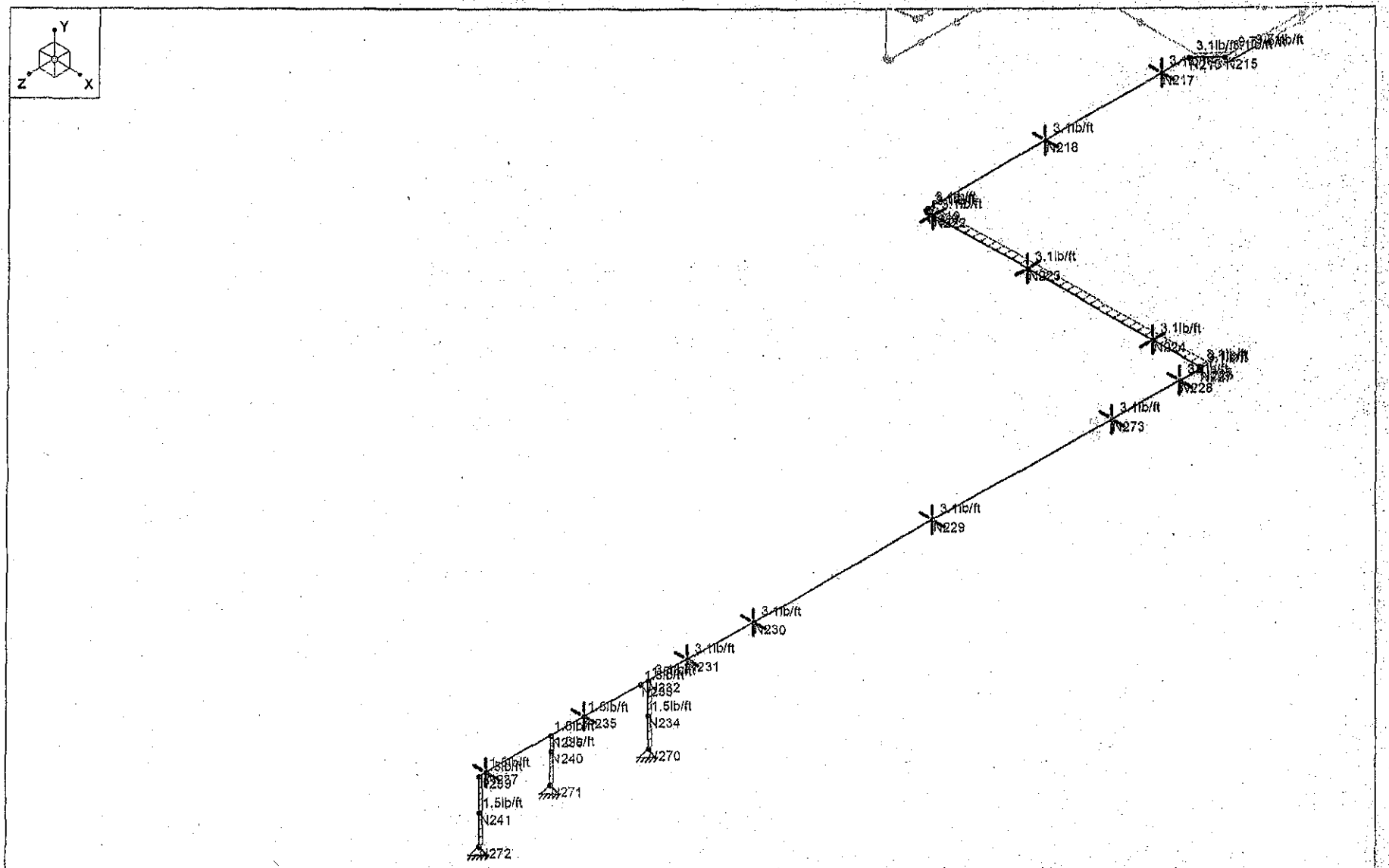
Loads: BLC 1, SELFWEIGHT
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Mar 26, 2006 at 2:13 PM
145579-V-CA-005	BLC Selfweight - LAW Tank Area	145579-V-CA-005 Model 1.r3d



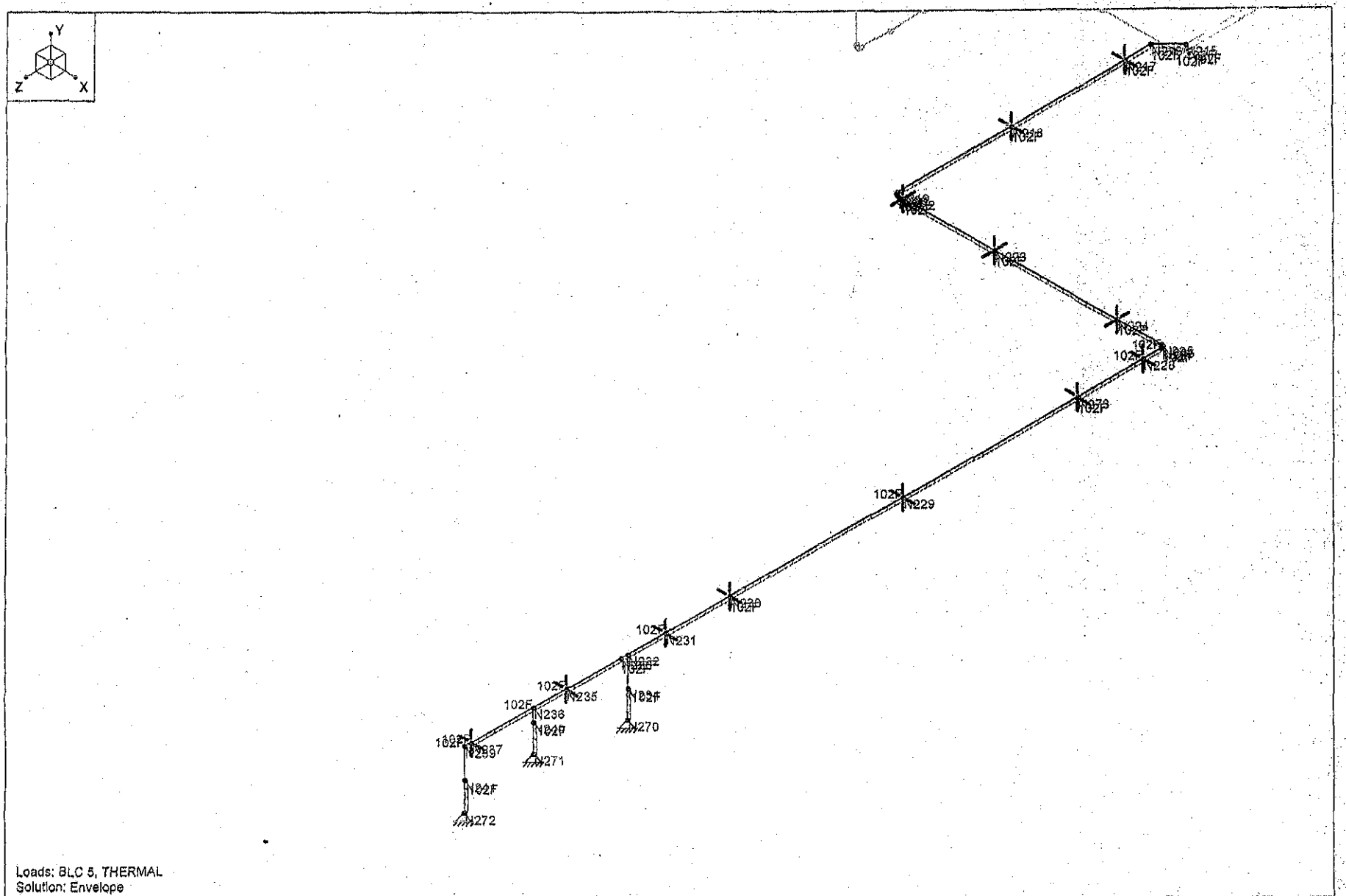
Loads: BLC 3, SEISMIC X
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Mar 26, 2006 at 2:14 PM
145579-V-CA-005	BLC Seismic X - LAW Tank Area	145579-V-CA-005 Model 1.r3d



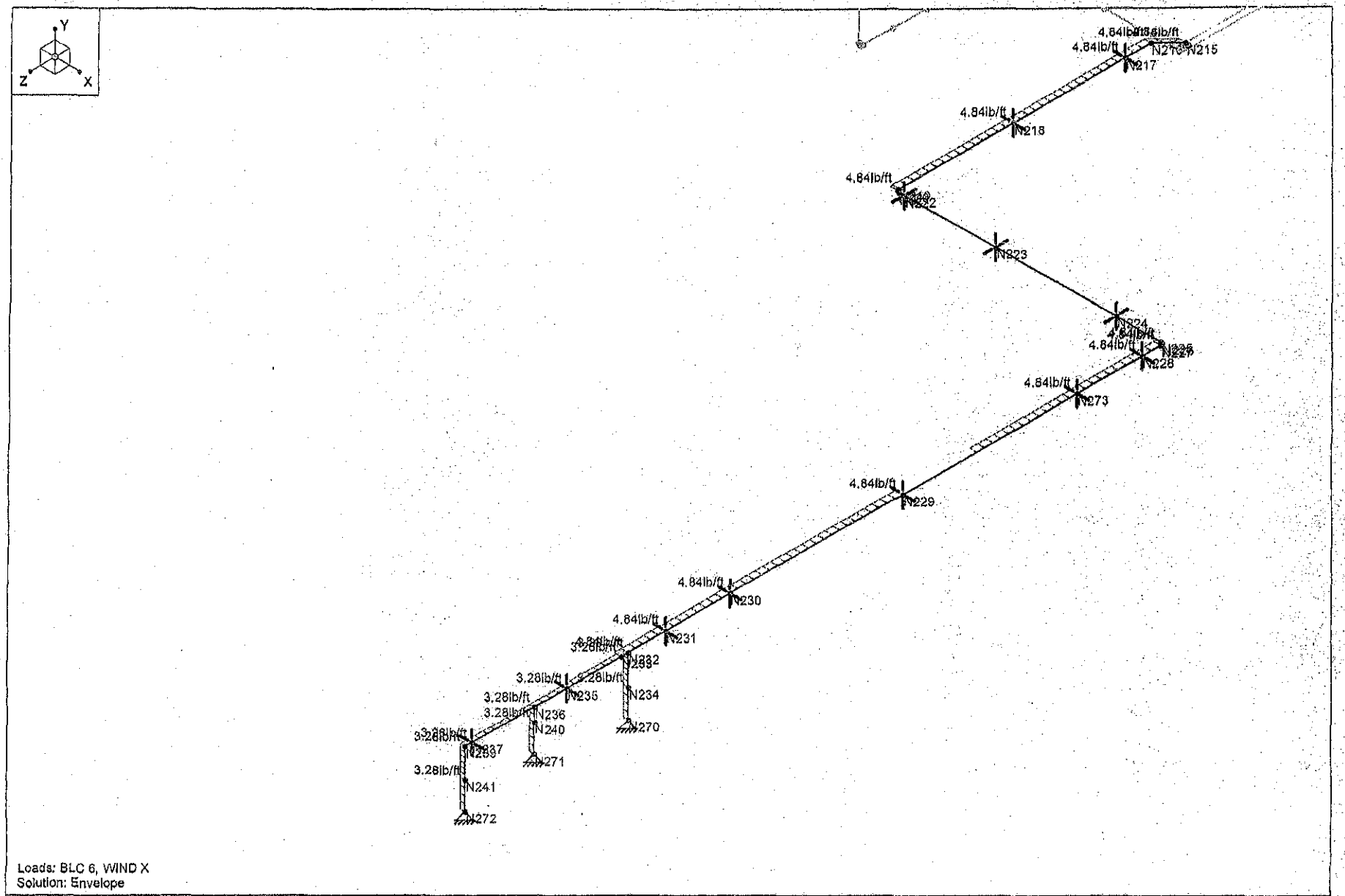
Loads: BLC 4, SEISMIC Z
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Mar 26, 2006 at 2:15 PM
145579-V-CA-005	BLC Seismic Z - LAW Tank Area	145579-V-CA-005 Model 1.r3d



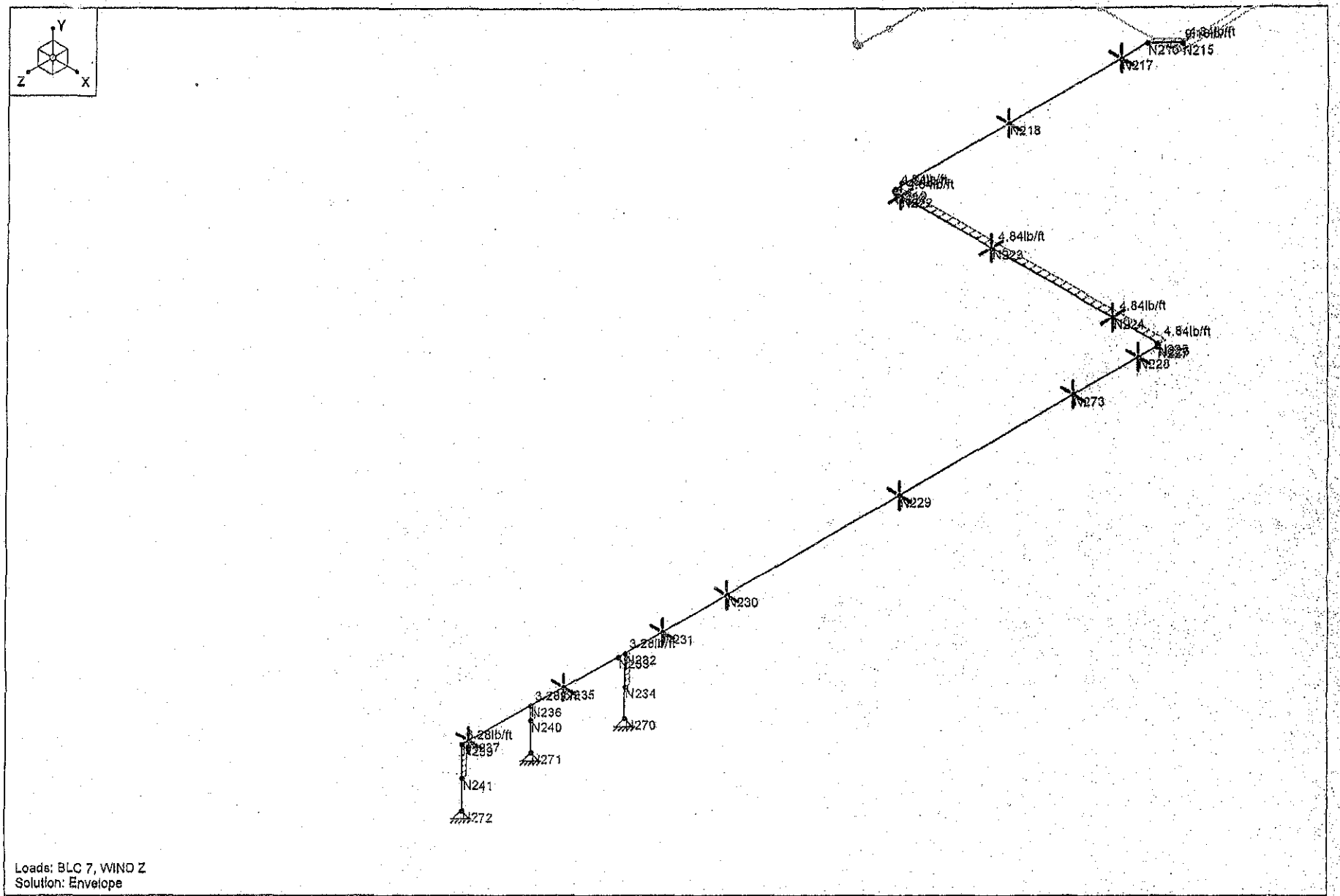
Loads: BLC 5, THERMAL
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Mar 26, 2006 at 2:15 PM
145579-V-CA-005	BLC Thermal - LAW Tank Area	145579-V-CA-005 Model 1.r3d



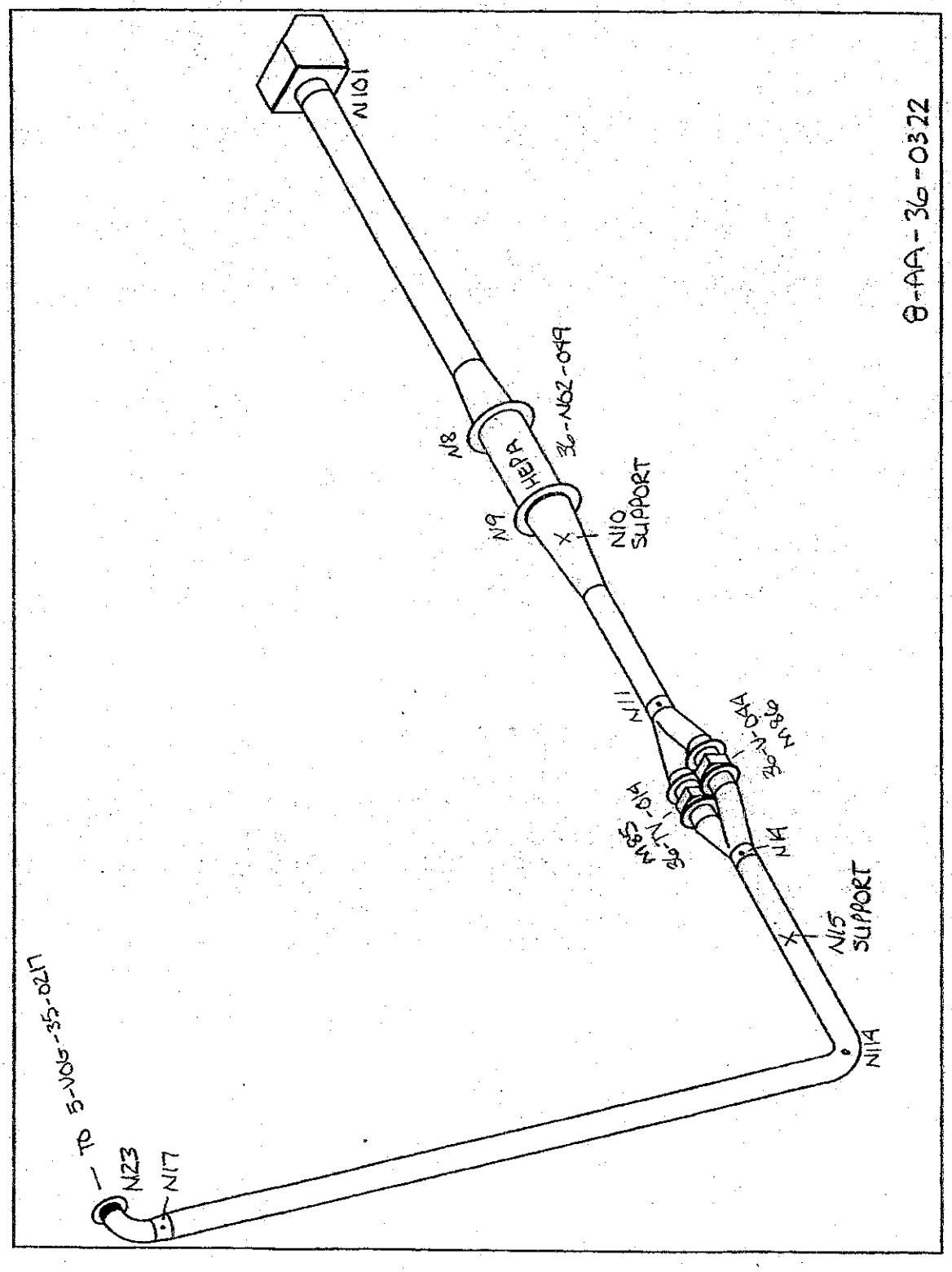
Loads: BLC 6, WIND X
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Mar 26, 2006 at 2:16 PM
145579-V-CA-005	BLC Wind X - LAW Tank Area	145579-V-CA-005 Model 1.r3d



Loads: BLC 7, WIND Z
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Mar 26, 2006 at 2:17 PM
145579-V-CA-005	BLC Wind Z - LAW Tank Area	145579-V-CA-005 Model 1.r3d


N101
N8
HEPA
N9
36-N62-049
N10
SUPPORT
N11
36-N62-044
N12
36-N62-014
N13
N15
SUPPORT
N114
TP
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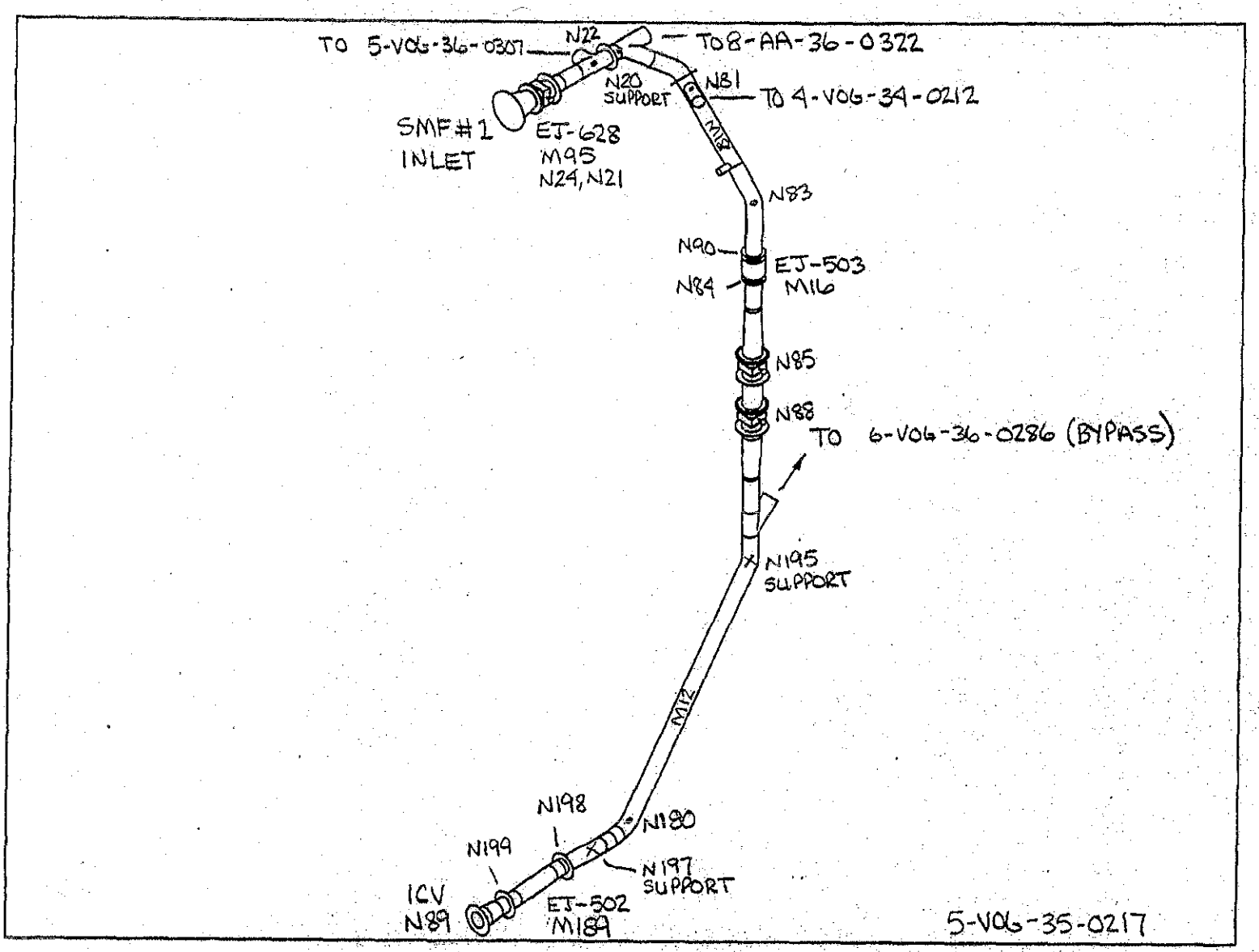
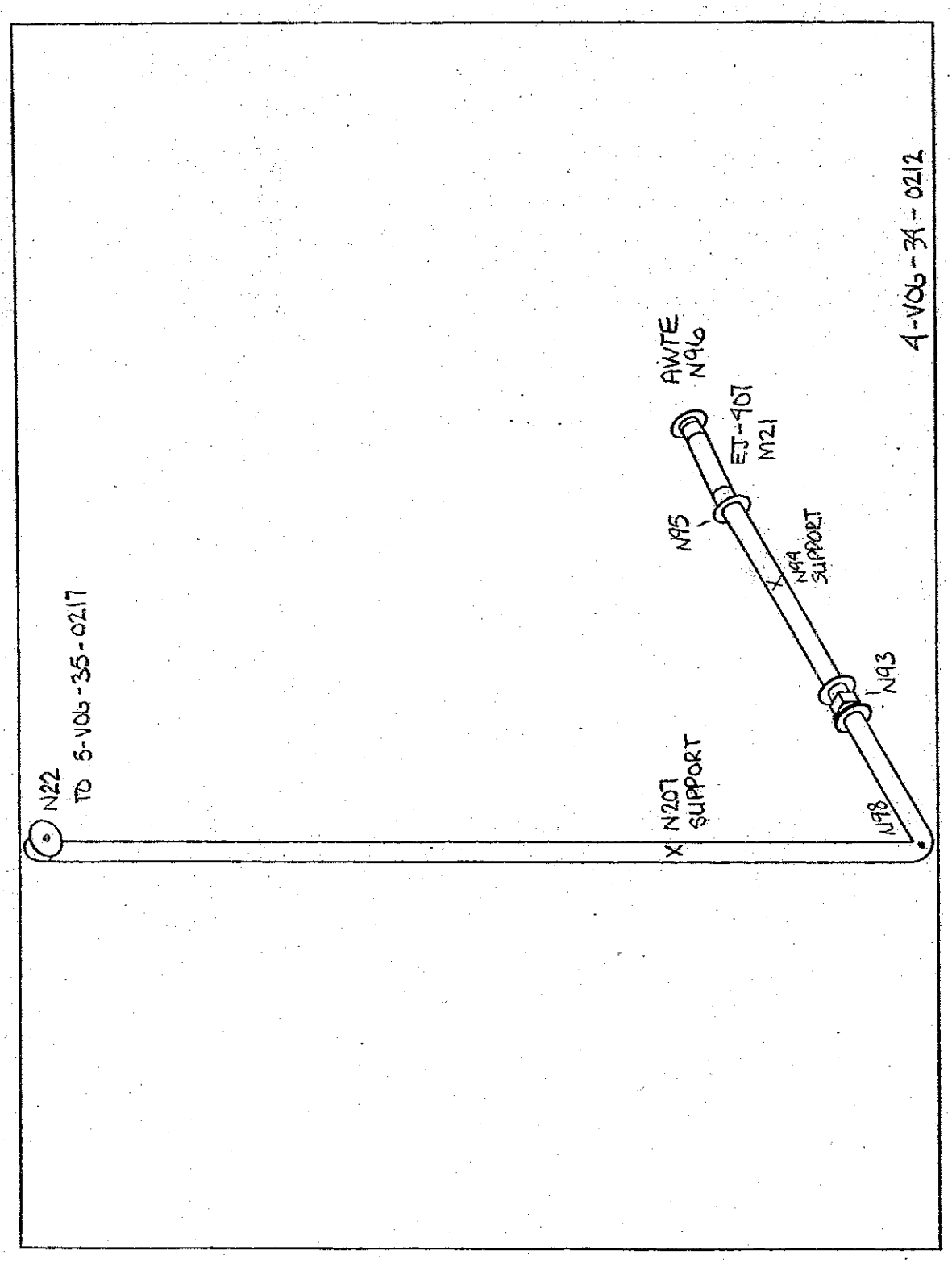
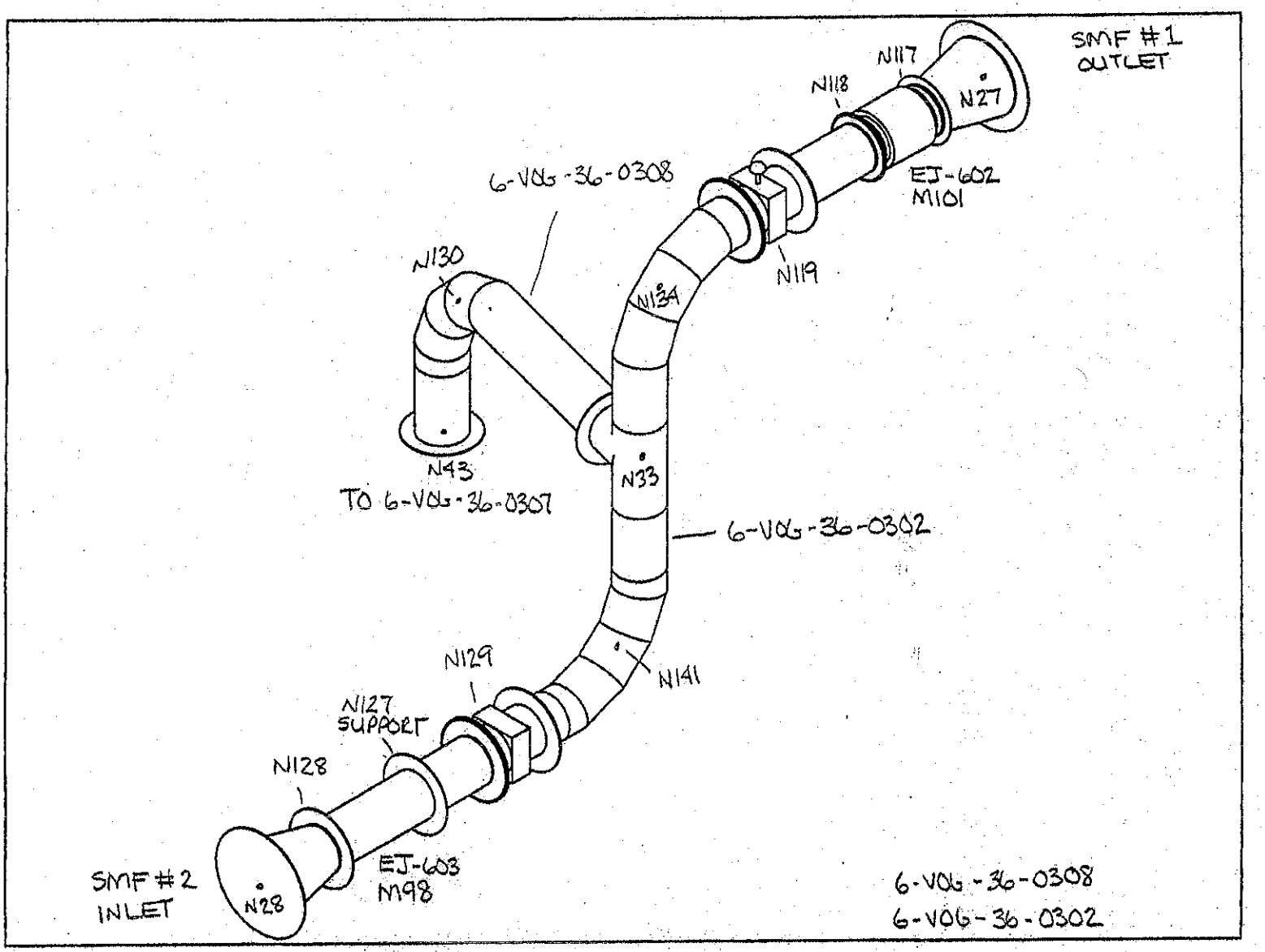
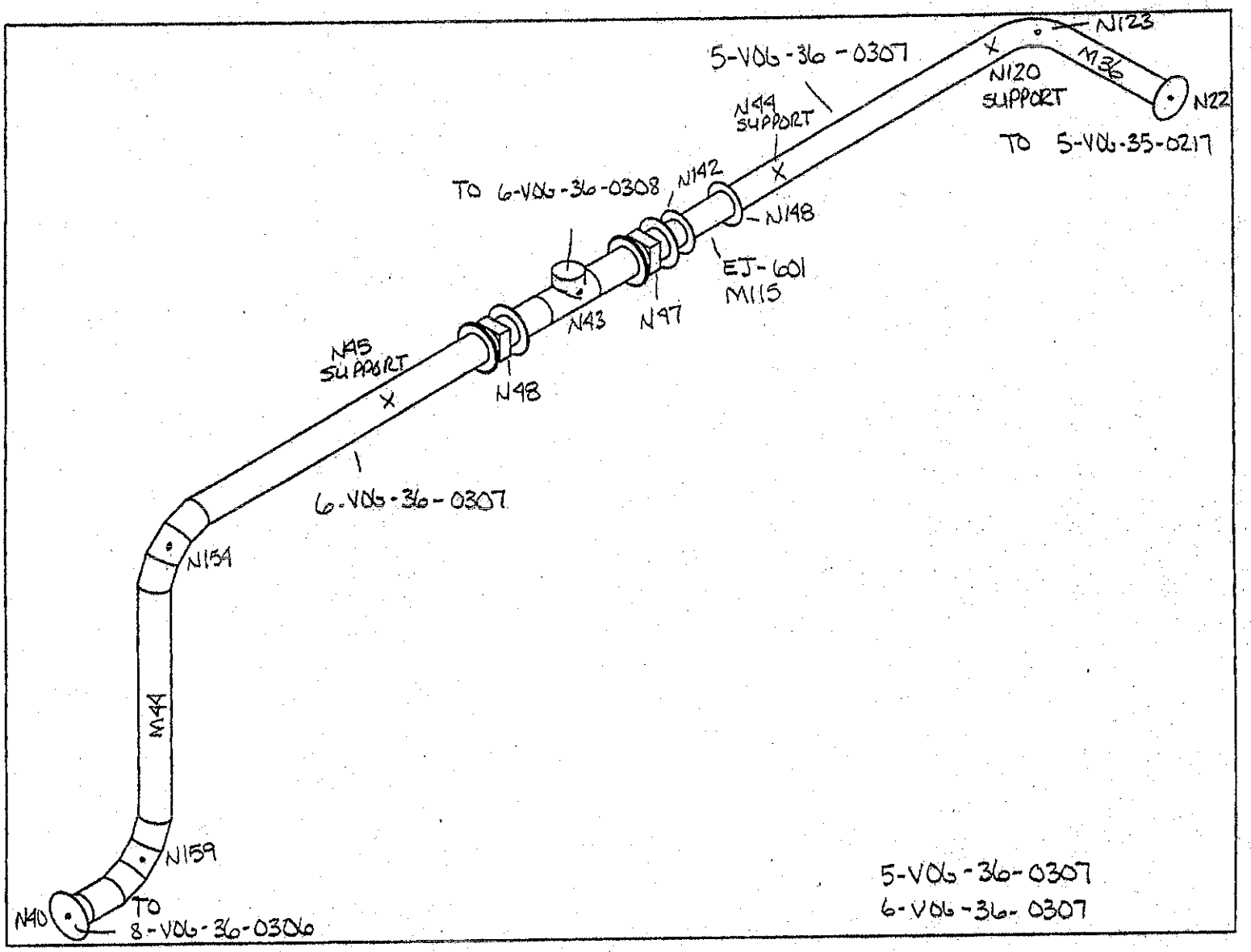
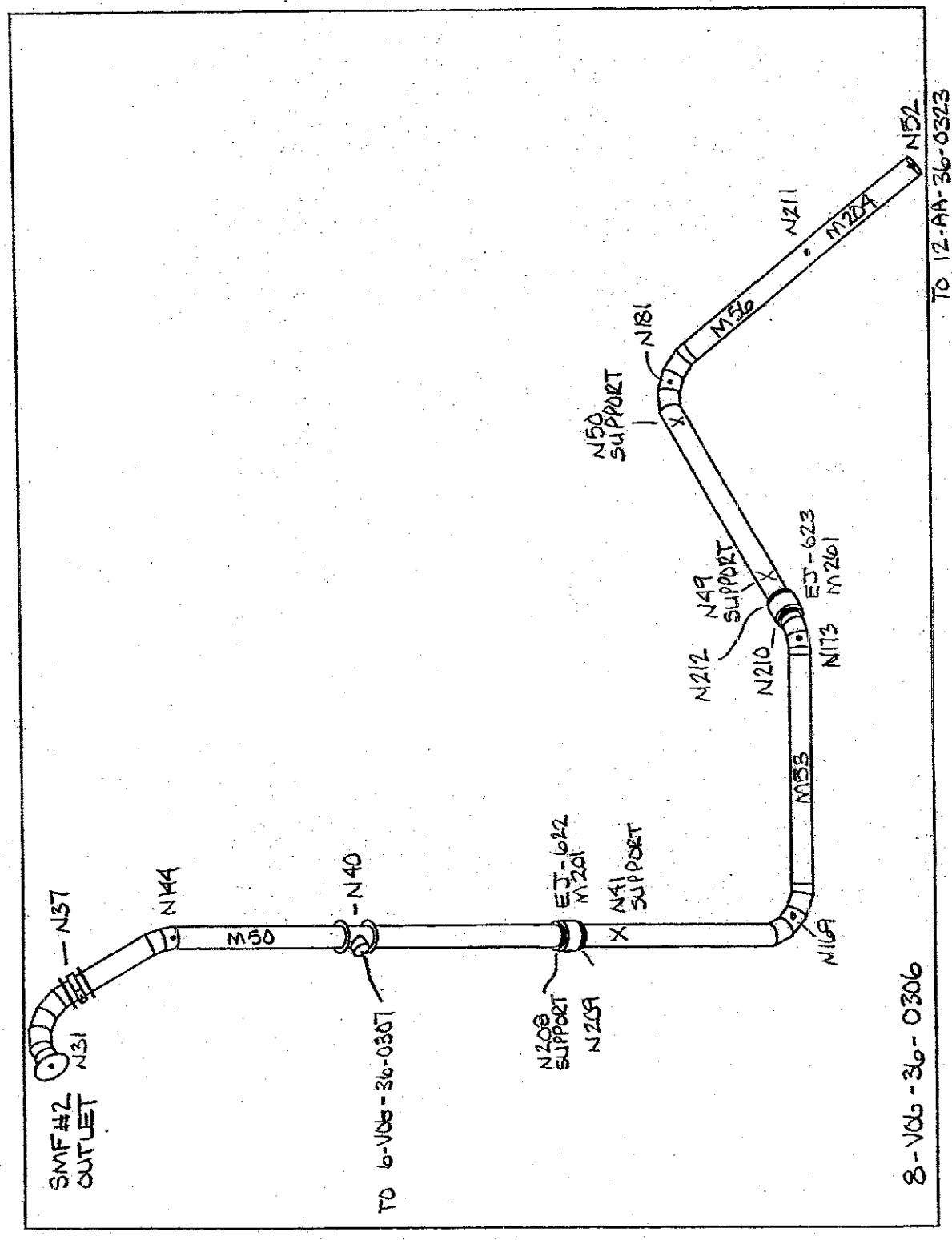
N23
N17
8-AA-36-0322

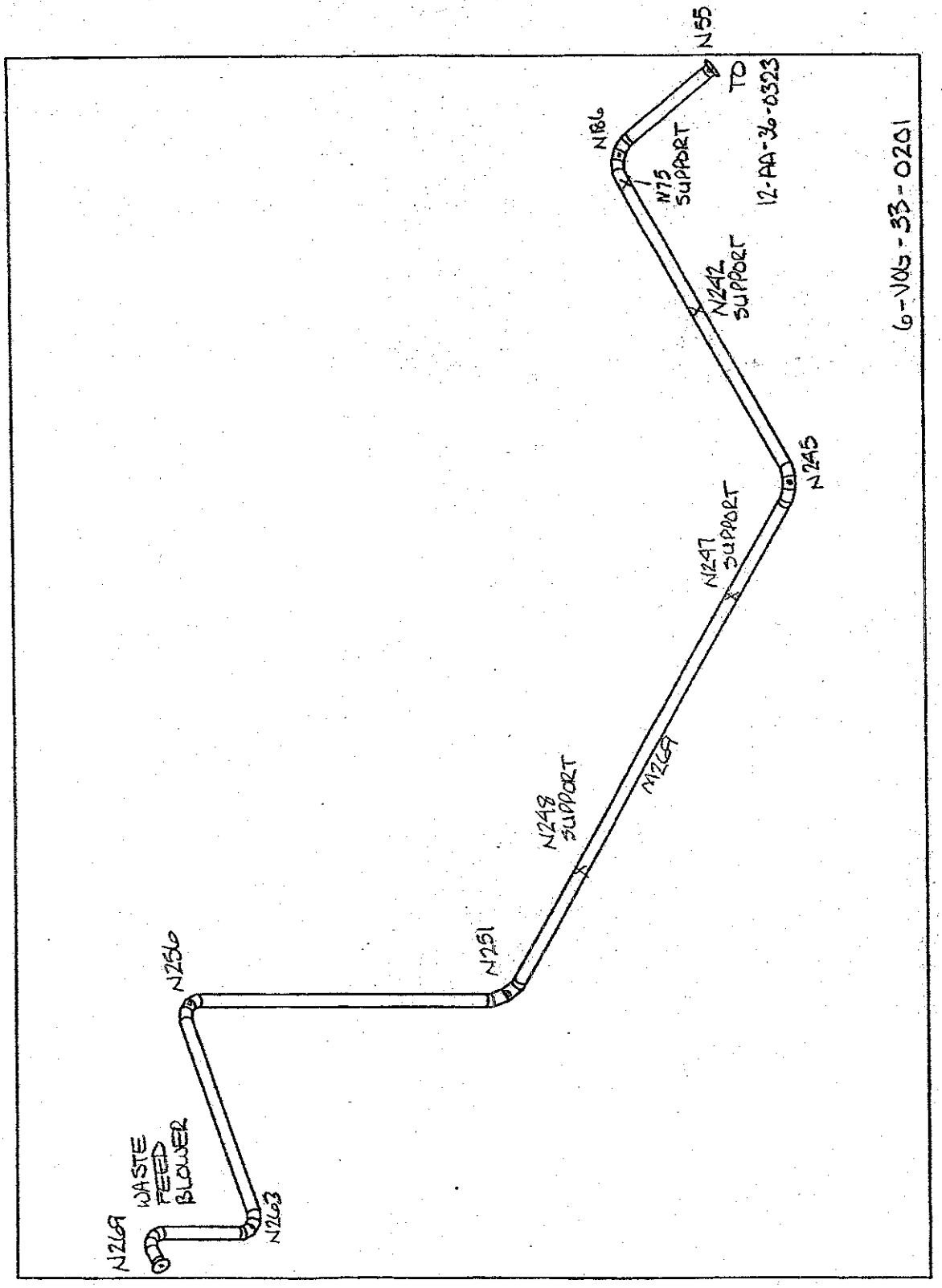

TO 5-VOG-36-0307
N22
TO 8-AA-36-0322
N20
SUPPORT
N81
TO 4-VOG-34-0212
SMF #1
INLET
EJ-628
M95
N24, N21
M13
N83
N90
EJ-503
M16
N84
N85
N88
TO 6-VOG-36-0286 (BYPASS)
N195
SUPPORT
M12
N198
N180
N199
N197
SUPPORT
ICV
N89
EJ-502
M189
5-VOG-35-0217

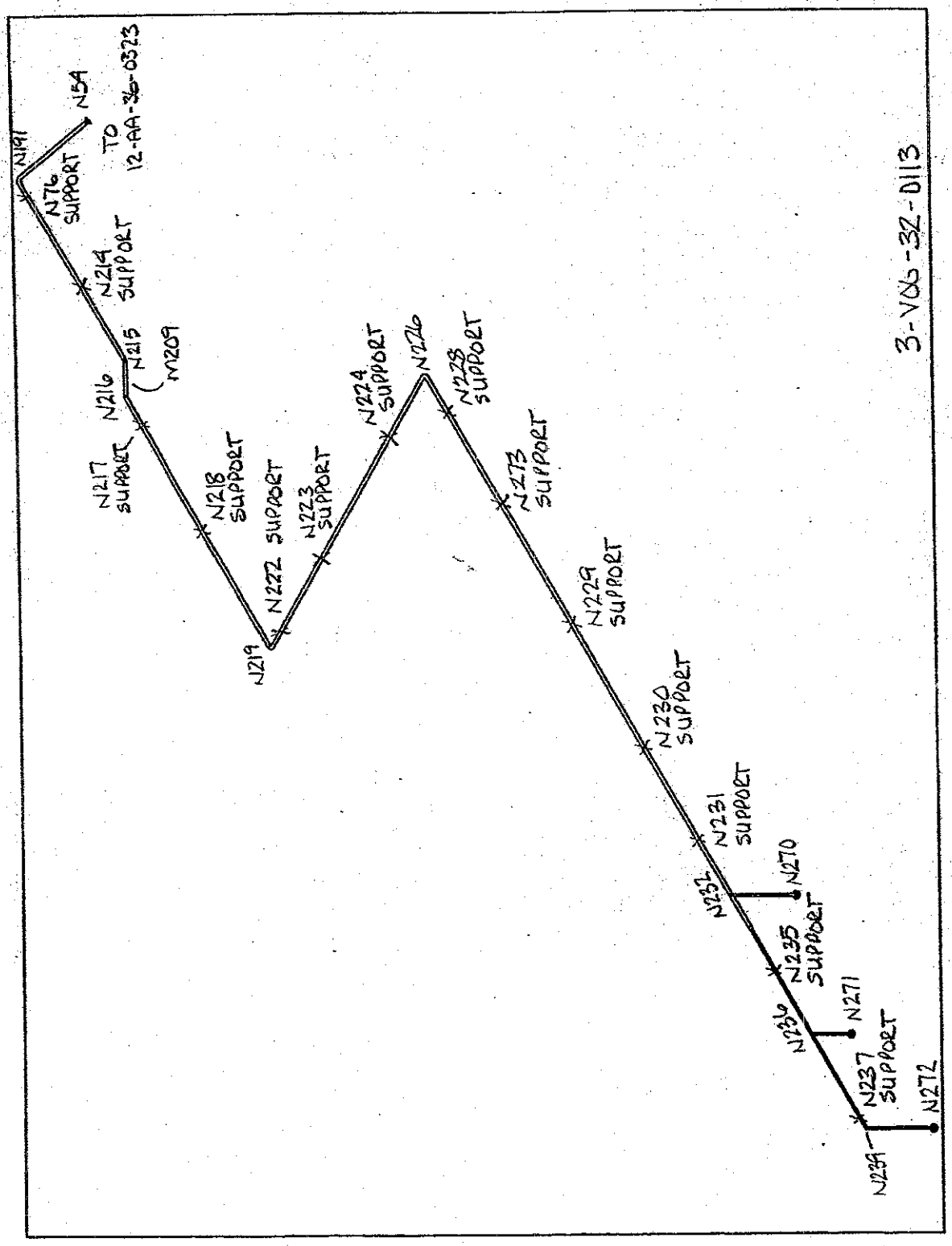

N22
TO 5-V06-35-0217
N207
SUPPORT
N198
N93
N99
SUPPORT
N95
EJ-907
M21
AWTE
N96
4-V06-34-0212


SMF #1
OUTLET
N117
N118
N27
EJ-602
M101
N119
6-VOG-36-0308
N130
N134
N43
TO 6-VOG-36-0307
N33
6-VOG-36-0302
N141
N129
N127
SUPPORT
N128
SMF #2
INLET
N28
EJ-603
M98
6-VOG-36-0308
6-VOG-36-0302


N123
5-V06-36-0307
N120
SUPPORT
M36
N22
N44
SUPPORT
TO 5-V06-35-0217
TO 6-V06-36-0308
N142
N148
EJ-601
M115
N43
N97
N45
SUPPORT
N48
6-V06-36-0307
N154
M44
N159
N40
TO
8-V06-36-0306
5-V06-36-0307
6-V06-36-0307


SMF #2 OUTLET
N31
N37
N44
M50
N40
TO 6-VOB-36-0307
N208 SUPPORT
N209
EJ-622 M201
N41 SUPPORT
N169
M53
N212
N49 SUPPORT
N210
EJ-623 M201
N173
N50 SUPPORT
N181
M56
N211
M204
N152
TO 12-AA-36-0323
8-VOL-36-0306


N55
TO
12-AA-36-0323
N186
N75 SUPPORT
N242 SUPPORT
N245
N247 SUPPORT
N249 SUPPORT
N251
N256
WASTE FEED BLOWER
N263
N269
6-VOL-33-0201


N191
N54
TO
12-AA-36-0323
N76
SUPPORT
N214
SUPPORT
N215
N209
N216
N217
SUPPORT
N218
SUPPORT
N222
SUPPORT
N223
SUPPORT
N219
N224
SUPPORT
N226
N228
SUPPORT
N227
SUPPORT
N229
SUPPORT
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N270
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SUPPORT
N236
N271
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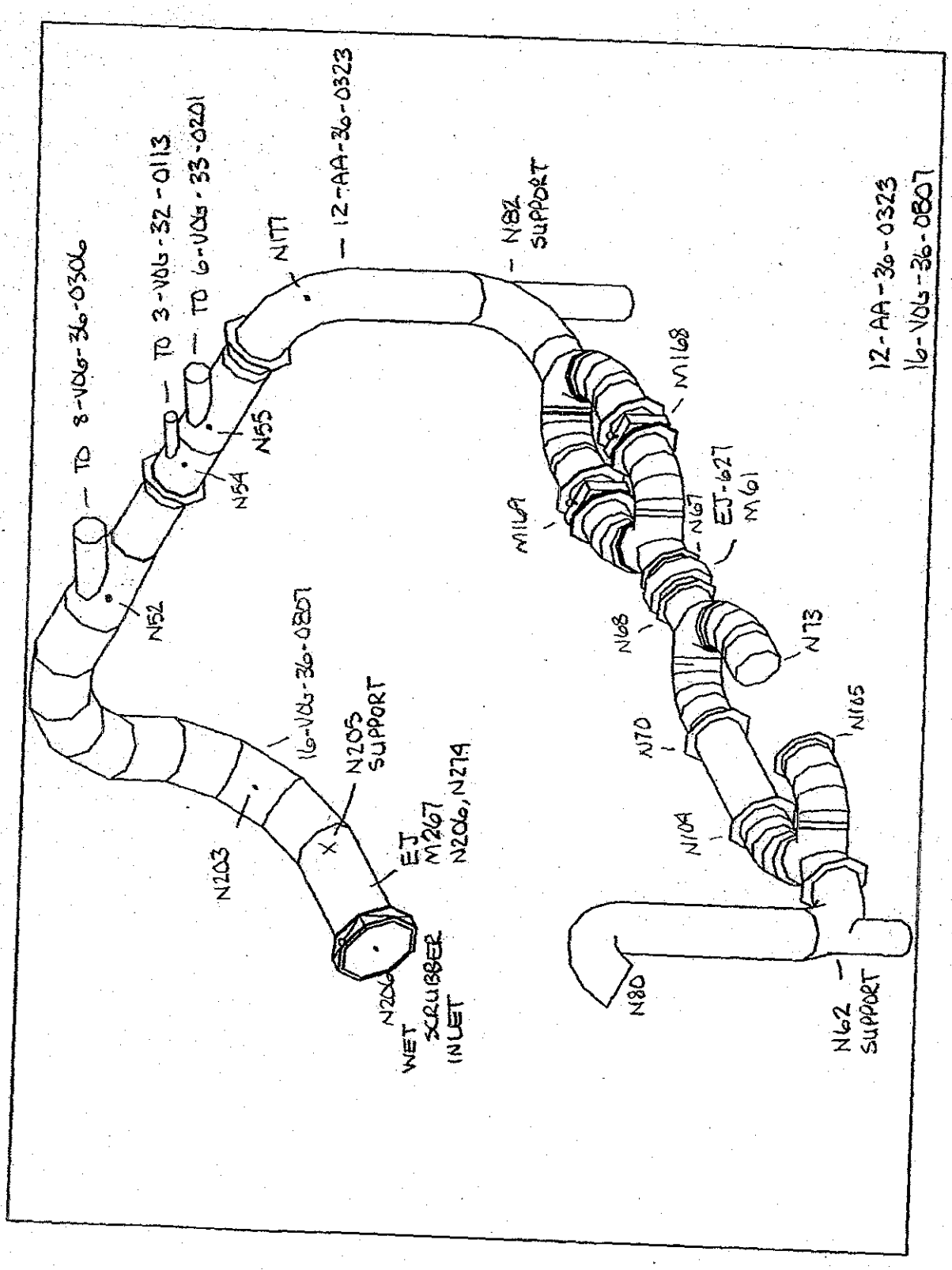
SUPPORT
N272
N239
3-VOS-32-0113


TO 8-VOL-36-0306
TO 3-VOL-32-0113
TO 6-VOL-33-0201
N177
12-AA-36-0323
N82 SUPPORT
N52
N54
N55
16-VOL-36-0807
N203
N205 SUPPORT
EJ M267 N206, N274
N206 WET SCRUBBER INLET
N80
N62 SUPPORT
N104
N170
N165
N73
N68
N67
EJ-627 M161
M169
M168
12-AA-36-0323
16-VOL-36-0807

Global

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation	Yes
Include Warping	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Vertical Axis	Y

Hot Rolled Steel Code	AISC: ASD 9th
Cold Formed Steel Code	AISI 99: ASD
NDS Wood Code	NDS 91: ASD
NDS Temperature	< 100F
Concrete Code	ACI 1999

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	PCA Load Contour
Parme Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections	Yes
Bad Framing Warnings	No
Unused Force Warnings	Yes

Joint Coordinates and Temperatures

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diaphragm
1	N8	576	0	127	0	
2	N9	576	0	149	0	
3	N10	576	0	173.125	0	
4	N11	576	0	246.875	0	
5	N12	582	0	262.875	0	
6	N13	570	0	262.875	0	
7	N14	576	0	296.125	0	
8	N15	575.999997	0	324.000005	0	
9	N16	576	0	361.5	0	
10	N17	534.089	118.125	370.5	0	
11	N18	532.511	122.572	369.236	0	
12	N19	531.356	125.827	365.781	0	
13	N20	530.75	127.563	350.031	0	
14	N21	530.75	127.562	311.25	0	
15	N22	530.75	127.562	336	0	
16	N23	530.75	127.562	361	0	
17	N24	530.749997	127.5945	296.625005	0	
18	N25	530.75	185.25	273.25	0	
19	N26	530.749998	127.5945	273.250005	0	
20	N27	530.75	185.25	249.875	0	
21	N28	530.749999	127.5625	128.625005	0	
22	N29	530.749999	127.5625	105.250005	0	
23	N30	530.75	185.25	105.25	0	
24	N31	530.75	185.249646	81.875005	0	
25	N32	530.75	170.25	192	0	
26	N33	530.75	159	192	0	
27	N34	530.75	142.563	192	0	
28	N35	567.307	159	201.671	0	
29	N36	570.829	145.171	55.625	0	
30	N37	547.981	168.019	55.625	0	
31	N38	533.237129	182.763577	68.750005	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diaphragm
32	N39	540.031129	175.969577	59.141838	0	
33	N40	576.004833	42.056366	55.625005	0	
34	N41	575.999833	-119.443634	55.625005	0	
35	N42	586.392	-174	49.625	0	
36	N43	575.999698	127.563	204.000005	0	
37	N44	576	127.563	252	0	
38	N45	576	127.563	156	0	
39	N46	576	127.563	102.125	0	
40	N47	576	127.563	223.375	0	
41	N48	576	127.563	182.75	0	
42	N49	660	-174	-35.875	0	
43	N50	660	-174	-155.875	0	
44	N51	660.791	-174.457	-161.467	0	
45	N52	806.5	-258.562	-168.875	0	
46	N53	816.938	-258.562	-168.875	0	
47	N54	759.625	-258.562	-168.875	0	
48	N55	744.125	-258.562	-168.875	0	
49	N56	833.083	-261.773	-168.875	0	
50	N57	846.769421	-270.918579	-168.875	0	
51	N58	693.000055	-333.124893	-194.874916	0	
52	N59	693	-256.375	-389.125	0	
53	N60	693	-250.927	-390.433	0	
54	N61	693	-246.667	-394.072	0	
55	N62	693	-321.125	-389.125	0	
56	N63	705.000055	-333.124893	-214.249916	0	
57	N64	681.000055	-333.124893	-214.249916	0	
58	N65	705.000055	-333.124893	-235.499916	0	
59	N66	681.000055	-333.124893	-235.499916	0	
60	N67	693.000055	-333.124893	-254.499916	0	
61	N68	693.000055	-333.124893	-281.624916	0	
62	N69	705	-333.125	-304.625	0	
63	N70	705	-333.125	-308.625	0	
64	N71	705.000055	-333.124893	-341.374916	0	
65	N72	681	-333.125	-304.625	0	
66	N73	681	-333.125	-308.625	0	
67	N74	681.000055	-333.124893	-341.374916	0	
68	N75	660	-210	-155.875	0	
69	N76	660	-201	-155.875	0	
70	N77	693	-244.523	-399.248	0	
71	N78	693	-244.962	-404.833	0	
72	N79	693.000055	-333.124893	-366.624916	0	
73	N80	693	-247.89	-409.61	0	
74	N81	514.969	111.75	366	0	
75	N82	693	-321.125	-168.875	0	
76	N83	483.566	79.565	366	0	
77	N84	483	13.1875	366	0	
78	N85	483	-13.125	366	0	
79	N86	519.468697	116.25	366.000105	0	
80	N87	469.125	-140.125	284.313	0	
81	N88	483	-33.375	366	0	
82	N89	469.125	-140.125	225.5	0	
83	N90	483	26.188	366	0	
84	N91	503.411469	111.75	360.466279	0	
85	N92	498	-140.126	351.875	0	
86	N93	498	-140.1255	311	0	
87	N94	498	-140.126	263.75	0	
88	N95	498	-140.126	235.25	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diaphragm
89	N96	498	-140.126	222.25	0	
90	N97	498	-139.322	354.875	0	
91	N98	498	-137.126	357.071	0	
92	N100	498	-134.126	357.875	0	
93	N101	576	0	21.875	0	
94	N104	705	-333.125	-337.375	0	
95	N105	681	-333.125	-337.375	0	
96	N106	582	0	280.125	0	
97	N107	570	0	280.125	0	
98	N114	575.596808	1.136363	366	0	
99	N115	574.495275	4.240967	369.294229	0	
100	N116	572.990554	8.481936	370.5	0	
101	N117	530.75	185.25	235.5625	0	
102	N118	530.75	185.25	224.563	0	
103	N119	530.75	185.25	209.875	0	
104	N120	576	127.562	328.5	0	
105	N121	500.705632	110.946	359.17073	0	
106	N122	498.72496	108.75	358.222388	0	
107	N123	573.803299	127.5625	333.803299	0	
108	N124	571.370125	127.5625	335.429094	0	
109	N125	568.5	127.5625	335.999997	0	
110	N126	497.999795	105.75	357.875181	0	
111	N127	530.75	127.563	152.875	0	
112	N128	530.75	127.563	141.875	0	
113	N129	530.749999	127.563	167.250005	0	
114	N130	571.653334	157.794229	202.835314	0	
115	N131	530.75	185.25	207	0	
116	N132	575.429094	127.5625	331.370125	0	
117	N133	530.75	184.108193	201.259749	0	
118	N134	530.75	180.856602	196.393398	0	
119	N135	530.75	175.990252	193.141807	0	
120	N136	574.835314	154.5	203.687923	0	
121	N137	576	150	204	0	
122	N139	530.749999	136.822747	190.858198	0	
123	N141	530.749999	131.956395	187.606605	0	
124	N142	576	127.563	245.125	0	
125	N143	530.749999	128.704802	182.740253	0	
126	N144	576	132.688	55.625	0	
127	N145	530.749999	127.562995	177	0	
128	N148	576	127.563	234.125	0	
129	N149	693	-333.125	-377.125	0	
130	N150	693	-332.211	-381.717	0	
131	N151	693	-329.61	-385.61	0	
132	N152	693	-325.717	-388.211	0	
133	N153	576	126.421	96.385	0	
134	N154	576	123.17	91.518	0	
135	N155	576	118.303	88.267	0	
136	N156	576	112.563	87.125	0	
137	N157	576	57.056	87.125	0	
138	N158	576	51.316	85.983	0	
139	N159	576	46.449	82.732	0	
140	N160	576	43.198	77.865	0	
141	N161	576	42.056	72.125	0	
142	N162	693	-333.125	-180.875	0	
143	N163	693	-332.211	-176.283	0	
144	N164	693	-329.61	-172.39	0	
145	N165	693	-325.717	-169.789	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diaphragm
146	N166	750	-258.562	-168.875	0	
147	N167	576	-162	55.625	0	
148	N168	576.791	-166.592	55.168	0	
149	N169	579.044	-170.485	53.868	0	
150	N170	582.415	-173.087	51.921	0	
151	N171	650	-174	12.946	0	
152	N172	655.321	-174	8.481	0	
153	N173	658.794	-174	2.465	0	
154	N174	660	-174	-4.375	0	
155	N175	693	-270.562	-168.875	0	
156	N176	693.913	-265.97	-168.875	0	
157	N177	696.514	-262.077	-168.875	0	
158	N178	700.407	-259.476	-168.875	0	
159	N179	705	-258.562	-168.875	0	
160	N180	469.501	-137.959	289.508	0	
161	N181	663.044	-175.757	-165.36	0	
162	N182	666.415	-177.704	-167.962	0	
163	N183	670.392	-180	-168.875	0	
164	N184	660	-210	-159.875	0	
165	N185	660.5933	-210.342542	-163.319151	0	
166	N186	662.283	-211.318	-166.239	0	
167	N187	664.812	-212.778	-168.19	0	
168	N188	667.794	-214.5	-168.875	0	
169	N189	660	-201	-164.375	0	
170	N190	482.999947	76.71875	366.000105	0	
171	N191	660.522114	-201.301443	-166.625	0	
172	N192	661.948557	-202.125	-168.272114	0	
173	N193	663.897114	-203.25	-168.875	0	
174	N194	485.178033	81.977614	366.000105	0	
175	N195	483	-67.25	366	0	
176	N196	482.623665	-72.477515	363.867437	0	
177	N197	469.125	-140.125	271.25	0	
178	N198	469.125	-140.125	258.3125	0	
179	N199	469.125	-140.125	245.3125	0	
180	N200	855.91463	-284.605351	-168.875	0	
181	N201	859.126	-300.75	-168.875	0	
182	N202	862.114	-315.77	-168.875	0	
183	N203	862.114	-328.503941	-177.383059	0	
184	N204	862.114	-337.012272	-190.116675	0	
185	N205	862.114	-340	-205.137	0	
186	N206	862.114	-340	-226.812	0	
187	N207	498	-70.126	357.875	0	
188	N208	576	-95.444	55.625	0	
189	N209	576	-107.444	55.625	0	
190	N210	660	-174	-14.375	0	
191	N211	738.446	-219.281	-168.875	0	
192	N212	660	-174	-25.375	0	
193	N214	660	-201	-35.875	0	
194	N215	660	-201	66.125	0	
195	N216	635.958	-201	90.167	0	
196	N217	635.958	-201	126.167	0	
197	N218	635.958	-201	282.167	0	
198	N219	635.958	-201	439.667	0	
199	N220	637.276	-201	442.849	0	
200	N221	640.458	-201	444.167	0	
201	N222	647.958	-201	444.167	0	
202	N223	773.958	-201	444.167	0	

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diaphragm
203	N224	941.958	-201	444.167	0	
204	N225	1003.458	-201	444.167	0	
205	N226	1006.64	-201	445.485	0	
206	N227	1007.958	-201	448.667	0	
207	N228	1007.958	-201	474.167	0	
208	N229	1007.958	-201	804.167	0	
209	N230	1007.958	-201	1044.167	0	
210	N231	1007.958	-201	1134.167	0	
211	N232	1007.958	-201	1186.667	0	
212	N233	1007.958	-201	1196.292	0	
213	N234	1049.854183	-201	1228.563184	0	
214	N235	1007.958	-201	1272.229	0	
215	N236	1007.958	-201	1317.729	0	
216	N237	1007.958	-201	1404.229	0	
217	N238	650.740251	-210	70.983193	0	
218	N239	1007.958	-201	1413.729	0	
219	N240	1026.453085	-201	1336.224085	0	
220	N241	1049.853855	-201	1455.624855	0	
221	N242	660	-210	-35.875	0	
222	N243	660	-210	57.125	0	
223	N244	658.858193	-210	62.865252	0	
224	N245	655.606602	-210	67.731602	0	
225	N246	645	-210	72.125	0	
226	N247	552	-210	72.125	0	
227	N248	408	-210	72.125	0	
228	N249	297	-210	72.125	0	
229	N250	291.259748	-208.858193	72.125	0	
230	N251	286.393398	-205.606602	72.125	0	
231	N252	283.141807	-200.740251	72.125	0	
232	N253	282	-195	72.125	0	
233	N274	862.114	-340	-210.812	0	
234	N254	282	-15	72.125	0	
235	N255	281.704479	-9.259749	73.227901	0	
236	N256	280.862905	-4.393398	76.368697	0	
237	N257	279.603401	-1.141807	81.06923	0	
238	N258	278.117714	0	86.613887	0	
239	N259	250.715	0	188.881	0	
240	N260	246.832962	15	203.370172	0	
241	N261	249.229562	1.141807	194.425941	0	
242	N262	247.970057	4.393398	199.126475	0	
243	N263	247.128484	9.259748	202.267271	0	
244	N264	246.833	62.125	203.37	0	
245	N265	246.833	67.865251	204.511807	0	
246	N266	246.833	72.731602	207.763398	0	
247	N267	246.833	75.983193	212.629748	0	
248	N268	246.833	77.125	218.37	0	
249	N269	246.833	77.125	227.37	0	
250	N270	1049.854183	-240.24	1228.563184	0	
251	N271	1026.453085	-240.24	1336.224085	0	
252	N272	1049.853855	-240.24	1455.624855	0	
253	N273	1007.958	-201	564.167	0	

Joint Boundary Conditions

	Joint Label	X [lb/in]	Y [lb/in]	Z [lb/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N10		Reaction				
2	N15		Reaction				

Joint Boundary Conditions (Continued)

	Joint Label	X [lb/in]	Y [lb/in]	Z [lb/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
3	N44	Reaction	CS1e+6				
4	N45	Reaction	CS1e+6				
5	N50		Reaction				
6	N49	Reaction	Reaction				
7	N94	Reaction	CS1e+6				
8	N89	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
9	N96	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
10	N26						
11	N29						
12	N25						
13	N30						
14	N53						
15	N24	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
16	N27	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
17	N28	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
18	N31	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
19	N117						
20	N118						
21	N119						
22	N142						
23	N148						
24	N47						
25	N48						
26	N166		Reaction	Reaction			
27	N76	Reaction	Reaction				
28	N75	Reaction	Reaction				
29	N59						
30	N60						
31	N61						
32	N77						
33	N78						
34	N80						
35	N149						
36	N150						
37	N151						
38	N152						
39	N62	Reaction	Reaction	Reaction			
40	N197	Reaction	CS1e+6				
41	N198						
42	N199						
43	N41	Reaction	Reaction	Reaction			
44	N127	Reaction	Reaction				
45	N82	Reaction	Reaction	Reaction			
46	N56						
47	N57						
48	N200						
49	N201						
50	N202						
51	N203						
52	N204						
53	N205		Reaction				
54	N206	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
55	N195	Reaction	Reaction	Reaction			
56	N98						
57	N100						
58	N207	Reaction	Reaction	Reaction			
59	N214	Reaction	Reaction				

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

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Joint Boundary Conditions (Continued)

	Joint Label	X [lb/in]	Y [lb/in]	Z [lb/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
60	N215						
61	N216						
62	N217	Reaction	Reaction				
63	N218	Reaction	Reaction				
64	N219						
65	N220						
66	N221						
67	N222		Reaction	Reaction			
68	N223		Reaction	Reaction			
69	N224		Reaction	Reaction			
70	N225						
71	N226						
72	N227						
73	N228	Reaction	Reaction				
74	N229	Reaction	Reaction				
75	N230	Reaction	Reaction				
76	N231	Reaction	Reaction				
77	N232						
78	N233						
79	N234						
80	N235	Reaction	Reaction				
81	N236						
82	N237	Reaction	Reaction				
83	N239						
84	N240						
85	N241						
86	N242	Reaction	Reaction				
87	N243						
88	N244						
89	N245						
90	N238						
91	N246						
92	N247	Reaction	Reaction	Reaction			
93	N248		Reaction	Reaction			
94	N249						
95	N250						
96	N251						
97	N252						
98	N253						
99	N254						
100	N255						
101	N256						
102	N257						
103	N258						
104	N259						
105	N261						
106	N262						
107	N263						
108	N260						
109	N264						
110	N265						
111	N266						
112	N267						
113	N268						
114	N269	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
115	N270	Reaction	Reaction	Reaction			
116	N271	Reaction	Reaction	Reaction			

Joint Boundary Conditions (Continued)

	Joint Label	X [lb/in]	Y [lb/in]	Z [lb/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
117	N272	Reaction	Reaction	Reaction			
118	N101	Reaction	Reaction	Reaction			
119	N273	Reaction	Reaction				
120	N120	Reaction	CS1e+6				
121	N22						
122	N21						
123	N20		CS1e+6				
124	N208	Reaction		Reaction			
125	N90						

General Material Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E5 F)	Density[lb/in^3]
1	gen_Conc3NW	3155	1372	.15	.6	.084
2	gen_Conc4NW	3644	1584	.15	.6	.084
3	gen_Conc3LW	2085	906	.15	.6	.064
4	gen_Conc4LW	2408	1047	.15	.6	.064
5	gen_Alum	10600	4077	.3	1.29	.1
6	gen_Steel	29000	11154	.3	.65	.284
7	RIGID	1e+7		0	0	0

General Section Sets

	Label	Shape	Type	Material	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	GEN1A	RE4X4	Beam	gen_Conc3NW	16	21.333	21.333	36.053
2	RIGID		None	RIGID	1e+6	1e+8	1e+8	1e+6

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E5 F)	Density[lb/in^3]	Yield[ksi]
1	A36	29000	11154	.3	.779	.283	36
2	A312TP316L	29000	11154	.3	1.013	.29	25
3	A312TP316	29000	11154	.3	1.013	.29	30
4	HR4	29000	11154	.3	.779	.283	36

Hot Rolled Steel Section Sets

	Label	Shape	Design List	Type	Material	Design Rules	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	2DIADUCT	2 in Sch 40...	Pipe	Beam	A36	Typical	.815	.522	.522	1.044
2	3DIADUCT	3 in Sch 40...	Pipe	Beam	A312TP316L	Typical	1.769	2.459	2.459	4.918
3	4DIADUCT	4 in Sch 40...	Pipe	Beam	A312TP316L	Typical	2.644	6.136	6.136	12.272
4	5DIADUCT	5 in Sch 40...	Pipe	Beam	A312TP316L	Typical	3.578	12.82	12.82	25.64
5	6DIADUCT	6 in Sch 40...	Pipe	Beam	A312TP316L	Typical	4.64	23.744	23.744	47.488
6	8DIADUCT	8 in dia Sch...	Pipe	Beam	A312TP316L	Typical	3.262	29.483	29.483	58.965
7	12DIADUCT	12 in dia Sc...	Pipe	Beam	A312TP316L	Typical	5.879	116.711	116.711	233.423
8	16DIADUCT	16 in dia Sc...	Pipe	Beam	A312TP316L	Typical	7.721	242.316	242.316	484.632

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(de...	Section/Shape	Design List	Type	Material	Design Rules
1	M1	N24	N26			RIGID	None	None	RIGID	Typical
2	M2	N26	N25			RIGID	None	None	RIGID	Typical
3	M3	N25	N27			RIGID	None	None	RIGID	Typical
4	M4	N28	N29			RIGID	None	None	RIGID	Typical
5	M5	N29	N30			RIGID	None	None	RIGID	Typical

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(de...	Section/Shape	Design List	Type	Material	Design Rules
6	M6	N30	N31			RIGID	None	None	RIGID	Typical
7	M7	N75	N184			6DIADUCT	Pipe	Beam	A312TP3...	Typical
8	M8	N188	N55			6DIADUCT	Pipe	Beam	A312TP3...	Typical
9	M9	N76	N189			3DIADUCT	Pipe	Beam	A312TP3...	Typical
10	M10	N193	N54			3DIADUCT	Pipe	Beam	A312TP3...	Typical
11	M11	N197	N87			5DIADUCT	Pipe	Beam	A312TP3...	Typical
12	M12	N180	N196			5DIADUCT	Pipe	Beam	A312TP3...	Typical
13	M13	N195	N88			5DIADUCT	Pipe	Beam	A312TP3...	Typical
14	M14	N88	N85			6DIADUCT	Pipe	Beam	A312TP3...	Typical
15	M15	N85	N84			5DIADUCT	Pipe	Beam	A312TP3...	Typical
16	M16	N84	N90			5DIADUCT	Pipe	Beam	A312TP3...	Typical
17	M17	N90	N190			5DIADUCT	Pipe	Beam	A312TP3...	Typical
18	M18	N194	N81			5DIADUCT	Pipe	Beam	A312TP3...	Typical
19	M19	N81	N86			5DIADUCT	Pipe	Beam	A312TP3...	Typical
20	M20	N86	N20			5DIADUCT	Pipe	Beam	A312TP3...	Typical
21	M21	N96	N95			4DIADUCT	Pipe	Beam	A312TP3...	Typical
22	M22	N95	N94			4DIADUCT	Pipe	Beam	A312TP3...	Typical
23	M23	N94	N93			4DIADUCT	Pipe	Beam	A312TP3...	Typical
24	M24	N93	N92			4DIADUCT	Pipe	Beam	A312TP3...	Typical
25	M25	N100	N207			4DIADUCT	Pipe	Beam	A312TP3...	Typical
26	M26	N91	N81			4DIADUCT	Pipe	Beam	A312TP3...	Typical
27	M29	N8	N9			RIGID	None	None	RIGID	Typical
28	M30	N9	N10			6DIADUCT	Pipe	Beam	A312TP3...	Typical
29	M31	N10	N11			6DIADUCT	Pipe	Beam	A312TP3...	Typical
30	M32	N14	N15			6DIADUCT	Pipe	Beam	A312TP3...	Typical
31	M33	N15	N16			6DIADUCT	Pipe	Beam	A312TP3...	Typical
32	M34	N116	N17			6DIADUCT	Pipe	Beam	A312TP3...	Typical
33	M35	N20	N22			5DIADUCT	Pipe	Beam	A312TP3...	Typical
34	M36	N22	N125			5DIADUCT	Pipe	Beam	A312TP3...	Typical
35	M37	N22	N21			5DIADUCT	Pipe	Beam	A312TP3...	Typical
36	M38	N120	N44			5DIADUCT	Pipe	Beam	A312TP3...	Typical
37	M39	N33	N34			6DIADUCT	Pipe	Beam	A312TP3...	Typical
38	M40	N33	N35			6DIADUCT	Pipe	Beam	A312TP3...	Typical
39	M41	N137	N43			6DIADUCT	Pipe	Beam	A312TP3...	Typical
40	M42	N43	N48			6DIADUCT	Pipe	Beam	A312TP3...	Typical
41	M43	N45	N46			6DIADUCT	Pipe	Beam	A312TP3...	Typical
42	M44	N156	N157			6DIADUCT	Pipe	Beam	A312TP3...	Typical
43	M45	N161	N40			6DIADUCT	Pipe	Beam	A312TP3...	Typical
44	M46	N31	N38			8DIADUCT	Pipe	Beam	A312TP3...	Typical
45	M47	N38	N39			8DIADUCT	Pipe	Beam	A312TP3...	Typical
46	M48	N39	N37			8DIADUCT	Pipe	Beam	A312TP3...	Typical
47	M49	N37	N36			8DIADUCT	Pipe	Beam	A312TP3...	Typical
48	M50	N144	N40			8DIADUCT	Pipe	Beam	A312TP3...	Typical
49	M51	N40	N208			8DIADUCT	Pipe	Beam	A312TP3...	Typical
50	M52	N41	N167			8DIADUCT	Pipe	Beam	A312TP3...	Typical
51	M53	N42	N171			8DIADUCT	Pipe	Beam	A312TP3...	Typical
52	M54	N174	N210			8DIADUCT	Pipe	Beam	A312TP3...	Typical
53	M55	N49	N50			8DIADUCT	Pipe	Beam	A312TP3...	Typical
54	M56	N183	N211			8DIADUCT	Pipe	Beam	A312TP3...	Typical
55	M57	N59	N62			12DIADUCT	Pipe	Beam	A312TP3...	Typical
56	M58	N149	N79			12DIADUCT	Pipe	Beam	A312TP3...	Typical
57	M59	N79	N74			12DIADUCT	Pipe	Beam	A312TP3...	Typical
58	M60	N79	N71			12DIADUCT	Pipe	Beam	A312TP3...	Typical
59	M61	N68	N67			12DIADUCT	Pipe	Beam	A312TP3...	Typical
60	M62	N67	N66			12DIADUCT	Pipe	Beam	A312TP3...	Typical
61	M63	N64	N58			12DIADUCT	Pipe	Beam	A312TP3...	Typical
62	M64	N67	N65			12DIADUCT	Pipe	Beam	A312TP3...	Typical

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(de...	Section/Shape	Design List	Type	Material	Design Rules
63	M65	N63	N58			12DIADUCT	Pipe	Beam	A312TP3...	Typical
64	M66	N58	N162			12DIADUCT	Pipe	Beam	A312TP3...	Typical
65	M67	N82	N175			12DIADUCT	Pipe	Beam	A312TP3...	Typical
66	M68	N179	N55			12DIADUCT	Pipe	Beam	A312TP3...	Typical
67	M69	N55	N54			12DIADUCT	Pipe	Beam	A312TP3...	Typical
68	M70	N54	N52			12DIADUCT	Pipe	Beam	A312TP3...	Typical
69	M71	N52	N53			16DIADUCT	Pipe	Beam	A312TP3...	Typical
70	M80	N101	N8			8DIADUCT	Pipe	Beam	A312TP3...	Typical
71	M81	N11	N13			6DIADUCT	Pipe	Beam	A312TP3...	Typical
72	M82	N11	N12			6DIADUCT	Pipe	Beam	A312TP3...	Typical
73	M83	N107	N14			6DIADUCT	Pipe	Beam	A312TP3...	Typical
74	M84	N106	N14			6DIADUCT	Pipe	Beam	A312TP3...	Typical
75	M85	N13	N107			6DIADUCT	Pipe	Beam	A312TP3...	Typical
76	M86	N12	N106			6DIADUCT	Pipe	Beam	A312TP3...	Typical
77	M87	N17	N18			5DIADUCT	Pipe	Beam	A312TP3...	Typical
78	M88	N18	N19			5DIADUCT	Pipe	Beam	A312TP3...	Typical
79	M89	N19	N23			5DIADUCT	Pipe	Beam	A312TP3...	Typical
80	M90	N23	N20			5DIADUCT	Pipe	Beam	A312TP3...	Typical
81	M91	N125	N124			5DIADUCT	Pipe	Beam	A312TP3...	Typical
82	M92	N124	N123			5DIADUCT	Pipe	Beam	A312TP3...	Typical
83	M93	N123	N132			5DIADUCT	Pipe	Beam	A312TP3...	Typical
84	M94	N132	N120			5DIADUCT	Pipe	Beam	A312TP3...	Typical
85	M95	N21	N24			6DIADUCT	Pipe	Beam	A312TP3...	Typical
86	M96	N145	N129			6DIADUCT	Pipe	Beam	A312TP3...	Typical
87	M97	N129	N127			6DIADUCT	Pipe	Beam	A312TP3...	Typical
88	M98	N127	N128			6DIADUCT	Pipe	Beam	A312TP3...	Typical
89	M99	N128	N28			6DIADUCT	Pipe	Beam	A312TP3...	Typical
90	M100	N27	N117			6DIADUCT	Pipe	Beam	A312TP3...	Typical
91	M101	N117	N118			6DIADUCT	Pipe	Beam	A312TP3...	Typical
92	M102	N118	N119			6DIADUCT	Pipe	Beam	A312TP3...	Typical
93	M103	N119	N131			6DIADUCT	Pipe	Beam	A312TP3...	Typical
94	M104	N131	N133			6DIADUCT	Pipe	Beam	A312TP3...	Typical
95	M105	N133	N134			6DIADUCT	Pipe	Beam	A312TP3...	Typical
96	M106	N134	N135			6DIADUCT	Pipe	Beam	A312TP3...	Typical
97	M107	N135	N32			6DIADUCT	Pipe	Beam	A312TP3...	Typical
98	M108	N32	N33			6DIADUCT	Pipe	Beam	A312TP3...	Typical
99	M109	N34	N139			6DIADUCT	Pipe	Beam	A312TP3...	Typical
100	M110	N139	N141			6DIADUCT	Pipe	Beam	A312TP3...	Typical
101	M111	N141	N143			6DIADUCT	Pipe	Beam	A312TP3...	Typical
102	M112	N143	N145			6DIADUCT	Pipe	Beam	A312TP3...	Typical
103	M113	N36	N144			8DIADUCT	Pipe	Beam	A312TP3...	Typical
104	M114	N44	N142			5DIADUCT	Pipe	Beam	A312TP3...	Typical
105	M115	N142	N148			5DIADUCT	Pipe	Beam	A312TP3...	Typical
106	M116	N148	N47			5DIADUCT	Pipe	Beam	A312TP3...	Typical
107	M117	N47	N43			6DIADUCT	Pipe	Beam	A312TP3...	Typical
108	M118	N16	N114			6DIADUCT	Pipe	Beam	A312TP3...	Typical
109	M119	N114	N115			6DIADUCT	Pipe	Beam	A312TP3...	Typical
110	M120	N115	N116			6DIADUCT	Pipe	Beam	A312TP3...	Typical
111	M121	N35	N130			6DIADUCT	Pipe	Beam	A312TP3...	Typical
112	M122	N130	N136			6DIADUCT	Pipe	Beam	A312TP3...	Typical
113	M123	N136	N137			6DIADUCT	Pipe	Beam	A312TP3...	Typical
114	M124	N46	N153			6DIADUCT	Pipe	Beam	A312TP3...	Typical
115	M125	N153	N154			6DIADUCT	Pipe	Beam	A312TP3...	Typical
116	M126	N154	N155			6DIADUCT	Pipe	Beam	A312TP3...	Typical
117	M127	N155	N156			6DIADUCT	Pipe	Beam	A312TP3...	Typical
118	M128	N157	N158			6DIADUCT	Pipe	Beam	A312TP3...	Typical
119	M129	N158	N159			6DIADUCT	Pipe	Beam	A312TP3...	Typical

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

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Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(de...	Section/Shape	Design List	Type	Material	Design Rules
120	M130	N159	N160			6DIADUCT	Pipe	Beam	A312TP3...	Typical
121	M131	N160	N161			6DIADUCT	Pipe	Beam	A312TP3...	Typical
122	M132	N48	N45			6DIADUCT	Pipe	Beam	A312TP3...	Typical
123	M133	N167	N168			8DIADUCT	Pipe	Beam	A312TP3...	Typical
124	M134	N168	N169			8DIADUCT	Pipe	Beam	A312TP3...	Typical
125	M135	N169	N170			8DIADUCT	Pipe	Beam	A312TP3...	Typical
126	M136	N170	N42			8DIADUCT	Pipe	Beam	A312TP3...	Typical
127	M137	N171	N172			8DIADUCT	Pipe	Beam	A312TP3...	Typical
128	M138	N172	N173			8DIADUCT	Pipe	Beam	A312TP3...	Typical
129	M139	N173	N174			8DIADUCT	Pipe	Beam	A312TP3...	Typical
130	M140	N50	N51			8DIADUCT	Pipe	Beam	A312TP3...	Typical
131	M141	N51	N181			8DIADUCT	Pipe	Beam	A312TP3...	Typical
132	M142	N181	N182			8DIADUCT	Pipe	Beam	A312TP3...	Typical
133	M143	N182	N183			8DIADUCT	Pipe	Beam	A312TP3...	Typical
134	M144	N184	N185			6DIADUCT	Pipe	Beam	A312TP3...	Typical
135	M145	N185	N186			6DIADUCT	Pipe	Beam	A312TP3...	Typical
136	M146	N186	N187			6DIADUCT	Pipe	Beam	A312TP3...	Typical
137	M147	N187	N188			6DIADUCT	Pipe	Beam	A312TP3...	Typical
138	M148	N189	N191			3DIADUCT	Pipe	Beam	A312TP3...	Typical
139	M149	N191	N192			3DIADUCT	Pipe	Beam	A312TP3...	Typical
140	M150	N192	N193			3DIADUCT	Pipe	Beam	A312TP3...	Typical
141	M151	N59	N60			12DIADUCT	Pipe	Beam	A312TP3...	Typical
142	M152	N60	N61			12DIADUCT	Pipe	Beam	A312TP3...	Typical
143	M153	N61	N77			12DIADUCT	Pipe	Beam	A312TP3...	Typical
144	M154	N77	N78			12DIADUCT	Pipe	Beam	A312TP3...	Typical
145	M155	N78	N80			12DIADUCT	Pipe	Beam	A312TP3...	Typical
146	M156	N149	N150			12DIADUCT	Pipe	Beam	A312TP3...	Typical
147	M157	N150	N151			12DIADUCT	Pipe	Beam	A312TP3...	Typical
148	M158	N151	N152			12DIADUCT	Pipe	Beam	A312TP3...	Typical
149	M159	N152	N62			12DIADUCT	Pipe	Beam	A312TP3...	Typical
150	M160	N68	N72			12DIADUCT	Pipe	Beam	A312TP3...	Typical
151	M161	N72	N73			12DIADUCT	Pipe	Beam	A312TP3...	Typical
152	M162	N68	N69			12DIADUCT	Pipe	Beam	A312TP3...	Typical
153	M163	N69	N70			12DIADUCT	Pipe	Beam	A312TP3...	Typical
154	M164	N105	N74			12DIADUCT	Pipe	Beam	A312TP3...	Typical
155	M165	N104	N71			12DIADUCT	Pipe	Beam	A312TP3...	Typical
156	M166	N73	N105			RIGID	None	None	RIGID	Typical
157	M167	N70	N104			RIGID	None	None	RIGID	Typical
158	M168	N64	N66			12DIADUCT	Pipe	Beam	A312TP3...	Typical
159	M169	N63	N65			12DIADUCT	Pipe	Beam	A312TP3...	Typical
160	M170	N162	N163			12DIADUCT	Pipe	Beam	A312TP3...	Typical
161	M171	N163	N164			12DIADUCT	Pipe	Beam	A312TP3...	Typical
162	M172	N164	N165			12DIADUCT	Pipe	Beam	A312TP3...	Typical
163	M173	N165	N82			12DIADUCT	Pipe	Beam	A312TP3...	Typical
164	M174	N175	N176			12DIADUCT	Pipe	Beam	A312TP3...	Typical
165	M175	N176	N177			12DIADUCT	Pipe	Beam	A312TP3...	Typical
166	M176	N177	N178			12DIADUCT	Pipe	Beam	A312TP3...	Typical
167	M177	N178	N179			12DIADUCT	Pipe	Beam	A312TP3...	Typical
168	M178	N92	N97			4DIADUCT	Pipe	Beam	A312TP3...	Typical
169	M179	N97	N98			4DIADUCT	Pipe	Beam	A312TP3...	Typical
170	M180	N98	N100			4DIADUCT	Pipe	Beam	A312TP3...	Typical
171	M181	N126	N122			4DIADUCT	Pipe	Beam	A312TP3...	Typical
172	M182	N122	N121			4DIADUCT	Pipe	Beam	A312TP3...	Typical
173	M183	N121	N91			4DIADUCT	Pipe	Beam	A312TP3...	Typical
174	M184	N190	N83			5DIADUCT	Pipe	Beam	A312TP3...	Typical
175	M185	N83	N194			5DIADUCT	Pipe	Beam	A312TP3...	Typical
176	M186	N195	N196			5DIADUCT	Pipe	Beam	A312TP3...	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(de...	Section/Shape	Design List	Type	Material	Design Rules
177	M187	N180	N87			5DIADUCT	Pipe	Beam	A312TP3...	Typical
178	M188	N197	N198			5DIADUCT	Pipe	Beam	A312TP3...	Typical
179	M189	N198	N199			5DIADUCT	Pipe	Beam	A312TP3...	Typical
180	M190	N199	N89			5DIADUCT	Pipe	Beam	A312TP3...	Typical
181	M191	N53	N56			16DIADUCT	Pipe	Beam	A312TP3...	Typical
182	M192	N56	N57			16DIADUCT	Pipe	Beam	A312TP3...	Typical
183	M193	N57	N200			16DIADUCT	Pipe	Beam	A312TP3...	Typical
184	M194	N200	N201			16DIADUCT	Pipe	Beam	A312TP3...	Typical
185	M195	N201	N202			16DIADUCT	Pipe	Beam	A312TP3...	Typical
186	M196	N202	N203			16DIADUCT	Pipe	Beam	A312TP3...	Typical
187	M197	N203	N204			16DIADUCT	Pipe	Beam	A312TP3...	Typical
188	M198	N204	N205			16DIADUCT	Pipe	Beam	A312TP3...	Typical
189	M199	N205	N274			16DIADUCT	Pipe	Beam	A312TP3...	Typical
190	M200	N207	N126			4DIADUCT	Pipe	Beam	A312TP3...	Typical
191	M201	N208	N209			8DIADUCT	Pipe	Beam	A312TP3...	Typical
192	M202	N209	N41			8DIADUCT	Pipe	Beam	A312TP3...	Typical
193	M204	N211	N52			8DIADUCT	Pipe	Beam	A312TP3...	Typical
194	M205	N236	N237			2DIADUCT	Pipe	Beam	A36	Typical
195	M206	N237	N239			2DIADUCT	Pipe	Beam	A36	Typical
196	M207	N76	N214			3DIADUCT	Pipe	Beam	A312TP3...	Typical
197	M208	N214	N215			3DIADUCT	Pipe	Beam	A312TP3...	Typical
198	M209	N215	N216			3DIADUCT	Pipe	Beam	A312TP3...	Typical
199	M210	N216	N217			3DIADUCT	Pipe	Beam	A312TP3...	Typical
200	M211	N217	N218			3DIADUCT	Pipe	Beam	A312TP3...	Typical
201	M212	N218	N219			3DIADUCT	Pipe	Beam	A312TP3...	Typical
202	M213	N219	N220			3DIADUCT	Pipe	Beam	A312TP3...	Typical
203	M214	N220	N221			3DIADUCT	Pipe	Beam	A312TP3...	Typical
204	M215	N221	N222			3DIADUCT	Pipe	Beam	A312TP3...	Typical
205	M216	N222	N223			3DIADUCT	Pipe	Beam	A312TP3...	Typical
206	M217	N223	N224			3DIADUCT	Pipe	Beam	A312TP3...	Typical
207	M218	N224	N225			3DIADUCT	Pipe	Beam	A312TP3...	Typical
208	M219	N225	N226			3DIADUCT	Pipe	Beam	A312TP3...	Typical
209	M220	N226	N227			3DIADUCT	Pipe	Beam	A312TP3...	Typical
210	M221	N227	N228			3DIADUCT	Pipe	Beam	A312TP3...	Typical
211	M222	N228	N273			3DIADUCT	Pipe	Beam	A312TP3...	Typical
212	M223	N229	N230			3DIADUCT	Pipe	Beam	A312TP3...	Typical
213	M224	N230	N231			3DIADUCT	Pipe	Beam	A312TP3...	Typical
214	M225	N231	N232			3DIADUCT	Pipe	Beam	A312TP3...	Typical
215	M226	N75	N242			6DIADUCT	Pipe	Beam	A312TP3...	Typical
216	M227	N242	N243			6DIADUCT	Pipe	Beam	A312TP3...	Typical
217	M228	N243	N244			6DIADUCT	Pipe	Beam	A312TP3...	Typical
218	M229	N232	N234			2DIADUCT	Pipe	Beam	A36	Typical
219	M230	N236	N240			2DIADUCT	Pipe	Beam	A36	Typical
220	M231	N239	N241			2DIADUCT	Pipe	Beam	A36	Typical
221	M232	N232	N233			3DIADUCT	Pipe	Beam	A312TP3...	Typical
222	M233	N233	N235			2DIADUCT	Pipe	Beam	A36	Typical
223	M234	N235	N236			2DIADUCT	Pipe	Beam	A36	Typical
224	M235	N249	N250			6DIADUCT	Pipe	Beam	A312TP3...	Typical
225	M236	N250	N251			6DIADUCT	Pipe	Beam	A312TP3...	Typical
226	M237	N251	N252			6DIADUCT	Pipe	Beam	A312TP3...	Typical
227	M238	N252	N253			6DIADUCT	Pipe	Beam	A312TP3...	Typical
228	M239	N253	N254			6DIADUCT	Pipe	Beam	A312TP3...	Typical
229	M240	N254	N255			6DIADUCT	Pipe	Beam	A312TP3...	Typical
230	M241	N255	N256			6DIADUCT	Pipe	Beam	A312TP3...	Typical
231	M242	N256	N257			6DIADUCT	Pipe	Beam	A312TP3...	Typical
232	M243	N257	N258			6DIADUCT	Pipe	Beam	A312TP3...	Typical
233	M244	N258	N259			6DIADUCT	Pipe	Beam	A312TP3...	Typical

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

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Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(de...	Section/Shape	Design List	Type	Material	Design Rules
234	M245	N259	N261			6DIADUCT	Pipe	Beam	A312TP3...	Typical
235	M246	N261	N262			6DIADUCT	Pipe	Beam	A312TP3...	Typical
236	M247	N262	N263			6DIADUCT	Pipe	Beam	A312TP3...	Typical
237	M248	N263	N260			6DIADUCT	Pipe	Beam	A312TP3...	Typical
238	M249	N260	N264			6DIADUCT	Pipe	Beam	A312TP3...	Typical
239	M250	N264	N265			6DIADUCT	Pipe	Beam	A312TP3...	Typical
240	M251	N265	N266			6DIADUCT	Pipe	Beam	A312TP3...	Typical
241	M252	N266	N267			6DIADUCT	Pipe	Beam	A312TP3...	Typical
242	M253	N267	N268			6DIADUCT	Pipe	Beam	A312TP3...	Typical
243	M254	N268	N269			6DIADUCT	Pipe	Beam	A312TP3...	Typical
244	M255	N244	N245			6DIADUCT	Pipe	Beam	A312TP3...	Typical
245	M256	N245	N238			6DIADUCT	Pipe	Beam	A312TP3...	Typical
246	M257	N238	N246			6DIADUCT	Pipe	Beam	A312TP3...	Typical
247	M258	N246	N247			6DIADUCT	Pipe	Beam	A312TP3...	Typical
248	M259	N247	N248			6DIADUCT	Pipe	Beam	A312TP3...	Typical
249	M260	N248	N249			6DIADUCT	Pipe	Beam	A312TP3...	Typical
250	M261	N210	N212			8DIADUCT	Pipe	Beam	A312TP3...	Typical
251	M262	N212	N49			8DIADUCT	Pipe	Beam	A312TP3...	Typical
252	M263	N234	N270			2DIADUCT	Pipe	Beam	A36	Typical
253	M264	N240	N271			2DIADUCT	Pipe	Beam	A36	Typical
254	M265	N241	N272			2DIADUCT	Pipe	Beam	A36	Typical
255	M266	N273	N229			3DIADUCT	Pipe	Beam	A312TP3...	Typical
256	M267	N274	N206			16DIADUCT	Pipe	Beam	A312TP3...	Typical

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area (Me...	Surface (...
1	SELFWEIGHT	DL						247		
2	DAMPER WEIGHT	DL				9	4			
3	SEISMIC X	ELX				9	4	247		
4	SEISMIC Z	ELZ				9	4	247		
5	THERMAL	None						249		
6	WIND X	WLX						92		
7	WIND Z	WLZ						62		
8	FML	DL				4				

Joint Loads and Enforced Displacements (BLC 2 : DAMPER WEIGHT)

	Joint Label	L,D,M	Direction	Magnitude[lb,lb-ft in,rad lb*s^2/in]
1	N85	L	Y	-63
2	N88	L	Y	-63
3	N93	L	Y	-50
4	N47	L	Y	-76
5	N48	L	Y	-76
6	N21	L	Y	-76
7	N119	L	Y	-76
8	N129	L	Y	-76
9	N37	L	Y	-101

Joint Loads and Enforced Displacements (BLC 3 : SEISMIC X)

	Joint Label	L,D,M	Direction	Magnitude[lb,lb-ft in,rad lb*s^2/in]
1	N85	L	X	31.5
2	N88	L	X	31.5
3	N93	L	X	25
4	N47	L	X	38
5	N48	L	X	38

Joint Loads and Enforced Displacements (BLC 3 : SEISMIC X) (Continued)

	Joint Label	L,D,M	Direction	Magnitude[lb,lb-ft in,rad lb*s^2/in]
6	N21	L	X	38
7	N119	L	X	38
8	N129	L	X	38
9	N37	L	X	50.5

Joint Loads and Enforced Displacements (BLC 4 : SEISMIC Z)

	Joint Label	L,D,M	Direction	Magnitude[lb,lb-ft in,rad lb*s^2/in]
1	N85	L	Z	31.5
2	N88	L	Z	31.5
3	N93	L	Z	25
4	N47	L	Z	38
5	N48	L	Z	38
6	N21	L	Z	38
7	N119	L	Z	38
8	N129	L	Z	38
9	N37	L	Z	50.5

Joint Loads and Enforced Displacements (BLC 8 : FML)

	Joint Label	L,D,M	Direction	Magnitude[lb,lb-ft in,rad lb*s^2/in]
1	N53	L	X	11
2	N200	L	Y	11
3	N201	L	Y	-11
4	N205	L	Z	11

Member Distributed Loads (BLC 1 : SELFWEIGHT)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
1	M9	Y	-7.76	-7.76	0	0
2	M10	Y	-7.76	-7.76	0	0
3	M148	Y	-7.76	-7.76	0	0
4	M149	Y	-7.76	-7.76	0	0
5	M150	Y	-7.76	-7.76	0	0
6	M21	Y	-11.05	-11.05	0	0
7	M22	Y	-11.05	-11.05	0	0
8	M23	Y	-11.05	-11.05	0	0
9	M24	Y	-11.05	-11.05	0	0
10	M25	Y	-11.05	-11.05	0	0
11	M26	Y	-11.05	-11.05	0	0
12	M178	Y	-11.05	-11.05	0	0
13	M179	Y	-11.05	-11.05	0	0
14	M180	Y	-11.05	-11.05	0	0
15	M181	Y	-11.05	-11.05	0	0
16	M182	Y	-11.05	-11.05	0	0
17	M183	Y	-11.05	-11.05	0	0
18	M11	Y	-14.96	-14.96	0	0
19	M12	Y	-14.96	-14.96	0	0
20	M13	Y	-14.96	-14.96	0	0
21	M14	Y	-19.42	-19.42	0	0
22	M15	Y	-14.96	-14.96	0	0
23	M16	Y	-14.96	-14.96	0	0
24	M17	Y	-14.96	-14.96	0	0
25	M18	Y	-14.96	-14.96	0	0
26	M19	Y	-14.96	-14.96	0	0
27	M20	Y	-14.96	-14.96	0	0
28	M35	Y	-14.96	-14.96	0	0
29	M36	Y	-14.96	-14.96	0	0

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Member Distributed Loads (BLC 1 : SELFWEIGHT) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
30	M37	Y	-14.96	-14.96	0	0
31	M38	Y	-14.96	-14.96	0	0
32	M87	Y	-14.96	-14.96	0	0
33	M88	Y	-14.96	-14.96	0	0
34	M89	Y	-14.96	-14.96	0	0
35	M90	Y	-14.96	-14.96	0	0
36	M91	Y	-14.96	-14.96	0	0
37	M92	Y	-14.96	-14.96	0	0
38	M93	Y	-14.96	-14.96	0	0
39	M94	Y	-14.96	-14.96	0	0
40	M114	Y	-14.96	-14.96	0	0
41	M115	Y	-14.96	-14.96	0	0
42	M116	Y	-14.96	-14.96	0	0
43	M184	Y	-14.96	-14.96	0	0
44	M185	Y	-14.96	-14.96	0	0
45	M186	Y	-14.96	-14.96	0	0
46	M187	Y	-14.96	-14.96	0	0
47	M188	Y	-14.96	-14.96	0	0
48	M189	Y	-14.96	-14.96	0	0
49	M190	Y	-14.96	-14.96	0	0
50	M7	Y	-19.42	-19.42	0	0
51	M8	Y	-19.42	-19.42	0	0
52	M30	Y	-19.42	-19.42	0	0
53	M31	Y	-19.42	-19.42	0	0
54	M32	Y	-19.42	-19.42	0	0
55	M33	Y	-19.42	-19.42	0	0
56	M34	Y	-19.42	-19.42	0	0
57	M39	Y	-19.42	-19.42	0	0
58	M40	Y	-19.42	-19.42	0	0
59	M41	Y	-19.42	-19.42	0	0
60	M42	Y	-19.42	-19.42	0	0
61	M43	Y	-19.42	-19.42	0	0
62	M44	Y	-19.42	-19.42	0	0
63	M45	Y	-19.42	-19.42	0	0
64	M81	Y	-19.42	-19.42	0	0
65	M82	Y	-19.42	-19.42	0	0
66	M83	Y	-19.42	-19.42	0	0
67	M84	Y	-19.42	-19.42	0	0
68	M85	Y	-19.42	-19.42	0	0
69	M86	Y	-19.42	-19.42	0	0
70	M95	Y	-19.42	-19.42	0	0
71	M96	Y	-19.42	-19.42	0	0
72	M97	Y	-19.42	-19.42	0	0
73	M98	Y	-19.42	-19.42	0	0
74	M99	Y	-19.42	-19.42	0	0
75	M100	Y	-19.42	-19.42	0	0
76	M101	Y	-19.42	-19.42	0	0
77	M102	Y	-19.42	-19.42	0	0
78	M103	Y	-19.42	-19.42	0	0
79	M104	Y	-19.42	-19.42	0	0
80	M105	Y	-19.42	-19.42	0	0
81	M106	Y	-19.42	-19.42	0	0
82	M107	Y	-19.42	-19.42	0	0
83	M108	Y	-19.42	-19.42	0	0
84	M109	Y	-19.42	-19.42	0	0
85	M110	Y	-19.42	-19.42	0	0
86	M111	Y	-19.42	-19.42	0	0

Member Distributed Loads (BLC 1 : SELFWEIGHT) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
87	M112	Y	-19.42	-19.42	0	0
88	M117	Y	-19.42	-19.42	0	0
89	M118	Y	-19.42	-19.42	0	0
90	M119	Y	-19.42	-19.42	0	0
91	M120	Y	-19.42	-19.42	0	0
92	M121	Y	-19.42	-19.42	0	0
93	M122	Y	-19.42	-19.42	0	0
94	M123	Y	-19.42	-19.42	0	0
95	M124	Y	-19.42	-19.42	0	0
96	M125	Y	-19.42	-19.42	0	0
97	M126	Y	-19.42	-19.42	0	0
98	M127	Y	-19.42	-19.42	0	0
99	M128	Y	-19.42	-19.42	0	0
100	M129	Y	-19.42	-19.42	0	0
101	M130	Y	-19.42	-19.42	0	0
102	M131	Y	-19.42	-19.42	0	0
103	M132	Y	-19.42	-19.42	0	0
104	M144	Y	-19.42	-19.42	0	0
105	M145	Y	-19.42	-19.42	0	0
106	M146	Y	-19.42	-19.42	0	0
107	M147	Y	-19.42	-19.42	0	0
108	M46	Y	-13.72	-13.72	0	0
109	M47	Y	-13.72	-13.72	0	0
110	M48	Y	-13.72	-13.72	0	0
111	M49	Y	-13.72	-13.72	0	0
112	M50	Y	-13.72	-13.72	0	0
113	M51	Y	-13.72	-13.72	0	0
114	M52	Y	-13.72	-13.72	0	0
115	M53	Y	-13.72	-13.72	0	0
116	M54	Y	-13.72	-13.72	0	0
117	M55	Y	-13.72	-13.72	0	0
118	M56	Y	-13.72	-13.72	0	0
119	M80	Y	-13.72	-13.72	0	0
120	M113	Y	-13.72	-13.72	0	0
121	M133	Y	-13.72	-13.72	0	0
122	M134	Y	-13.72	-13.72	0	0
123	M135	Y	-13.72	-13.72	0	0
124	M136	Y	-13.72	-13.72	0	0
125	M137	Y	-13.72	-13.72	0	0
126	M138	Y	-13.72	-13.72	0	0
127	M139	Y	-13.72	-13.72	0	0
128	M140	Y	-13.72	-13.72	0	0
129	M141	Y	-13.72	-13.72	0	0
130	M142	Y	-13.72	-13.72	0	0
131	M143	Y	-13.72	-13.72	0	0
132	M57	Y	-24.74	-24.74	0	0
133	M58	Y	-24.74	-24.74	0	0
134	M59	Y	-24.74	-24.74	0	0
135	M60	Y	-24.74	-24.74	0	0
136	M61	Y	-24.74	-24.74	0	0
137	M62	Y	-24.74	-24.74	0	0
138	M63	Y	-24.74	-24.74	0	0
139	M64	Y	-24.74	-24.74	0	0
140	M65	Y	-24.74	-24.74	0	0
141	M66	Y	-24.74	-24.74	0	0
142	M67	Y	-24.74	-24.74	0	0
143	M68	Y	-24.74	-24.74	0	0

Member Distributed Loads (BLC 1 : SELFWEIGHT) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
144	M69	Y	-24.74	-24.74	0	0
145	M70	Y	-24.74	-24.74	0	0
146	M151	Y	-24.74	-24.74	0	0
147	M152	Y	-24.74	-24.74	0	0
148	M153	Y	-24.74	-24.74	0	0
149	M154	Y	-24.74	-24.74	0	0
150	M155	Y	-24.74	-24.74	0	0
151	M156	Y	-24.74	-24.74	0	0
152	M157	Y	-24.74	-24.74	0	0
153	M158	Y	-24.74	-24.74	0	0
154	M159	Y	-24.74	-24.74	0	0
155	M160	Y	-24.74	-24.74	0	0
156	M161	Y	-24.74	-24.74	0	0
157	M162	Y	-24.74	-24.74	0	0
158	M163	Y	-24.74	-24.74	0	0
159	M164	Y	-24.74	-24.74	0	0
160	M165	Y	-24.74	-24.74	0	0
161	M168	Y	-24.74	-24.74	0	0
162	M169	Y	-24.74	-24.74	0	0
163	M170	Y	-24.74	-24.74	0	0
164	M171	Y	-24.74	-24.74	0	0
165	M172	Y	-24.74	-24.74	0	0
166	M173	Y	-24.74	-24.74	0	0
167	M174	Y	-24.74	-24.74	0	0
168	M175	Y	-24.74	-24.74	0	0
169	M176	Y	-24.74	-24.74	0	0
170	M177	Y	-24.74	-24.74	0	0
171	M71	Y	-32.5	-32.5	0	0
172	M191	Y	-32.5	-32.5	0	0
173	M192	Y	-32.5	-32.5	0	0
174	M193	Y	-32.5	-32.5	0	0
175	M194	Y	-32.5	-32.5	0	0
176	M195	Y	-32.5	-32.5	0	0
177	M196	Y	-32.5	-32.5	0	0
178	M197	Y	-32.5	-32.5	0	0
179	M198	Y	-32.5	-32.5	0	0
180	M199	Y	-32.5	-32.5	0	0
181	M200	Y	-11.05	-11.05	0	0
182	M201	Y	-13.72	-13.72	0	0
183	M202	Y	-13.72	-13.72	0	0
184	M204	Y	-13.72	-13.72	0	0
185	M207	Y	-7.76	-7.76	0	0
186	M208	Y	-7.76	-7.76	0	0
187	M209	Y	-7.76	-7.76	0	0
188	M210	Y	-7.76	-7.76	0	0
189	M211	Y	-7.76	-7.76	0	0
190	M212	Y	-7.76	-7.76	0	0
191	M213	Y	-7.76	-7.76	0	0
192	M214	Y	-7.76	-7.76	0	0
193	M215	Y	-7.76	-7.76	0	0
194	M216	Y	-7.76	-7.76	0	0
195	M217	Y	-7.76	-7.76	0	0
196	M218	Y	-7.76	-7.76	0	0
197	M219	Y	-7.76	-7.76	0	0
198	M220	Y	-7.76	-7.76	0	0
199	M221	Y	-7.76	-7.76	0	0
200	M222	Y	-7.76	-7.76	0	0

Member Distributed Loads (BLC 1 : SELFWEIGHT) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
201	M223	Y	-7.76	-7.76	0	0
202	M224	Y	-7.76	-7.76	0	0
203	M225	Y	-7.76	-7.76	0	0
204	M232	Y	-7.76	-7.76	0	0
205	M229	Y	-3.74	-3.74	0	0
206	M230	Y	-3.74	-3.74	0	0
207	M231	Y	-3.74	-3.74	0	0
208	M233	Y	-3.74	-3.74	0	0
209	M234	Y	-3.74	-3.74	0	0
210	M205	Y	-3.74	-3.74	0	0
211	M206	Y	-3.74	-3.74	0	0
212	M226	Y	-19.42	-19.42	0	0
213	M227	Y	-19.42	-19.42	0	0
214	M228	Y	-19.42	-19.42	0	0
215	M255	Y	-19.42	-19.42	0	0
216	M256	Y	-19.42	-19.42	0	0
217	M257	Y	-19.42	-19.42	0	0
218	M258	Y	-19.42	-19.42	0	0
219	M259	Y	-19.42	-19.42	0	0
220	M260	Y	-19.42	-19.42	0	0
221	M235	Y	-19.42	-19.42	0	0
222	M236	Y	-19.42	-19.42	0	0
223	M237	Y	-19.42	-19.42	0	0
224	M238	Y	-19.42	-19.42	0	0
225	M239	Y	-19.42	-19.42	0	0
226	M240	Y	-19.42	-19.42	0	0
227	M241	Y	-19.42	-19.42	0	0
228	M242	Y	-19.42	-19.42	0	0
229	M243	Y	-19.42	-19.42	0	0
230	M244	Y	-19.42	-19.42	0	0
231	M245	Y	-19.42	-19.42	0	0
232	M246	Y	-19.42	-19.42	0	0
233	M247	Y	-19.42	-19.42	0	0
234	M248	Y	-19.42	-19.42	0	0
235	M249	Y	-19.42	-19.42	0	0
236	M250	Y	-19.42	-19.42	0	0
237	M251	Y	-19.42	-19.42	0	0
238	M252	Y	-19.42	-19.42	0	0
239	M253	Y	-19.42	-19.42	0	0
240	M254	Y	-19.42	-19.42	0	0
241	M261	Y	-13.72	-13.72	0	0
242	M262	Y	-13.72	-13.72	0	0
243	M263	Y	-3.74	-3.74	0	0
244	M264	Y	-3.74	-3.74	0	0
245	M265	Y	-3.74	-3.74	0	0
246	M266	Y	-7.76	-7.76	0	0
247	M267	Y	-32.5	-32.5	0	16

Member Distributed Loads (BLC 3 : SEISMIC X)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
1	M7	X	7.77	7.77	0	0
2	M8	X	7.77	7.77	0	0
3	M9	X	3.1	3.1	0	0
4	M10	X	3.1	3.1	0	0
5	M11	X	7.48	7.48	0	0
6	M12	X	7.48	7.48	0	0
7	M13	X	7.48	7.48	0	0

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Member Distributed Loads (BLC 3 : SEISMIC X) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
8	M14	X	9.71	9.71	0	0
9	M15	X	7.48	7.48	0	0
10	M16	X	7.48	7.48	0	0
11	M17	X	7.48	7.48	0	0
12	M18	X	7.48	7.48	0	0
13	M19	X	7.48	7.48	0	0
14	M20	X	7.48	7.48	0	0
15	M21	X	5.52	5.52	0	0
16	M22	X	5.52	5.52	0	0
17	M23	X	5.52	5.52	0	0
18	M24	X	5.52	5.52	0	0
19	M25	X	5.52	5.52	0	0
20	M26	X	5.52	5.52	0	0
21	M30	X	9.71	9.71	0	0
22	M31	X	9.71	9.71	0	0
23	M32	X	9.71	9.71	0	0
24	M33	X	9.71	9.71	0	0
25	M34	X	9.71	9.71	0	0
26	M35	X	7.48	7.48	0	0
27	M36	X	7.48	7.48	0	0
28	M37	X	7.48	7.48	0	0
29	M38	X	7.48	7.48	0	0
30	M39	X	9.71	9.71	0	0
31	M40	X	9.71	9.71	0	0
32	M41	X	9.71	9.71	0	0
33	M42	X	9.71	9.71	0	0
34	M43	X	9.71	9.71	0	0
35	M44	X	9.71	9.71	0	0
36	M45	X	9.71	9.71	0	0
37	M46	X	6.86	6.86	0	0
38	M47	X	6.86	6.86	0	0
39	M48	X	6.86	6.86	0	0
40	M49	X	6.86	6.86	0	0
41	M50	X	6.86	6.86	0	0
42	M51	X	6.86	6.86	0	0
43	M52	X	6.86	6.86	0	0
44	M53	X	5.49	5.49	0	0
45	M54	X	5.49	5.49	0	0
46	M55	X	5.49	5.49	0	0
47	M56	X	5.49	5.49	0	0
48	M57	X	9.89	9.89	0	0
49	M58	X	9.89	9.89	0	0
50	M59	X	9.89	9.89	0	0
51	M60	X	9.89	9.89	0	0
52	M61	X	9.89	9.89	0	0
53	M62	X	9.89	9.89	0	0
54	M63	X	9.89	9.89	0	0
55	M64	X	9.89	9.89	0	0
56	M65	X	9.89	9.89	0	0
57	M66	X	9.89	9.89	0	0
58	M67	X	9.89	9.89	0	0
59	M68	X	12.37	9.89	0	0
60	M69	X	9.89	12.37	0	0
61	M70	X	9.89	9.89	0	0
62	M71	X	13	13	0	0
63	M80	X	6.86	6.86	0	0
64	M81	X	9.71	9.71	0	0

Member Distributed Loads (BLC 3 : SEISMIC X) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
65	M82	X	9.71	9.71	0	0
66	M83	X	9.71	9.71	0	0
67	M84	X	9.71	9.71	0	0
68	M85	X	9.71	9.71	0	0
69	M86	X	9.71	9.71	0	0
70	M87	X	7.48	7.48	0	0
71	M88	X	7.48	7.48	0	0
72	M89	X	7.48	7.48	0	0
73	M90	X	7.48	7.48	0	0
74	M91	X	7.48	7.48	0	0
75	M92	X	7.48	7.48	0	0
76	M93	X	7.48	7.48	0	0
77	M94	X	7.48	7.48	0	0
78	M95	X	9.71	9.71	0	0
79	M96	X	9.71	9.71	0	0
80	M97	X	9.71	9.71	0	0
81	M98	X	9.71	9.71	0	0
82	M99	X	9.71	9.71	0	0
83	M100	X	9.71	9.71	0	0
84	M101	X	9.71	9.71	0	0
85	M102	X	9.71	9.71	0	0
86	M103	X	9.71	9.71	0	0
87	M104	X	9.71	9.71	0	0
88	M105	X	9.71	9.71	0	0
89	M106	X	9.71	9.71	0	0
90	M107	X	9.71	9.71	0	0
91	M108	X	9.71	9.71	0	0
92	M109	X	9.71	9.71	0	0
93	M110	X	9.71	9.71	0	0
94	M111	X	9.71	9.71	0	0
95	M112	X	9.71	9.71	0	0
96	M113	X	6.86	6.86	0	0
97	M114	X	7.48	7.48	0	0
98	M115	X	7.48	7.48	0	0
99	M116	X	7.48	7.48	0	0
100	M117	X	9.71	9.71	0	0
101	M118	X	9.71	9.71	0	0
102	M119	X	9.71	9.71	0	0
103	M120	X	9.71	9.71	0	0
104	M121	X	9.71	9.71	0	0
105	M122	X	9.71	9.71	0	0
106	M123	X	9.71	9.71	0	0
107	M124	X	9.71	9.71	0	0
108	M125	X	9.71	9.71	0	0
109	M126	X	9.71	9.71	0	0
110	M127	X	9.71	9.71	0	0
111	M128	X	9.71	9.71	0	0
112	M129	X	9.71	9.71	0	0
113	M130	X	9.71	9.71	0	0
114	M131	X	9.71	9.71	0	0
115	M132	X	9.71	9.71	0	0
116	M133	X	6.86	6.86	0	0
117	M134	X	6.86	6.86	0	0
118	M135	X	6.86	6.86	0	0
119	M136	X	6.86	6.86	0	0
120	M137	X	5.49	5.49	0	0
121	M138	X	5.49	5.49	0	0

Member Distributed Loads (BLC 3 : SEISMIC X) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
122	M139	X	5.49	5.49	0	0
123	M140	X	5.49	5.49	0	0
124	M141	X	5.49	5.49	0	0
125	M142	X	5.49	5.49	0	0
126	M143	X	5.49	5.49	0	0
127	M144	X	7.77	7.77	0	0
128	M145	X	7.77	7.77	0	0
129	M146	X	7.77	7.77	0	0
130	M147	X	7.77	7.77	0	0
131	M148	X	3.1	3.1	0	0
132	M149	X	3.1	3.1	0	0
133	M150	X	3.1	3.1	0	0
134	M151	X	9.89	9.89	0	0
135	M152	X	9.89	9.89	0	0
136	M153	X	9.89	9.89	0	0
137	M154	X	9.89	9.89	0	0
138	M155	X	9.89	9.89	0	0
139	M156	X	9.89	9.89	0	0
140	M157	X	9.89	9.89	0	0
141	M158	X	9.89	9.89	0	0
142	M159	X	9.89	9.89	0	0
143	M160	X	9.89	9.89	0	0
144	M161	X	9.89	9.89	0	0
145	M162	X	9.89	9.89	0	0
146	M163	X	9.89	9.89	0	0
147	M164	X	9.89	9.89	0	0
148	M165	X	9.89	9.89	0	0
149	M168	X	9.89	9.89	0	0
150	M169	X	9.89	9.89	0	0
151	M170	X	9.89	9.89	0	0
152	M171	X	9.89	9.89	0	0
153	M172	X	9.89	9.89	0	0
154	M173	X	9.89	9.89	0	0
155	M174	X	9.89	9.89	0	0
156	M175	X	9.89	9.89	0	0
157	M176	X	9.89	9.89	0	0
158	M177	X	9.89	9.89	0	0
159	M178	X	5.52	5.52	0	0
160	M179	X	5.52	5.52	0	0
161	M180	X	5.52	5.52	0	0
162	M181	X	5.52	5.52	0	0
163	M182	X	5.52	5.52	0	0
164	M183	X	5.52	5.52	0	0
165	M184	X	7.48	7.48	0	0
166	M185	X	7.48	7.48	0	0
167	M186	X	7.48	7.48	0	0
168	M187	X	7.48	7.48	0	0
169	M188	X	7.48	7.48	0	0
170	M189	X	7.48	7.48	0	0
171	M190	X	7.48	7.48	0	0
172	M191	X	13	13	0	0
173	M192	X	13	13	0	0
174	M193	X	13	13	0	0
175	M194	X	13	13	0	0
176	M195	X	13	13	0	0
177	M196	X	13	13	0	0
178	M197	X	13	13	0	0

Member Distributed Loads (BLC 3 : SEISMIC X) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
179	M198	X	13	13	0	0
180	M199	X	13	13	0	0
181	M200	X	5.52	5.52	0	0
182	M201	X	6.86	6.86	0	0
183	M202	X	6.86	6.86	0	0
184	M204	X	5.49	5.49	0	0
185	M205	X	1.5	1.5	0	0
186	M206	X	1.5	1.5	0	0
187	M207	X	3.1	3.1	0	0
188	M208	X	3.1	3.1	0	0
189	M209	X	3.1	3.1	0	0
190	M210	X	3.1	3.1	0	0
191	M211	X	3.1	3.1	0	0
192	M212	X	3.1	3.1	0	0
193	M213	X	3.1	3.1	0	0
194	M214	X	3.1	3.1	0	0
195	M215	X	3.1	3.1	0	0
196	M216	X	3.1	3.1	0	0
197	M217	X	3.1	3.1	0	0
198	M218	X	3.1	3.1	0	0
199	M219	X	3.1	3.1	0	0
200	M220	X	3.1	3.1	0	0
201	M221	X	3.1	3.1	0	0
202	M222	X	3.1	3.1	0	0
203	M223	X	3.1	3.1	0	0
204	M224	X	3.1	3.1	0	0
205	M225	X	3.1	3.1	0	0
206	M226	X	7.77	7.77	0	0
207	M227	X	7.77	7.77	0	0
208	M228	X	9.71	9.71	0	0
209	M229	X	1.5	1.5	0	0
210	M230	X	1.5	1.5	0	0
211	M231	X	1.5	1.5	0	0
212	M232	X	3.1	3.1	0	0
213	M233	X	1.5	1.5	0	0
214	M234	X	1.5	1.5	0	0
215	M235	X	9.71	9.71	0	0
216	M236	X	9.71	9.71	0	0
217	M237	X	9.71	9.71	0	0
218	M238	X	9.71	9.71	0	0
219	M239	X	9.71	9.71	0	0
220	M240	X	9.71	9.71	0	0
221	M241	X	9.71	9.71	0	0
222	M242	X	9.71	9.71	0	0
223	M243	X	9.71	9.71	0	0
224	M244	X	9.71	9.71	0	0
225	M245	X	9.71	9.71	0	0
226	M246	X	9.71	9.71	0	0
227	M247	X	9.71	9.71	0	0
228	M248	X	9.71	9.71	0	0
229	M249	X	9.71	9.71	0	0
230	M250	X	9.71	9.71	0	0
231	M251	X	9.71	9.71	0	0
232	M252	X	9.71	9.71	0	0
233	M253	X	9.71	9.71	0	0
234	M254	X	9.71	9.71	0	0
235	M255	X	9.71	9.71	0	0

Member Distributed Loads (BLC 3 : SEISMIC X) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
236	M256	X	9.71	9.71	0	0
237	M257	X	9.71	9.71	0	0
238	M258	X	9.71	9.71	0	0
239	M259	X	9.71	9.71	0	0
240	M260	X	9.71	9.71	0	0
241	M261	X	5.49	5.49	0	0
242	M262	X	5.49	5.49	0	0
243	M263	X	1.5	1.5	0	0
244	M264	X	1.5	1.5	0	0
245	M265	X	1.5	1.5	0	0
246	M266	X	3.1	3.1	0	0
247	M267	X	13	13	0	16

Member Distributed Loads (BLC 4 : SEISMIC Z)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
1	M7	Z	7.77	7.77	0	0
2	M8	Z	7.77	7.77	0	0
3	M9	Z	3.1	3.1	0	0
4	M10	Z	3.1	3.1	0	0
5	M11	Z	7.48	7.48	0	0
6	M12	Z	7.48	7.48	0	0
7	M13	Z	7.48	7.48	0	0
8	M14	Z	9.71	9.71	0	0
9	M15	Z	7.48	7.48	0	0
10	M16	Z	7.48	7.48	0	0
11	M17	Z	7.48	7.48	0	0
12	M18	Z	7.48	7.48	0	0
13	M19	Z	7.48	7.48	0	0
14	M20	Z	7.48	7.48	0	0
15	M21	Z	5.52	5.52	0	0
16	M22	Z	5.52	5.52	0	0
17	M23	Z	5.52	5.52	0	0
18	M24	Z	5.52	5.52	0	0
19	M25	Z	5.52	5.52	0	0
20	M26	Z	5.52	5.52	0	0
21	M30	Z	9.71	9.71	0	0
22	M31	Z	9.71	9.71	0	0
23	M32	Z	9.71	9.71	0	0
24	M33	Z	9.71	9.71	0	0
25	M34	Z	9.71	9.71	0	0
26	M35	Z	7.48	7.48	0	0
27	M36	Z	7.48	7.48	0	0
28	M37	Z	7.48	7.48	0	0
29	M38	Z	7.48	7.48	0	0
30	M39	Z	9.71	9.71	0	0
31	M40	Z	9.71	9.71	0	0
32	M41	Z	9.71	9.71	0	0
33	M42	Z	9.71	9.71	0	0
34	M43	Z	9.71	9.71	0	0
35	M44	Z	9.71	9.71	0	0
36	M45	Z	9.71	9.71	0	0
37	M46	Z	6.86	6.86	0	0
38	M47	Z	6.86	6.86	0	0
39	M48	Z	6.86	6.86	0	0
40	M49	Z	6.86	6.86	0	0
41	M50	Z	6.86	6.86	0	0
42	M51	Z	6.86	6.86	0	0

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Member Distributed Loads (BLC 4 : SEISMIC Z) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
43	M52	Z	6.86	6.86	0	0
44	M53	Z	5.49	5.49	0	0
45	M54	Z	5.49	5.49	0	0
46	M55	Z	5.49	5.49	0	0
47	M56	Z	5.49	5.49	0	0
48	M57	Z	9.89	9.89	0	0
49	M58	Z	9.89	9.89	0	0
50	M59	Z	9.89	9.89	0	0
51	M60	Z	9.89	9.89	0	0
52	M61	Z	9.89	9.89	0	0
53	M62	Z	9.89	9.89	0	0
54	M63	Z	9.89	9.89	0	0
55	M64	Z	9.89	9.89	0	0
56	M65	Z	9.89	9.89	0	0
57	M66	Z	9.89	9.89	0	0
58	M67	Z	9.89	9.89	0	0
59	M68	Z	12.37	9.89	0	0
60	M69	Z	9.89	12.37	0	0
61	M70	Z	9.89	9.89	0	0
62	M71	Z	13	13	0	0
63	M80	Z	6.86	6.86	0	0
64	M81	Z	9.71	9.71	0	0
65	M82	Z	9.71	9.71	0	0
66	M83	Z	9.71	9.71	0	0
67	M84	Z	9.71	9.71	0	0
68	M85	Z	9.71	9.71	0	0
69	M86	Z	9.71	9.71	0	0
70	M87	Z	7.48	7.48	0	0
71	M88	Z	7.48	7.48	0	0
72	M89	Z	7.48	7.48	0	0
73	M90	Z	7.48	7.48	0	0
74	M91	Z	7.48	7.48	0	0
75	M92	Z	7.48	7.48	0	0
76	M93	Z	7.48	7.48	0	0
77	M94	Z	7.48	7.48	0	0
78	M95	Z	9.71	9.71	0	0
79	M96	Z	9.71	9.71	0	0
80	M97	Z	9.71	9.71	0	0
81	M98	Z	9.71	9.71	0	0
82	M99	Z	9.71	9.71	0	0
83	M100	Z	9.71	9.71	0	0
84	M101	Z	9.71	9.71	0	0
85	M102	Z	9.71	9.71	0	0
86	M103	Z	9.71	9.71	0	0
87	M104	Z	9.71	9.71	0	0
88	M105	Z	9.71	9.71	0	0
89	M106	Z	9.71	9.71	0	0
90	M107	Z	9.71	9.71	0	0
91	M108	Z	9.71	9.71	0	0
92	M109	Z	9.71	9.71	0	0
93	M110	Z	9.71	9.71	0	0
94	M111	Z	9.71	9.71	0	0
95	M112	Z	9.71	9.71	0	0
96	M113	Z	6.86	6.86	0	0
97	M114	Z	7.48	7.48	0	0
98	M115	Z	7.48	7.48	0	0
99	M116	Z	7.48	7.48	0	0

Company : **DMJM H&N**
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Mar 26, 2006
2:24 PM
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Member Distributed Loads (BLC 4 : SEISMIC Z) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
100	M117	Z	9.71	9.71	0	0
101	M118	Z	9.71	9.71	0	0
102	M119	Z	9.71	9.71	0	0
103	M120	Z	9.71	9.71	0	0
104	M121	Z	9.71	9.71	0	0
105	M122	Z	9.71	9.71	0	0
106	M123	Z	9.71	9.71	0	0
107	M124	Z	9.71	9.71	0	0
108	M125	Z	9.71	9.71	0	0
109	M126	Z	9.71	9.71	0	0
110	M127	Z	9.71	9.71	0	0
111	M128	Z	9.71	9.71	0	0
112	M129	Z	9.71	9.71	0	0
113	M130	Z	9.71	9.71	0	0
114	M131	Z	9.71	9.71	0	0
115	M132	Z	9.71	9.71	0	0
116	M133	Z	6.86	6.86	0	0
117	M134	Z	6.86	6.86	0	0
118	M135	Z	6.86	6.86	0	0
119	M136	Z	6.86	6.86	0	0
120	M137	Z	5.49	5.49	0	0
121	M138	Z	5.49	5.49	0	0
122	M139	Z	5.49	5.49	0	0
123	M140	Z	5.49	5.49	0	0
124	M141	Z	5.49	5.49	0	0
125	M142	Z	5.49	5.49	0	0
126	M143	Z	5.49	5.49	0	0
127	M144	Z	7.77	7.77	0	0
128	M145	Z	7.77	7.77	0	0
129	M146	Z	7.77	7.77	0	0
130	M147	Z	7.77	7.77	0	0
131	M148	Z	3.1	3.1	0	0
132	M149	Z	3.1	3.1	0	0
133	M150	Z	3.1	3.1	0	0
134	M151	Z	9.89	9.89	0	0
135	M152	Z	9.89	9.89	0	0
136	M153	Z	9.89	9.89	0	0
137	M154	Z	9.89	9.89	0	0
138	M155	Z	9.89	9.89	0	0
139	M156	Z	9.89	9.89	0	0
140	M157	Z	9.89	9.89	0	0
141	M158	Z	9.89	9.89	0	0
142	M159	Z	9.89	9.89	0	0
143	M160	Z	9.89	9.89	0	0
144	M161	Z	9.89	9.89	0	0
145	M162	Z	9.89	9.89	0	0
146	M163	Z	9.89	9.89	0	0
147	M164	Z	9.89	9.89	0	0
148	M165	Z	9.89	9.89	0	0
149	M168	Z	9.89	9.89	0	0
150	M169	Z	9.89	9.89	0	0
151	M170	Z	9.89	9.89	0	0
152	M171	Z	9.89	9.89	0	0
153	M172	Z	9.89	9.89	0	0
154	M173	Z	9.89	9.89	0	0
155	M174	Z	9.89	9.89	0	0
156	M175	Z	9.89	9.89	0	0

Member Distributed Loads (BLC 4 : SEISMIC Z) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
157	M176	Z	9.89	9.89	0	0
158	M177	Z	9.89	9.89	0	0
159	M178	Z	5.52	5.52	0	0
160	M179	Z	5.52	5.52	0	0
161	M180	Z	5.52	5.52	0	0
162	M181	Z	5.52	5.52	0	0
163	M182	Z	5.52	5.52	0	0
164	M183	Z	5.52	5.52	0	0
165	M184	Z	7.48	7.48	0	0
166	M185	Z	7.48	7.48	0	0
167	M186	Z	7.48	7.48	0	0
168	M187	Z	7.48	7.48	0	0
169	M188	Z	7.48	7.48	0	0
170	M189	Z	7.48	7.48	0	0
171	M190	Z	7.48	7.48	0	0
172	M191	Z	13	13	0	0
173	M192	Z	13	13	0	0
174	M193	Z	13	13	0	0
175	M194	Z	13	13	0	0
176	M195	Z	13	13	0	0
177	M196	Z	13	13	0	0
178	M197	Z	13	13	0	0
179	M198	Z	13	13	0	0
180	M199	Z	13	13	0	0
181	M200	Z	5.52	5.52	0	0
182	M201	Z	6.86	6.86	0	0
183	M202	Z	6.86	6.86	0	0
184	M204	Z	5.49	5.49	0	0
185	M205	Z	1.5	1.5	0	0
186	M206	Z	1.5	1.5	0	0
187	M207	Z	3.1	3.1	0	0
188	M208	Z	3.1	3.1	0	0
189	M209	Z	3.1	3.1	0	0
190	M210	Z	3.1	3.1	0	0
191	M211	Z	3.1	3.1	0	0
192	M212	Z	3.1	3.1	0	0
193	M213	Z	3.1	3.1	0	0
194	M214	Z	3.1	3.1	0	0
195	M215	Z	3.1	3.1	0	0
196	M216	Z	3.1	3.1	0	0
197	M217	Z	3.1	3.1	0	0
198	M218	Z	3.1	3.1	0	0
199	M219	Z	3.1	3.1	0	0
200	M220	Z	3.1	3.1	0	0
201	M221	Z	3.1	3.1	0	0
202	M222	Z	3.1	3.1	0	0
203	M223	Z	3.1	3.1	0	0
204	M224	Z	3.1	3.1	0	0
205	M225	Z	3.1	3.1	0	0
206	M226	Z	7.77	7.77	0	0
207	M227	Z	7.77	7.77	0	0
208	M228	Z	9.71	9.71	0	0
209	M229	Z	1.5	1.5	0	0
210	M230	Z	1.5	1.5	0	0
211	M231	Z	1.5	1.5	0	0
212	M232	Z	3.1	3.1	0	0
213	M233	Z	1.5	1.5	0	0

Member Distributed Loads (BLC 4 : SEISMIC Z) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
214	M234	Z	1.5	1.5	0	0
215	M235	Z	9.71	9.71	0	0
216	M236	Z	9.71	9.71	0	0
217	M237	Z	9.71	9.71	0	0
218	M238	Z	9.71	9.71	0	0
219	M239	Z	9.71	9.71	0	0
220	M240	Z	9.71	9.71	0	0
221	M241	Z	9.71	9.71	0	0
222	M242	Z	9.71	9.71	0	0
223	M243	Z	9.71	9.71	0	0
224	M244	Z	9.71	9.71	0	0
225	M245	Z	9.71	9.71	0	0
226	M246	Z	9.71	9.71	0	0
227	M247	Z	9.71	9.71	0	0
228	M248	Z	9.71	9.71	0	0
229	M249	Z	9.71	9.71	0	0
230	M250	Z	9.71	9.71	0	0
231	M251	Z	9.71	9.71	0	0
232	M252	Z	9.71	9.71	0	0
233	M253	Z	9.71	9.71	0	0
234	M254	Z	9.71	9.71	0	0
235	M255	Z	9.71	9.71	0	0
236	M256	Z	9.71	9.71	0	0
237	M257	Z	9.71	9.71	0	0
238	M258	Z	9.71	9.71	0	0
239	M259	Z	9.71	9.71	0	0
240	M260	Z	9.71	9.71	0	0
241	M261	Z	5.49	5.49	0	0
242	M262	Z	5.49	5.49	0	0
243	M263	Z	1.5	1.5	0	0
244	M264	Z	1.5	1.5	0	0
245	M265	Z	1.5	1.5	0	0
246	M266	Z	3.1	3.1	0	0
247	M267	Z	13	13	0	16

Member Distributed Loads (BLC 5 : THERMAL)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
1	M11	T	900	900	0	0
2	M12	T	900	900	0	0
3	M13	T	900	900	0	0
4	M14	T	900	900	0	0
5	M15	T	900	900	0	0
6	M16	T	900	900	0	0
7	M17	T	900	900	0	0
8	M18	T	900	900	0	0
9	M19	T	900	900	0	0
10	M20	T	900	900	0	0
11	M184	T	900	900	0	0
12	M185	T	900	900	0	0
13	M186	T	900	900	0	0
14	M187	T	900	900	0	0
15	M188	T	900	900	0	0
16	M189	T	900	900	0	0
17	M190	T	900	900	0	0
18	M35	T	597	597	0	0
19	M36	T	597	597	0	0
20	M37	T	597	597	0	0

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Member Distributed Loads (BLC 5 : THERMAL) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
21	M38	T	597	597	0	0
22	M39	T	597	597	0	0
23	M41	T	597	597	0	0
24	M42	T	597	597	0	0
25	M43	T	597	597	0	0
26	M44	T	597	597	0	0
27	M45	T	597	597	0	0
28	M46	T	597	597	0	0
29	M47	T	597	597	0	0
30	M48	T	597	597	0	0
31	M49	T	597	597	0	0
32	M50	T	597	597	0	0
33	M51	T	597	597	0	0
34	M52	T	597	597	0	0
35	M53	T	597	597	0	0
36	M54	T	597	597	0	0
37	M55	T	597	597	0	0
38	M56	T	597	597	0	0
39	M91	T	597	597	0	0
40	M92	T	597	597	0	0
41	M93	T	597	597	0	0
42	M94	T	597	597	0	0
43	M95	T	597	597	0	0
44	M96	T	597	597	0	0
45	M97	T	597	597	0	0
46	M98	T	597	597	0	0
47	M99	T	597	597	0	0
48	M100	T	597	597	0	0
49	M101	T	597	597	0	0
50	M102	T	597	597	0	0
51	M103	T	597	597	0	0
52	M104	T	597	597	0	0
53	M105	T	597	597	0	0
54	M106	T	597	597	0	0
55	M107	T	597	597	0	0
56	M108	T	597	597	0	0
57	M109	T	597	597	0	0
58	M110	T	597	597	0	0
59	M111	T	597	597	0	0
60	M112	T	597	597	0	0
61	M113	T	597	597	0	0
62	M114	T	597	597	0	0
63	M115	T	597	597	0	0
64	M116	T	597	597	0	0
65	M117	T	597	597	0	0
66	M121	T	597	597	0	0
67	M122	T	597	597	0	0
68	M123	T	597	597	0	0
69	M124	T	597	597	0	0
70	M125	T	597	597	0	0
71	M126	T	597	597	0	0
72	M127	T	597	597	0	0
73	M128	T	597	597	0	0
74	M129	T	597	597	0	0
75	M130	T	597	597	0	0
76	M131	T	597	597	0	0
77	M132	T	597	597	0	0

Member Distributed Loads (BLC 5 : THERMAL) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
78	M133	T	597	597	0	0
79	M134	T	597	597	0	0
80	M135	T	597	597	0	0
81	M136	T	597	597	0	0
82	M137	T	597	597	0	0
83	M138	T	597	597	0	0
84	M139	T	597	597	0	0
85	M140	T	597	597	0	0
86	M141	T	597	597	0	0
87	M142	T	597	597	0	0
88	M143	T	597	597	0	0
89	M21	T	102	102	0	0
90	M22	T	102	102	0	0
91	M23	T	102	102	0	0
92	M24	T	102	102	0	0
93	M25	T	102	102	0	0
94	M26	T	102	102	0	0
95	M29	T	102	102	0	0
96	M30	T	102	102	0	0
97	M31	T	102	102	0	0
98	M32	T	102	102	0	0
99	M33	T	102	102	0	0
100	M34	T	102	102	0	0
101	M57	T	102	102	0	0
102	M58	T	102	102	0	0
103	M59	T	102	102	0	0
104	M60	T	102	102	0	0
105	M61	T	102	102	0	0
106	M62	T	102	102	0	0
107	M63	T	102	102	0	0
108	M64	T	102	102	0	0
109	M65	T	102	102	0	0
110	M66	T	102	102	0	0
111	M67	T	102	102	0	0
112	M68	T	102	102	0	0
113	M69	T	102	102	0	0
114	M70	T	102	102	0	0
115	M80	T	102	102	0	0
116	M81	T	102	102	0	0
117	M82	T	102	102	0	0
118	M83	T	102	102	0	0
119	M84	T	102	102	0	0
120	M85	T	102	102	0	0
121	M86	T	102	102	0	0
122	M87	T	102	102	0	0
123	M88	T	102	102	0	0
124	M89	T	102	102	0	0
125	M90	T	102	102	0	0
126	M118	T	102	102	0	0
127	M119	T	102	102	0	0
128	M120	T	102	102	0	0
129	M151	T	102	102	0	0
130	M152	T	102	102	0	0
131	M153	T	102	102	0	0
132	M154	T	102	102	0	0
133	M155	T	102	102	0	0
134	M156	T	102	102	0	0

Member Distributed Loads (BLC 5 : THERMAL) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
135	M157	T	102	102	0	0
136	M158	T	102	102	0	0
137	M159	T	102	102	0	0
138	M160	T	102	102	0	0
139	M161	T	102	102	0	0
140	M162	T	102	102	0	0
141	M163	T	102	102	0	0
142	M164	T	102	102	0	0
143	M165	T	102	102	0	0
144	M166	T	102	102	0	0
145	M167	T	102	102	0	0
146	M168	T	102	102	0	0
147	M169	T	102	102	0	0
148	M170	T	102	102	0	0
149	M171	T	102	102	0	0
150	M172	T	102	102	0	0
151	M173	T	102	102	0	0
152	M174	T	102	102	0	0
153	M175	T	102	102	0	0
154	M176	T	102	102	0	0
155	M177	T	102	102	0	0
156	M178	T	102	102	0	0
157	M179	T	102	102	0	0
158	M180	T	102	102	0	0
159	M181	T	102	102	0	0
160	M182	T	102	102	0	0
161	M183	T	102	102	0	0
162	M7	T	102	102	0	0
163	M8	T	102	102	0	0
164	M9	T	102	102	0	0
165	M10	T	102	102	0	0
166	M144	T	102	102	0	0
167	M145	T	102	102	0	0
168	M146	T	102	102	0	0
169	M147	T	102	102	0	0
170	M148	T	102	102	0	0
171	M149	T	102	102	0	0
172	M150	T	102	102	0	0
173	M71	T	159	159	0	0
174	M191	T	159	159	0	0
175	M192	T	159	159	0	0
176	M193	T	159	159	0	0
177	M194	T	159	159	0	0
178	M195	T	159	159	0	0
179	M196	T	159	159	0	0
180	M197	T	159	159	0	0
181	M198	T	159	159	0	0
182	M199	T	159	159	0	0
183	M200	T	102	102	0	0
184	M201	T	597	597	0	0
185	M202	T	597	597	0	0
186	M204	T	597	597	0	0
187	M229	T	102	102	0	0
188	M230	T	102	102	0	0
189	M231	T	102	102	0	0
190	M232	T	102	102	0	0
191	M233	T	102	102	0	0

Company : **DMJM H&N**
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Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Member Distributed Loads (BLC 5 : THERMAL) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
192	M234	T	102	102	0	0
193	M205	T	102	102	0	0
194	M206	T	102	102	0	0
195	M207	T	102	102	0	0
196	M208	T	102	102	0	0
197	M209	T	102	102	0	0
198	M210	T	102	102	0	0
199	M211	T	102	102	0	0
200	M212	T	102	102	0	0
201	M213	T	102	102	0	0
202	M214	T	102	102	0	0
203	M215	T	102	102	0	0
204	M216	T	102	102	0	0
205	M217	T	102	102	0	0
206	M218	T	102	102	0	0
207	M219	T	102	102	0	0
208	M220	T	102	102	0	0
209	M221	T	102	102	0	0
210	M222	T	102	102	0	0
211	M223	T	102	102	0	0
212	M224	T	102	102	0	0
213	M225	T	102	102	0	0
214	M226	T	102	102	0	0
215	M227	T	102	102	0	0
216	M228	T	102	102	0	0
217	M255	T	102	102	0	0
218	M256	T	102	102	0	0
219	M257	T	102	102	0	0
220	M258	T	102	102	0	0
221	M259	T	102	102	0	0
222	M260	T	102	102	0	0
223	M235	T	102	102	0	0
224	M236	T	102	102	0	0
225	M237	T	102	102	0	0
226	M238	T	102	102	0	0
227	M239	T	102	102	0	0
228	M240	T	102	102	0	0
229	M241	T	102	102	0	0
230	M242	T	102	102	0	0
231	M243	T	102	102	0	0
232	M244	T	102	102	0	0
233	M245	T	102	102	0	0
234	M246	T	102	102	0	0
235	M247	T	102	102	0	0
236	M248	T	102	102	0	0
237	M249	T	102	102	0	0
238	M250	T	102	102	0	0
239	M251	T	102	102	0	0
240	M252	T	102	102	0	0
241	M253	T	102	102	0	0
242	M254	T	102	102	0	0
243	M261	T	597	597	0	0
244	M262	T	597	597	0	0
245	M263	T	102	102	0	0
246	M264	T	102	102	0	0
247	M265	T	102	102	0	0
248	M266	T	102	102	0	0

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Member Distributed Loads (BLC 5 : THERMAL) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
249	M267	T	159	159	0	16

Member Distributed Loads (BLC 6 : WIND X)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
1	M7	X	9.16	9.16	0	0
2	M8	X	9.16	9.16	0	0
3	M9	X	4.84	4.84	0	0
4	M10	X	4.84	4.84	0	0
5	M54	X	11.93	11.93	0	0
6	M55	X	11.93	11.93	0	0
7	M56	X	11.93	11.93	0	0
8	M57	X	17.63	17.63	0	0
9	M58	X	17.63	17.63	0	0
10	M59	X	17.63	17.63	0	0
11	M61	X	17.63	17.63	0	0
12	M62	X	17.63	17.63	0	0
13	M63	X	17.63	17.63	0	0
14	M66	X	17.63	17.63	0	0
15	M67	X	17.63	17.63	0	0
16	M137	X	11.93	11.93	0	0
17	M138	X	11.93	11.93	0	0
18	M139	X	11.93	11.93	0	0
19	M140	X	11.93	11.93	0	0
20	M141	X	11.93	11.93	0	0
21	M142	X	11.93	11.93	0	0
22	M143	X	11.93	11.93	0	0
23	M144	X	9.16	9.16	0	0
24	M145	X	9.16	9.16	0	0
25	M146	X	9.16	9.16	0	0
26	M147	X	9.16	9.16	0	0
27	M148	X	4.84	4.84	0	0
28	M149	X	4.84	4.84	0	0
29	M150	X	4.84	4.84	0	0
30	M151	X	17.63	17.63	0	0
31	M152	X	17.63	17.63	0	0
32	M153	X	17.63	17.63	0	0
33	M154	X	17.63	17.63	0	0
34	M155	X	17.63	17.63	0	0
35	M156	X	17.63	17.63	0	0
36	M157	X	17.63	17.63	0	0
37	M158	X	17.63	17.63	0	0
38	M159	X	17.63	17.63	0	0
39	M160	X	17.63	17.63	0	0
40	M161	X	17.63	17.63	0	0
41	M164	X	17.63	17.63	0	0
42	M168	X	17.63	17.63	0	0
43	M170	X	17.63	17.63	0	0
44	M171	X	17.63	17.63	0	0
45	M172	X	17.63	17.63	0	0
46	M173	X	17.63	17.63	0	0
47	M174	X	17.63	17.63	0	0
48	M175	X	17.63	17.63	0	0
49	M176	X	17.63	17.63	0	0
50	M191	X	22.13	22.13	0	0
51	M192	X	22.13	22.13	0	0
52	M193	X	22.13	22.13	0	0
53	M194	X	22.13	22.13	0	0

Member Distributed Loads (BLC 6 : WIND X) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
54	M195	X	22.13	22.13	0	0
55	M196	X	22.13	22.13	0	0
56	M197	X	22.13	22.13	0	0
57	M198	X	22.13	22.13	0	0
58	M199	X	22.13	22.13	0	0
59	M204	X	11.93	11.93	0	0
60	M212	X	4.84	4.84	0	0
61	M211	X	4.84	4.84	0	0
62	M210	X	4.84	4.84	0	0
63	M209	X	4.84	4.84	0	0
64	M208	X	4.84	4.84	0	0
65	M207	X	4.84	4.84	0	0
66	M221	X	4.84	4.84	0	0
67	M222	X	4.84	4.84	0	0
68	M223	X	4.84	4.84	0	0
69	M224	X	4.84	4.84	0	0
70	M225	X	4.84	4.84	0	0
71	M232	X	4.84	4.84	0	0
72	M220	X	4.84	4.84	0	0
73	M213	X	4.84	4.84	0	0
74	M229	X	3.28	3.28	0	0
75	M233	X	3.28	3.28	0	0
76	M234	X	3.28	3.28	0	0
77	M230	X	3.28	3.28	0	0
78	M205	X	3.28	3.28	0	0
79	M206	X	3.28	3.28	0	0
80	M231	X	3.28	3.28	0	0
81	M226	X	9.16	9.16	0	0
82	M227	X	9.16	9.16	0	0
83	M256	X	9.16	9.16	0	0
84	M255	X	9.16	9.16	0	0
85	M228	X	9.16	9.16	0	0
86	M261	X	11.93	11.93	0	0
87	M262	X	11.93	11.93	0	0
88	M263	X	3.28	3.28	0	0
89	M264	X	3.28	3.28	0	0
90	M265	X	3.28	3.28	0	0
91	M266	X	4.84	4.84	0	138.125
92	M267	X	22.13	22.13	0	16

Member Distributed Loads (BLC 7 : WIND Z)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
1	M8	Z	9.16	9.16	0	0
2	M10	Z	4.84	4.84	0	0
3	M53	Z	11.93	11.93	0	0
4	M56	Z	11.93	11.93	0	0
5	M57	Z	17.63	17.63	0	0
6	M59	Z	17.63	17.63	0	0
7	M60	Z	17.63	17.63	0	0
8	M62	Z	17.63	17.63	0	0
9	M64	Z	17.63	17.63	0	0
10	M67	Z	17.63	17.63	0	0
11	M68	Z	17.63	17.63	0	0
12	M69	Z	17.63	17.63	0	0
13	M70	Z	17.63	17.63	0	0
14	M71	Z	22.13	22.13	0	0
15	M137	Z	11.93	11.93	0	0

Member Distributed Loads (BLC 7 : WIND Z) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
16	M138	Z	11.93	11.93	0	0
17	M141	Z	11.93	11.93	0	0
18	M142	Z	11.93	11.93	0	0
19	M143	Z	11.93	11.93	0	0
20	M144	Z	9.16	9.16	0	0
21	M145	Z	9.16	9.16	0	0
22	M146	Z	9.16	9.16	0	0
23	M147	Z	9.16	9.16	0	0
24	M148	Z	4.84	4.84	0	0
25	M149	Z	4.84	4.84	0	0
26	M150	Z	4.84	4.84	0	0
27	M151	Z	17.63	17.63	0	0
28	M152	Z	17.63	17.63	0	0
29	M153	Z	17.63	17.63	0	0
30	M155	Z	17.63	17.63	0	0
31	M157	Z	17.63	17.63	0	0
32	M158	Z	17.63	17.63	0	0
33	M159	Z	17.63	17.63	0	0
34	M171	Z	17.63	17.63	0	0
35	M172	Z	17.63	17.63	0	0
36	M173	Z	17.63	17.63	0	0
37	M174	Z	17.63	17.63	0	0
38	M175	Z	17.63	17.63	0	0
39	M176	Z	17.63	17.63	0	0
40	M177	Z	17.63	17.63	0	0
41	M191	Z	22.13	22.13	0	0
42	M192	Z	22.13	22.13	0	0
43	M193	Z	22.13	22.13	0	0
44	M194	Z	22.13	22.13	0	0
45	M195	Z	22.13	22.13	0	0
46	M196	Z	22.13	22.13	0	0
47	M197	Z	22.13	22.13	0	0
48	M204	Z	11.93	11.93	0	67.577
49	M216	Z	4.84	4.84	0	0
50	M217	Z	4.84	4.84	0	0
51	M218	Z	4.84	4.84	0	0
52	M215	Z	4.84	4.84	0	0
53	M214	Z	4.84	4.84	0	0
54	M219	Z	4.84	4.84	0	0
55	M209	Z	4.84	4.84	0	0
56	M231	Z	3.28	3.28	0	0
57	M229	Z	3.28	3.28	0	0
58	M230	Z	3.28	3.28	0	0
59	M255	Z	9.16	9.16	0	0
60	M256	Z	9.16	9.16	0	0
61	M257	Z	9.16	9.16	0	0
62	M235	Z	9.16	9.16	0	0

Member Point Loads (BLC 2 : DAMPER WEIGHT)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	M85	Y	-76	%50
2	M86	Y	-76	%50
3	M168	Y	-151	%50
4	M169	Y	-151	%50

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Member Point Loads (BLC 3 : SEISMIC X)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	M85	X	38	%50
2	M86	X	38	%50
3	M168	X	75.5	%50
4	M169	X	75.5	%50

Member Point Loads (BLC 4 : SEISMIC Z)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	M85	Z	38	%50
2	M86	Z	38	%50
3	M168	Z	75.5	%50
4	M169	Z	75.5	%50

Load Combinations

	Description	Sol..	PD..	SR..	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	Normal + Wind (+X) + Thermal	Yes			DL	1	WLX	1	5	1										
2	Normal + Wind (-X) + Thermal	Yes			DL	1	WLX	-1	5	1										
3	Normal + Wind (+Z) + Thermal	Yes			DL	1	WLZ	1	5	1										
4	Normal + Wind (-Z) + Thermal	Yes			DL	1	WLZ	-1	5	1										
5	Normal + Seismic (+X)(+Z) +..	Yes			DL	1	ELX	1	ELZ	1	5	1								
6	Normal + Seismic (+X)(-Z) + ..	Yes			DL	1	ELX	1	ELZ	-1	5	1								
7	Normal + Seismic (-X)(+Z) + ..	Yes			DL	1	ELX	-1	ELZ	1	5	1								
8	Normal + Seismic (-X)(-Z) + ...	Yes			DL	1	ELX	-1	ELZ	-1	5	1								

Envelope Joint Reactions

	Joint		X [lb]	Ic	Y [lb]	Ic	Z [lb]	Ic	MX [lb-ft]	Ic	MY [lb-ft]	Ic	MZ [lb-ft]	Ic
1	N10	max	0	1	704.625	6	0	1	0	1	0	1	0	1
2		min	0	1	16.015	7	0	1	0	1	0	1	0	1
3	N15	max	0	1	968.437	7	0	1	0	1	0	1	0	1
4		min	0	1	-484.651	6	0	1	0	1	0	1	0	1
5	N44	max	127.373	5	0	1	0	1	0	1	0	1	0	1
6		min	-116.043	8	0	1	0	1	0	1	0	1	0	1
7	N45	max	-332.859	8	2177.341	5	0	1	0	1	0	1	0	1
8		min	-1141.774	5	1330.088	8	0	1	0	1	0	1	0	1
9	N50	max	0	1	-301.596	8	0	1	0	1	0	1	0	1
10		min	0	1	-498.948	5	0	1	0	1	0	1	0	1
11	N49	max	423.634	2	152.968	5	0	1	0	1	0	1	0	1
12		min	269.461	1	18.572	8	0	1	0	1	0	1	0	1
13	N94	max	14.705	7	128.961	5	0	1	0	1	0	1	0	1
14		min	-123.807	6	102.278	8	0	1	0	1	0	1	0	1
15	N89	max	20.453	7	40.906	7	20.453	6	-2855.388	5	704.077	6	160.961	6
16		min	-20.453	5	40.906	1	-20.453	5	-3015.255	8	562.387	7	-36.753	7
17	N96	max	0	1	0	1	0	1	-133.472	8	-228.152	8	-74.673	8
18		min	0	1	0	1	0	1	-170.252	5	-443.503	5	-188.824	5
19	N24	max	11.834	8	23.668	7	11.834	8	1158.271	6	979.532	8	1207.229	7
20		min	-11.834	5	23.668	6	-11.834	5	-1004.682	7	-674.411	5	686.894	6
21	N27	max	11.581	7	23.162	6	11.581	6	563.611	6	705.991	8	-615.192	6
22		min	-11.581	6	23.162	7	-11.581	7	300.117	7	-75.523	5	-897.442	7
23	N28	max	19.622	7	39.245	8	19.622	8	723.587	6	1530.8	8	-687.343	6
24		min	-19.622	6	39.244	5	-19.622	5	508.314	7	588.974	5	-992.905	7
25	N31	max	536.41	7	173.838	8	625.782	8	713.124	7	457.831	5	2257.298	8
26		min	144.512	6	-596.317	5	-341.152	5	-1700.268	6	-2996.121	8	31.576	5
27	N166	max	0	1	-3157.122	8	1540.214	4	0	1	0	1	0	1
28		min	0	1	-3498.702	5	-77.62	3	0	1	0	1	0	1
29	N76	max	888.028	7	-283.774	6	0	1	0	1	0	1	0	1

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Envelope Joint Reactions (Continued)

	Joint		X [lb]	lc	Y [lb]	lc	Z [lb]	lc	MX [lb-ft]	lc	MY [lb-ft]	lc	MZ [lb-ft]	lc
30		min	550.325	6	-442.738	7	0	1	0	1	0	1	0	1
31	N75	max	-598.531	2	725.893	1	0	1	0	1	0	1	0	1
32		min	-1790.218	1	153.428	2	0	1	0	1	0	1	0	1
33	N62	max	270.163	2	506.737	6	230.835	4	0	1	0	1	0	1
34		min	-270.167	1	506.735	7	-230.835	3	0	1	0	1	0	1
35	N197	max	139.059	7	602.824	8	0	1	0	1	0	1	0	1
36		min	75.043	6	546.213	5	0	1	0	1	0	1	0	1
37	N41	max	96.455	7	216.717	8	96.455	8	0	1	0	1	0	1
38		min	-96.455	6	216.717	5	-96.455	5	0	1	0	1	0	1
39	N127	max	646.796	7	-17.252	8	0	1	0	1	0	1	0	1
40		min	248.024	6	-94.349	5	0	1	0	1	0	1	0	1
41	N82	max	523.058	7	3792.817	7	178.599	6	0	1	0	1	0	1
42		min	-511.164	6	3382.351	6	-589.254	7	0	1	0	1	0	1
43	N205	max	0	1	2203.107	2	0	1	0	1	0	1	0	1
44		min	0	1	2148.689	1	0	1	0	1	0	1	0	1
45	N206	max	29.507	2	43.333	1	17.333	6	-4234.904	6	1643.144	3	-6235.746	2
46		min	-29.507	1	43.333	1	-17.333	5	-4949.891	7	258.917	4	-6812.21	1
47	N195	max	94.558	8	-141.307	5	202.453	8	0	1	0	1	0	1
48		min	-308.66	5	-197.918	8	-202.453	7	0	1	0	1	0	1
49	N207	max	247.839	7	1681.966	5	209.718	6	0	1	0	1	0	1
50		min	66.93	6	453.618	8	-237.517	7	0	1	0	1	0	1
51	N214	max	37.086	8	97.375	7	0	1	0	1	0	1	0	1
52		min	-76.654	5	85.86	6	0	1	0	1	0	1	0	1
53	N217	max	67.433	2	106.696	6	0	1	0	1	0	1	0	1
54		min	-71.415	1	104.475	7	0	1	0	1	0	1	0	1
55	N218	max	155.891	2	115.179	7	0	1	0	1	0	1	0	1
56		min	18.056	1	114.664	6	0	1	0	1	0	1	0	1
57	N222	max	0	1	81.843	5	24.548	6	0	1	0	1	0	1
58		min	0	1	81.643	8	-434.646	7	0	1	0	1	0	1
59	N223	max	0	1	102.82	8	-52.536	4	0	1	0	1	0	1
60		min	0	1	102.552	5	-164.791	3	0	1	0	1	0	1
61	N224	max	0	1	104.098	5	539.32	6	0	1	0	1	0	1
62		min	0	1	99.779	8	122.93	7	0	1	0	1	0	1
63	N228	max	229.218	8	22.497	8	0	1	0	1	0	1	0	1
64		min	-158.467	5	16.67	5	0	1	0	1	0	1	0	1
65	N229	max	80.047	8	166.227	8	0	1	0	1	0	1	0	1
66		min	-64.055	5	165.276	5	0	1	0	1	0	1	0	1
67	N230	max	61.923	2	130.671	5	0	1	0	1	0	1	0	1
68		min	-87.928	1	119.742	8	0	1	0	1	0	1	0	1
69	N231	max	90.746	7	43.007	8	0	1	0	1	0	1	0	1
70		min	4.867	6	-10.958	5	0	1	0	1	0	1	0	1
71	N235	max	113.452	2	-.302	8	0	1	0	1	0	1	0	1
72		min	13.296	1	-109.973	5	0	1	0	1	0	1	0	1
73	N237	max	126.901	7	-23.26	8	0	1	0	1	0	1	0	1
74		min	38.536	6	-87.996	5	0	1	0	1	0	1	0	1
75	N242	max	-63.274	8	364.339	7	0	1	0	1	0	1	0	1
76		min	-314.627	5	227.208	6	0	1	0	1	0	1	0	1
77	N247	max	689.365	7	93.132	6	-231.663	6	0	1	0	1	0	1
78		min	-382.575	6	-99.618	7	-472.445	7	0	1	0	1	0	1
79	N248	max	0	1	1131.031	5	387.829	6	0	1	0	1	0	1
80		min	0	1	869.281	8	-205.653	7	0	1	0	1	0	1
81	N269	max	361.759	7	369.591	8	257.511	8	2260.149	7	-186.253	6	1666.024	7
82		min	-89.71	6	145.335	5	-320.343	5	-200.287	6	-2362.09	7	206.352	6
83	N270	max	-20.894	8	115.393	5	-20.143	8	0	1	0	1	0	1
84		min	-89.203	5	47.431	8	-112.315	5	0	1	0	1	0	1
85	N271	max	-23.565	8	150.413	5	-40.4	8	0	1	0	1	0	1
86		min	-75.659	5	67.688	8	-162.064	5	0	1	0	1	0	1

Envelope Joint Reactions (Continued)

	Joint		X [lb]	lc	Y [lb]	lc	Z [lb]	lc	MX [lb-ft]	lc	MY [lb-ft]	lc	MZ [lb-ft]	lc
87	N272	max	-42.891	8	133.044	5	-49.106	8	0	1	0	1	0	1
88		min	-114.06	5	65.62	8	-139.97	5	0	1	0	1	0	1
89	N101	max	154.767	7	97.508	7	726.005	8	0	1	0	1	0	1
90		min	-138.124	6	-15.375	6	-698.197	5	0	1	0	1	0	1
91	N273	max	-20.584	7	125.234	5	0	1	0	1	0	1	0	1
92		min	-169.608	6	123.319	8	0	1	0	1	0	1	0	1
93	N120	max	666.32	8	0	1	0	1	0	1	0	1	0	1
94		min	-899.958	5	0	1	0	1	0	1	0	1	0	1
95	N20	max	0	1	0	1	0	1	0	1	0	1	0	1
96		min	0	1	0	1	0	1	0	1	0	1	0	1
97	N208	max	68.041	8	0	1	119.253	6	0	1	0	1	0	1
98		min	-169.149	5	0	1	-403.879	7	0	1	0	1	0	1
99	Totals:	max	4384.132	7	9588.026	6	4384.137	6						
100		min	-4406.135	6	9588.023	7	-4406.124	7						

Envelope Joint Displacements

	Joint		X [in]	lc	Y [in]	lc	Z [in]	lc	X Rotation ...	lc	Y Rotation ...	lc	Z Rotation ...	lc
1	N8	max	.092	6	.012	6	.109	5	1.509e-4	6	3.668e-4	6	-1.148e-4	6
2		min	-.458	7	-.008	7	.108	8	-1.493e-4	7	-3.783e-3	7	-5.364e-3	7
3	N9	max	.1	6	.009	6	.109	5	1.509e-4	6	3.668e-4	6	-1.148e-4	6
4		min	-.542	7	-.005	7	.108	8	-1.493e-4	7	-3.783e-3	7	-5.364e-3	7
5	N10	max	.103	6	0	7	.134	5	5.961e-4	6	-1.216e-4	6	-1.148e-4	6
6		min	-.626	7	0	6	.133	8	-2.545e-4	7	-3.214e-3	7	-5.364e-3	7
7	N11	max	.031	6	.021	7	.211	5	2.299e-4	6	-1.149e-3	7	-1.148e-4	6
8		min	-.789	7	-.055	6	.209	8	-1.755e-4	7	-1.851e-3	6	-5.364e-3	7
9	N12	max	.007	6	-.009	7	.238	5	-6.922e-5	6	-1.01e-3	7	-1.563e-4	6
10		min	-.8	7	-.057	6	.232	8	-8.743e-5	7	-1.965e-3	6	-5.352e-3	7
11	N13	max	-.006	6	.056	7	.221	7	-6.922e-5	6	-9.987e-4	7	-7.327e-5	6
12		min	-.812	7	-.056	6	.213	6	-8.743e-5	7	-1.976e-3	6	-5.377e-3	7
13	N14	max	-.066	6	.022	7	.262	5	2.736e-4	7	-8.582e-4	7	-1.148e-4	6
14		min	-.838	7	-.042	6	.259	8	-8.347e-4	6	-2.079e-3	6	-5.364e-3	7
15	N15	max	-.131	6	0	6	.291	5	1.418e-3	7	-2.382e-4	7	-1.148e-4	6
16		min	-.853	7	0	7	.288	8	-2.19e-3	6	-2.505e-3	6	-5.364e-3	7
17	N16	max	-.231	6	.112	6	.33	5	2.92e-3	7	2.953e-4	7	-1.148e-4	6
18		min	-.85	7	-.085	7	.327	8	-3.594e-3	6	-2.748e-3	6	-5.364e-3	7
19	N17	max	-.229	5	.312	8	.773	7	3.055e-3	7	1.017e-3	5	-6.152e-4	6
20		min	-.342	8	.185	5	-.192	6	-2.66e-3	6	-2.066e-3	8	-4.004e-3	7
21	N18	max	-.224	5	.319	8	.784	7	2.859e-3	7	1.089e-3	5	-7.054e-4	6
22		min	-.328	8	.196	5	-.206	6	-2.367e-3	6	-2.043e-3	8	-3.749e-3	7
23	N19	max	-.224	5	.318	8	.79	7	2.664e-3	7	1.14e-3	5	-8.152e-4	6
24		min	-.314	8	.21	5	-.218	6	-2.083e-3	6	-2.019e-3	8	-3.447e-3	7
25	N20	max	-.24	5	.294	8	.778	7	2.017e-3	7	1.099e-3	5	-1.202e-3	6
26		min	-.28	8	.25	5	-.238	6	-1.391e-3	6	-1.697e-3	8	-2.296e-3	7
27	N21	max	-.245	8	.328	7	.543	7	2.536e-4	7	1.708e-4	5	-2.276e-4	6
28		min	-.265	5	.218	6	-.472	6	-2.977e-4	6	-2.483e-4	8	-3.999e-4	7
29	N22	max	-.254	5	.311	7	.693	7	1.116e-3	7	7.394e-4	5	-9.41e-4	6
30		min	-.261	8	.236	6	-.323	6	-1.163e-3	6	-1.061e-3	8	-1.654e-3	7
31	N23	max	-.227	5	.312	8	.789	7	2.455e-3	7	1.16e-3	5	-9.399e-4	6
32		min	-.301	8	.225	5	-.226	6	-1.813e-3	6	-1.959e-3	8	-3.091e-3	7
33	N24	max	0	5	0	6	0	5	0	7	0	5	0	6
34		min	0	8	0	7	0	8	0	6	0	8	0	7
35	N25	max	0	5	0	7	0	7	0	6	0	5	0	8
36		min	0	8	0	6	0	6	0	7	0	8	0	5
37	N26	max	0	6	0	7	0	5	0	7	0	5	0	8
38		min	0	7	0	6	0	8	0	6	0	8	0	5
39	N27	max	0	6	0	7	0	7	0	7	0	5	0	7

Envelope Joint Displacements (Continued)

	Joint		X [in]	lc	Y [in]	lc	Z [in]	lc	X Rotation ...	lc	Y Rotation ...	lc	Z Rotation ...	lc
40		min	0	7	0	6	0	6	0	6	0	8	0	6
41	N28	max	0	6	0	5	0	5	0	7	0	5	0	7
42		min	0	7	0	8	0	8	0	6	0	8	0	6
43	N29	max	0	6	0	7	0	5	0	7	0	5	0	7
44		min	0	7	0	6	0	8	0	6	0	8	0	6
45	N30	max	0	6	0	7	0	5	0	5	0	8	0	7
46		min	0	7	0	6	0	8	0	8	0	5	0	6
47	N31	max	0	6	0	5	0	5	0	6	0	8	0	5
48		min	0	7	0	8	0	8	0	7	0	5	0	8
49	N32	max	-.058	5	.279	6	.659	5	-4.271e-4	7	7.845e-5	5	1.27e-3	7
50		min	-.096	8	.274	7	.09	8	-7.05e-4	6	-7.849e-4	8	8.84e-4	6
51	N33	max	-.046	5	.211	6	.664	5	-5.565e-4	7	6.842e-5	5	1.42e-3	7
52		min	-.081	8	.206	7	.099	8	-8.35e-4	6	-9.355e-4	8	1.03e-3	6
53	N34	max	-.028	5	.112	6	.674	5	-5.378e-4	7	-1.498e-4	5	1.454e-3	7
54		min	-.057	8	.106	7	.111	8	-7.326e-4	6	-1.014e-3	8	1.011e-3	6
55	N35	max	-.045	5	.269	8	.657	5	-8.999e-4	5	3.462e-4	5	1.179e-3	8
56		min	-.09	8	.254	5	.133	8	-1.571e-3	8	-8.77e-4	8	8.587e-4	5
57	N36	max	.238	5	-.255	5	-.114	5	1.212e-3	6	1.372e-3	8	-5.488e-4	5
58		min	.179	8	-.281	8	-.238	8	-1.425e-3	7	-3.666e-4	5	-1.711e-3	8
59	N37	max	.107	5	-.104	6	-.148	5	9.231e-4	8	1.073e-3	8	-1.07e-4	5
60		min	.076	8	-.115	7	-.183	8	-7.497e-4	5	-3.075e-4	5	-1.223e-3	8
61	N38	max	.016	5	-.013	6	-.079	5	3.466e-4	8	4.932e-4	8	-1.236e-5	5
62		min	.011	8	-.016	7	-.081	8	-1.889e-4	5	-1.059e-4	5	-5.257e-4	8
63	N39	max	.058	5	-.053	6	-.134	5	6.899e-4	8	8.494e-4	8	-4.257e-5	5
64		min	.04	8	-.062	7	-.147	8	-4.705e-4	5	-2.256e-4	5	-9.488e-4	8
65	N40	max	.157	5	-.881	5	.067	5	-1.568e-3	5	1.234e-3	8	-6.876e-4	6
66		min	.047	8	-.914	8	-.269	8	-1.837e-3	8	-2.383e-4	5	-9.196e-4	7
67	N41	max	0	6	0	5	0	5	9.207e-4	5	4.867e-3	8	1.139e-6	8
68		min	0	7	0	8	0	8	-1.591e-3	8	3.253e-3	5	-6.813e-4	5
69	N42	max	.035	6	-.329	5	-.018	6	3.879e-4	5	6.189e-3	8	3.53e-4	6
70		min	.01	7	-.335	8	-.123	7	-1.276e-3	8	4.555e-3	5	-1.919e-4	7
71	N43	max	.025	5	.113	8	.7	5	-1.136e-3	5	5.996e-4	5	7.313e-4	8
72		min	-.012	8	.093	5	.212	8	-1.919e-3	8	-3.554e-4	8	4.205e-4	5
73	N44	max	0	8	.19	7	.203	7	-8.696e-4	5	1.203e-4	5	1.725e-4	8
74		min	0	5	.036	6	-.839	6	-1.953e-3	8	-1.427e-5	8	-1.281e-4	5
75	N45	max	0	5	-.001	8	.409	5	-3.042e-3	6	2.861e-5	5	8.75e-4	6
76		min	0	8	-.002	5	-.078	8	-3.548e-3	7	-3.015e-4	8	8.204e-4	7
77	N46	max	.035	5	-.226	6	.083	5	-4.527e-3	5	-3.079e-4	8	1.377e-3	5
78		min	.02	8	-.251	7	-.403	8	-5.073e-3	8	-1.003e-3	5	9.29e-4	8
79	N47	max	.036	5	.15	8	.817	5	-1.038e-3	5	4.849e-4	5	5.817e-4	8
80		min	-.019	8	.114	5	.33	8	-1.901e-3	8	-2.777e-4	8	2.737e-4	5
81	N48	max	.011	5	.07	8	.571	5	-1.777e-3	5	6.221e-4	5	7.725e-4	8
82		min	-.007	8	.063	5	.084	8	-2.234e-3	8	-2.375e-4	8	6.199e-4	5
83	N49	max	0	1	0	8	1.381	5	-1.471e-4	4	7.88e-3	8	2.01e-3	6
84		min	0	2	0	5	1.212	8	-3.811e-4	3	7.131e-3	5	1.726e-3	7
85	N50	max	-.902	1	0	5	.655	5	3.637e-4	3	6.937e-3	5	4.108e-3	1
86		min	-.914	2	0	8	.487	8	1.214e-4	4	6.309e-3	8	3.977e-3	2
87	N51	max	-.932	1	.003	3	.616	5	3.759e-4	3	6.785e-3	5	4.201e-3	1
88		min	-.944	2	.001	4	.448	8	1.1e-4	4	6.093e-3	8	4.076e-3	2
89	N52	max	.217	6	.042	2	.043	3	9.767e-5	7	-3.197e-5	4	1.459e-3	3
90		min	.204	7	.04	1	.02	4	-2.034e-4	6	-3.835e-4	3	1.449e-3	4
91	N53	max	.234	6	.058	2	.047	3	1.191e-4	7	-1.612e-5	4	1.487e-3	6
92		min	.221	7	.056	1	.02	4	-1.451e-4	6	-3.671e-4	3	1.47e-3	7
93	N54	max	.168	6	0	8	.01	6	-2.726e-4	7	-6.1e-4	7	1.493e-4	2
94		min	.156	7	0	5	.006	7	-7.393e-4	6	-9.723e-4	6	1.219e-4	1
95	N55	max	.152	6	.002	5	-.004	7	-3.501e-4	7	-6.702e-4	7	-4.113e-4	6
96		min	.14	7	.002	8	-.007	6	-8.736e-4	6	-1.186e-3	6	-4.36e-4	7

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Joint Displacements (Continued)

	Joint		X [in]	lc	Y [in]	lc	Z [in]	lc	X Rotation ...	lc	Y Rotation ...	lc	Z Rotation ...	lc
97	N56	max	.265	6	.077	2	.052	3	1.528e-4	7	-2.459e-7	4	1.48e-3	1
98		min	.252	7	.076	1	.02	4	-5.686e-5	6	-3.364e-4	3	1.441e-3	2
99	N57	max	.3	6	.082	6	.056	3	1.85e-4	7	6.416e-6	4	1.408e-3	1
100		min	.287	7	.081	7	.019	4	2.092e-5	6	-2.993e-4	3	1.347e-3	2
101	N58	max	.026	6	-.035	7	-.01	6	-9.008e-4	7	-2.902e-4	7	-1.331e-3	2
102		min	-.009	7	-.051	6	-.017	7	-1.51e-3	6	-1.737e-3	6	-1.631e-3	1
103	N59	max	.12	1	.067	7	-.029	7	-4.439e-4	7	-3.786e-4	7	-1.087e-3	2
104		min	.071	2	.067	6	-.081	6	-1.262e-3	6	-1.649e-3	6	-1.874e-3	1
105	N60	max	.132	1	.072	7	-.033	7	-4.444e-4	7	-3.782e-4	7	-1.087e-3	2
106		min	.078	2	.071	6	-.089	6	-1.263e-3	6	-1.649e-3	6	-1.875e-3	1
107	N61	max	.144	1	.075	7	-.038	7	-4.449e-4	7	-3.78e-4	7	-1.087e-3	2
108		min	.086	2	.071	6	-.098	6	-1.263e-3	6	-1.65e-3	6	-1.875e-3	1
109	N62	max	0	1	0	7	0	3	-4.636e-4	7	-3.835e-4	7	-1.139e-3	2
110		min	0	2	0	6	0	4	-1.223e-3	6	-1.644e-3	6	-1.823e-3	1
111	N63	max	.072	6	-.069	7	-.009	6	-8.863e-4	7	-2.846e-4	7	-1.326e-3	2
112		min	.009	7	-.1	6	-.033	7	-1.514e-3	6	-1.743e-3	6	-1.657e-3	1
113	N64	max	.047	6	-.037	7	-.04	7	-8.91e-4	7	-2.828e-4	7	-1.304e-3	2
114		min	-.015	7	-.061	6	-.051	6	-1.51e-3	6	-1.745e-3	6	-1.636e-3	1
115	N65	max	.109	6	-.088	7	-.031	6	-8.451e-4	7	-2.855e-4	7	-1.309e-3	2
116		min	.015	7	-.132	6	-.055	7	-1.485e-3	6	-1.742e-3	6	-1.668e-3	1
117	N66	max	.084	6	-.056	7	-.062	7	-8.497e-4	7	-2.877e-4	7	-1.294e-3	2
118		min	-.009	7	-.093	6	-.073	6	-1.481e-3	6	-1.74e-3	6	-1.653e-3	1
119	N67	max	.13	6	-.087	7	-.072	6	-7.862e-4	7	-3.007e-4	7	-1.286e-3	2
120		min	.009	7	-.14	6	-.078	7	-1.436e-3	6	-1.727e-3	6	-1.676e-3	1
121	N68	max	-.055	7	.122	6	.096	6	-6.398e-4	7	-3.53e-4	7	-1.238e-3	2
122		min	-.198	6	.046	7	.087	7	-1.321e-3	6	-1.675e-3	6	-1.724e-3	1
123	N69	max	-.034	7	.072	6	.092	6	-5.642e-4	7	-3.688e-4	7	-1.225e-3	2
124		min	-.148	6	.016	7	.068	7	-1.265e-3	6	-1.659e-3	6	-1.751e-3	1
125	N70	max	-.033	7	.067	6	.088	6	-5.539e-4	7	-3.698e-4	7	-1.223e-3	2
126		min	-.141	6	.014	7	.064	7	-1.258e-3	6	-1.658e-3	6	-1.754e-3	1
127	N71	max	-.021	7	.026	6	.084	6	-5.464e-4	7	-3.7e-4	7	-1.22e-3	2
128		min	-.087	6	-.004	7	.059	7	-1.252e-3	6	-1.658e-3	6	-1.758e-3	1
129	N72	max	-.059	7	.112	6	.06	8	-5.676e-4	7	-3.693e-4	7	-1.211e-3	2
130		min	-.172	6	.047	7	.051	5	-1.262e-3	6	-1.658e-3	6	-1.736e-3	1
131	N73	max	-.058	7	.107	6	.056	8	-5.577e-4	7	-3.701e-4	7	-1.208e-3	2
132		min	-.166	6	.045	7	.047	5	-1.254e-3	6	-1.657e-3	6	-1.739e-3	1
133	N74	max	-.046	7	.066	6	.052	8	-5.498e-4	7	-3.699e-4	7	-1.204e-3	2
134		min	-.112	6	.027	7	.043	5	-1.249e-3	6	-1.658e-3	6	-1.742e-3	1
135	N75	max	0	1	0	2	-.116	7	-4.747e-4	7	-1.221e-3	7	1.111e-3	6
136		min	0	2	0	1	-.225	6	-8.651e-4	6	-1.762e-3	6	1.015e-3	7
137	N76	max	0	6	0	7	-.586	5	-2.507e-4	7	-9.622e-4	7	5.781e-4	1
138		min	0	7	0	6	-.622	8	-7.243e-4	6	-1.48e-3	6	3.523e-4	2
139	N77	max	.155	1	.075	7	-.045	7	-4.452e-4	7	-3.779e-4	7	-1.087e-3	2
140		min	.093	2	.066	6	-.106	6	-1.264e-3	6	-1.65e-3	6	-1.875e-3	1
141	N78	max	.16	1	.072	7	-.05	7	-4.454e-4	7	-3.778e-4	7	-1.087e-3	2
142		min	.097	2	.059	6	-.112	6	-1.264e-3	6	-1.65e-3	6	-1.875e-3	1
143	N79	max	-.024	7	.015	6	.038	6	-5.019e-4	7	-3.748e-4	7	-1.19e-3	2
144		min	-.057	6	-.002	7	.029	7	-1.222e-3	6	-1.653e-3	6	-1.771e-3	1
145	N80	max	.16	1	.066	7	-.054	7	-4.454e-4	7	-3.778e-4	7	-1.087e-3	2
146		min	.098	2	.05	6	-.113	6	-1.264e-3	6	-1.65e-3	6	-1.875e-3	1
147	N81	max	-.404	5	.18	8	.876	7	3.132e-3	7	1.087e-3	5	-7.909e-4	8
148		min	-.471	8	.111	5	-.084	6	-2.837e-5	6	-1.812e-3	8	-2.63e-3	5
149	N82	max	0	6	0	6	0	7	-7.695e-4	7	-3.692e-4	7	-1.364e-3	7
150		min	0	7	0	7	0	6	-1.355e-3	6	-1.658e-3	6	-1.598e-3	6
151	N83	max	-.763	5	-.091	6	.747	7	4.298e-3	7	6.546e-4	5	-5.389e-4	8
152		min	-.778	8	-.113	7	-.131	6	1.865e-3	6	-1.68e-3	8	-2.007e-3	5
153	N84	max	.121	5	.733	1	.57	7	6.132e-3	7	-5.059e-4	5	-1.47e-4	8

Envelope Joint Displacements (Continued)

	Joint		X [in]	lc	Y [in]	lc	Z [in]	lc	X Rotation ...	lc	Y Rotation ...	lc	Z Rotation ...	lc
154		min	-.003	8	.733	1	.425	6	4.088e-3	6	-1.691e-3	8	-1.689e-3	5
155	N85	max	.079	6	.493	1	.399	7	6.886e-3	7	-9.227e-4	7	3.555e-5	8
156		min	-.006	7	.493	1	.306	6	4.941e-3	6	-1.742e-3	6	-1.59e-3	5
157	N86	max	-.351	5	.217	8	.891	7	2.835e-3	7	1.11e-3	5	-9.61e-4	8
158		min	-.426	8	.14	5	-.083	6	-4.439e-4	6	-1.83e-3	8	-2.616e-3	5
159	N87	max	-.012	7	-.062	5	-1.3	8	5.509e-3	8	-9.974e-4	7	9.07e-5	7
160		min	-.016	6	-.066	8	-1.307	5	5.218e-3	5	-1.358e-3	6	-3.972e-4	6
161	N88	max	.048	6	.309	1	.256	7	7.179e-3	7	-9.912e-4	7	9.127e-5	8
162		min	-.006	7	.309	1	.202	6	5.315e-3	6	-1.868e-3	6	-1.529e-3	5
163	N89	max	0	5	0	1	0	5	0	8	0	7	0	7
164		min	0	7	0	7	0	6	0	5	0	6	0	6
165	N90	max	-.805	8	-.577	6	.479	7	5.758e-3	7	-2.778e-4	5	-2.391e-4	8
166		min	-.867	5	-.6	7	-.28	6	3.668e-3	6	-1.687e-3	8	-1.735e-3	5
167	N91	max	-.422	5	.187	8	.866	7	3.897e-3	5	1.064e-3	5	-1.983e-4	8
168		min	-.473	8	.162	5	-.094	6	1.673e-4	8	-1.731e-3	8	-2.436e-3	5
169	N92	max	.18	5	-.066	8	-.061	6	1.048e-3	8	2.296e-3	5	2.146e-3	5
170		min	.092	8	-.068	5	-.132	7	7.874e-4	5	1.194e-3	8	8.486e-4	8
171	N93	max	.087	5	-.031	8	-.103	6	8.129e-4	5	2.198e-3	5	1.469e-3	5
172		min	.042	8	-.036	5	-.174	7	7.602e-4	8	1.138e-3	8	5.81e-4	8
173	N94	max	0	6	0	8	-.152	6	5.381e-4	5	1.272e-3	5	6.87e-4	5
174		min	0	7	0	5	-.223	7	4.352e-4	8	6.077e-4	8	2.717e-4	8
175	N95	max	-.012	8	.009	5	-.181	6	1.512e-4	5	3.898e-4	5	2.152e-4	5
176		min	-.024	5	.007	8	-.253	7	1.189e-4	8	1.991e-4	8	8.51e-5	8
177	N96	max	0	1	0	1	0	1	0	5	0	5	0	5
178		min	0	1	0	1	0	1	0	8	0	8	0	8
179	N97	max	.185	5	-.068	8	-.057	6	1.091e-3	8	2.29e-3	5	2.196e-3	5
180		min	.095	8	-.069	5	-.128	7	7.971e-4	5	1.174e-3	8	8.677e-4	8
181	N98	max	.185	5	-.068	8	-.053	6	1.134e-3	8	2.285e-3	5	2.241e-3	5
182		min	.096	8	-.069	5	-.124	7	8.11e-4	5	1.148e-3	8	8.848e-4	8
183	N100	max	.181	5	-.066	5	-.049	6	1.175e-3	8	2.274e-3	5	2.284e-3	5
184		min	.094	8	-.066	8	-.12	7	8.3e-4	5	1.116e-3	8	9.047e-4	8
185	N101	max	0	6	0	6	0	5	2.22e-4	7	1.13e-3	6	-1.148e-4	6
186		min	0	7	0	7	0	8	-2.074e-4	6	-4.654e-3	7	-5.364e-3	7
187	N104	max	-.022	7	.031	6	.088	6	-5.539e-4	7	-3.698e-4	7	-1.223e-3	2
188		min	-.093	6	-.002	7	.064	7	-1.258e-3	6	-1.658e-3	6	-1.754e-3	1
189	N105	max	-.047	7	.071	6	.056	8	-5.577e-4	7	-3.701e-4	7	-1.208e-3	2
190		min	-.118	6	.029	7	.047	5	-1.254e-3	6	-1.657e-3	6	-1.739e-3	1
191	N106	max	-.027	6	-.008	7	.256	5	4.821e-5	7	-9.702e-4	7	-1.517e-4	6
192		min	-.817	7	-.053	6	.25	8	-4.291e-4	6	-2.e-3	6	-5.358e-3	7
193	N107	max	-.04	6	.056	7	.239	7	4.821e-5	7	-9.819e-4	7	-7.785e-5	6
194		min	-.829	7	-.051	6	.231	6	-4.291e-4	6	-1.987e-3	6	-5.371e-3	7
195	N114	max	-.243	6	.13	6	.338	7	3.048e-3	7	3.344e-4	7	-1.124e-4	6
196		min	-.843	7	-.095	7	.326	6	-3.699e-3	6	-2.748e-3	6	-5.365e-3	7
197	N115	max	-.253	6	.146	6	.351	7	3.163e-3	7	3.657e-4	7	-1.079e-4	6
198		min	-.827	7	-.096	7	.315	6	-3.787e-3	6	-2.736e-3	6	-5.364e-3	7
199	N116	max	-.258	6	.155	6	.367	7	3.265e-3	7	3.899e-4	7	-1.068e-4	6
200		min	-.805	7	-.087	7	.296	6	-3.86e-3	6	-2.714e-3	6	-5.362e-3	7
201	N117	max	.001	8	0	7	-.087	5	-7.256e-5	7	1.999e-5	5	2.91e-4	7
202		min	0	5	0	6	-.087	6	-1.383e-4	6	-1.772e-4	8	1.995e-4	6
203	N118	max	-.068	5	.384	6	.85	5	-1.28e-4	7	3.553e-5	5	5.146e-4	7
204		min	-.129	8	.372	7	.278	8	-2.442e-4	6	-3.136e-4	8	3.528e-4	6
205	N119	max	-.068	5	.379	6	.761	5	-2.074e-4	7	5.357e-5	5	8.133e-4	7
206		min	-.123	8	.369	7	.189	8	-3.91e-4	6	-4.931e-4	8	5.575e-4	6
207	N120	max	0	5	.239	7	.665	7	-1.129e-4	5	3.023e-4	5	-8.105e-4	6
208		min	0	8	.18	6	-.377	6	-1.784e-3	8	-3.776e-4	8	-1.312e-3	7
209	N121	max	-.428	5	.187	8	.861	7	4.022e-3	5	1.081e-3	5	-3.669e-5	8
210		min	-.474	8	.173	5	-.096	6	1.803e-4	8	-1.702e-3	8	-2.218e-3	5

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Checked By:_____

Envelope Joint Displacements (Continued)

	Joint		X [in]	Ic	Y [in]	Ic	Z [in]	Ic	X Rotation ...	Ic	Y Rotation ...	Ic	Z Rotation ...	Ic
211	N122	max	-.436	5	.184	8	.851	7	4.101e-3	5	1.115e-3	5	1.272e-4	8
212		min	-.474	8	.179	5	-.098	6	1.844e-4	8	-1.662e-3	8	-1.954e-3	5
213	N123	max	-.011	5	.242	7	.697	7	4.672e-6	5	3.841e-4	5	-8.786e-4	6
214		min	-.016	8	.191	6	-.344	6	-1.714e-3	8	-4.76e-4	8	-1.417e-3	7
215	N124	max	-.025	5	.246	7	.706	7	8.065e-5	7	4.072e-4	5	-9.077e-4	6
216		min	-.031	8	.196	6	-.333	6	-1.674e-3	6	-5.133e-4	8	-1.463e-3	7
217	N125	max	-.042	5	.25	7	.708	7	1.613e-4	7	4.252e-4	5	-9.302e-4	6
218		min	-.049	8	.199	6	-.329	6	-1.634e-3	6	-5.475e-4	8	-1.5e-3	7
219	N126	max	-.442	5	.181	8	.838	7	4.145e-3	5	1.141e-3	5	2.881e-4	8
220		min	-.474	8	.178	5	-.099	6	1.772e-4	8	-1.623e-3	8	-1.674e-3	5
221	N127	max	0	6	0	5	.446	5	-2.26e-4	7	-2.545e-4	5	5.455e-4	7
222		min	0	7	0	8	-.116	8	-3.17e-4	6	-6.413e-4	8	3.776e-4	6
223	N128	max	0	5	.001	6	.08	5	-1.215e-4	7	-1.38e-4	5	2.98e-4	7
224		min	-.002	8	0	7	.08	6	-1.712e-4	6	-3.514e-4	8	2.063e-4	6
225	N129	max	-.005	5	.006	6	.533	5	-3.585e-4	7	-3.575e-4	5	8.688e-4	7
226		min	-.012	8	.004	7	-.029	8	-4.939e-4	6	-9.351e-4	8	6.015e-4	6
227	N130	max	-.017	5	.269	8	.663	5	-9.3e-4	5	3.796e-4	5	1.099e-3	8
228		min	-.063	8	.251	5	.146	8	-1.66e-3	8	-8.243e-4	8	7.7e-4	5
229	N131	max	-.069	5	.378	6	.744	5	-2.247e-4	7	5.622e-5	5	8.717e-4	7
230		min	-.122	8	.369	7	.172	8	-4.215e-4	6	-5.273e-4	8	5.976e-4	6
231	N132	max	-.002	5	.24	7	.682	7	-5.865e-5	5	3.505e-4	5	-8.45e-4	6
232		min	-.005	8	.185	6	-.359	6	-1.753e-3	8	-4.317e-4	8	-1.364e-3	7
233	N133	max	-.068	5	.368	6	.71	5	-2.647e-4	7	6.309e-5	5	9.877e-4	7
234		min	-.117	8	.36	7	.138	8	-4.878e-4	6	-5.904e-4	8	6.766e-4	6
235	N134	max	-.066	5	.346	6	.681	5	-3.119e-4	7	7.235e-5	5	1.093e-3	7
236		min	-.111	8	.339	7	.11	8	-5.588e-4	6	-6.485e-4	8	7.486e-4	6
237	N135	max	-.062	5	.315	6	.663	5	-3.664e-4	7	7.905e-5	5	1.186e-3	7
238		min	-.103	8	.309	7	.093	8	-6.322e-4	6	-7.115e-4	8	8.156e-4	6
239	N136	max	.005	5	.254	8	.67	5	-9.57e-4	5	4.181e-4	5	1.015e-3	8
240		min	-.041	8	.234	5	.159	8	-1.735e-3	8	-7.514e-4	8	6.771e-4	5
241	N137	max	.015	5	.228	8	.676	5	-9.804e-4	5	4.56e-4	5	9.374e-4	8
242		min	-.03	8	.208	5	.17	8	-1.79e-3	8	-6.72e-4	8	5.927e-4	5
243	N139	max	-.022	5	.076	6	.67	5	-5.228e-4	7	-2.262e-4	5	1.408e-3	7
244		min	-.048	8	.071	7	.108	8	-7.025e-4	6	-1.042e-3	8	9.729e-4	6
245	N141	max	-.016	5	.045	6	.653	5	-5.015e-4	7	-2.942e-4	5	1.326e-3	7
246		min	-.038	8	.04	7	.091	8	-6.714e-4	6	-1.063e-3	8	9.155e-4	6
247	N142	max	0	8	.183	7	.161	7	-9.087e-4	5	2.085e-4	5	2.708e-4	8
248		min	-.001	5	.024	6	-.881	6	-1.939e-3	8	-7.816e-5	8	-3.158e-5	5
249	N143	max	-.011	5	.022	6	.626	5	-4.724e-4	7	-3.435e-4	5	1.216e-3	7
250		min	-.029	8	.018	7	.064	8	-6.349e-4	6	-1.067e-3	8	8.405e-4	6
251	N144	max	.261	5	-.334	5	-.093	5	1.184e-3	6	1.381e-3	8	-8.119e-4	5
252		min	.188	8	-.366	8	-.26	8	-1.618e-3	7	-3.448e-4	5	-1.818e-3	8
253	N145	max	-.008	5	.011	6	.592	5	-4.355e-4	7	-3.672e-4	5	1.088e-3	7
254		min	-.022	8	.008	7	.03	8	-5.901e-4	6	-1.042e-3	8	7.533e-4	6
255	N148	max	.04	5	.17	8	.882	5	-9.717e-4	5	3.493e-4	5	4.28e-4	8
256		min	-.021	8	.124	5	.395	8	-1.918e-3	8	-1.802e-4	8	1.228e-4	5
257	N149	max	-.02	7	.002	6	.027	6	-4.821e-4	7	-3.802e-4	7	-1.172e-3	2
258		min	-.04	6	-.007	7	.018	7	-1.214e-3	6	-1.647e-3	6	-1.79e-3	1
259	N150	max	-.017	7	-.003	6	.021	6	-4.76e-4	7	-3.817e-4	7	-1.163e-3	2
260		min	-.031	6	-.008	7	.013	7	-1.214e-3	6	-1.646e-3	6	-1.798e-3	1
261	N151	max	-.012	7	-.005	6	.014	6	-4.714e-4	7	-3.828e-4	7	-1.155e-3	2
262		min	-.02	6	-.007	7	.008	7	-1.215e-3	6	-1.645e-3	6	-1.807e-3	1
263	N152	max	-.006	2	-.004	6	.007	6	-4.675e-4	7	-3.835e-4	7	-1.147e-3	2
264		min	-.009	1	-.004	7	.003	7	-1.218e-3	6	-1.644e-3	6	-1.815e-3	1
265	N153	max	.042	5	-.261	6	.054	5	-4.341e-3	5	-2.639e-4	8	1.428e-3	5
266		min	.023	8	-.285	7	-.432	8	-5.14e-3	8	-1.01e-3	5	9.416e-4	8
267	N154	max	.052	5	-.305	6	.038	5	-4.107e-3	5	-2.07e-4	8	1.469e-3	5

Envelope Joint Displacements (Continued)

	Joint		X [in]	lc	Y [in]	lc	Z [in]	lc	X Rotation ...	lc	Y Rotation ...	lc	Z Rotation ...	lc
268		min	.027	8	-.326	7	-.445	8	-5.178e-3	8	-9.962e-4	5	9.539e-4	8
269	N155	max	.063	5	-.351	6	.038	5	-3.846e-3	5	-1.369e-4	8	1.494e-3	5
270		min	.032	8	-.369	7	-.439	8	-5.186e-3	8	-9.67e-4	5	9.593e-4	8
271	N156	max	.072	5	-.392	6	.052	5	-3.582e-3	5	-5.768e-5	8	1.498e-3	5
272		min	.038	8	-.408	7	-.416	8	-5.165e-3	8	-9.294e-4	5	9.512e-4	8
273	N157	max	.139	5	-.728	6	.2	5	-2.141e-3	5	7.191e-4	8	6.307e-4	5
274		min	.078	8	-.744	7	-.156	8	-3.832e-3	8	-5.49e-4	5	3.044e-4	8
275	N158	max	.143	5	-.767	6	.206	5	-2.107e-3	5	7.944e-4	8	4.495e-4	5
276		min	.078	8	-.782	7	-.142	8	-3.567e-3	8	-5.176e-4	5	1.77e-4	8
277	N159	max	.147	5	-.804	5	.196	5	-2.074e-3	5	8.582e-4	8	2.617e-4	6
278		min	.076	8	-.821	8	-.145	8	-3.274e-3	8	-4.982e-4	5	1.176e-5	7
279	N160	max	.149	5	-.834	5	.173	5	-2.02e-3	5	9.225e-4	8	5.411e-5	6
280		min	.072	8	-.856	8	-.164	8	-2.953e-3	8	-4.727e-4	5	-1.938e-4	7
281	N161	max	.152	5	-.852	5	.141	5	-1.927e-3	5	1.004e-3	8	-1.804e-4	6
282		min	.066	8	-.879	8	-.195	8	-2.608e-3	8	-4.204e-4	5	-4.241e-4	7
283	N162	max	.001	6	-.023	7	.004	6	-8.706e-4	7	-3.102e-4	7	-1.354e-3	7
284		min	-.013	7	-.03	6	-.002	7	-1.463e-3	6	-1.717e-3	6	-1.607e-3	6
285	N163	max	-.005	5	-.018	7	.008	6	-8.519e-4	7	-3.209e-4	7	-1.358e-3	7
286		min	-.013	8	-.022	6	.001	7	-1.439e-3	6	-1.707e-3	6	-1.604e-3	6
287	N164	max	-.007	5	-.012	7	.008	6	-8.285e-4	7	-3.344e-4	7	-1.362e-3	7
288		min	-.011	8	-.014	6	.003	7	-1.412e-3	6	-1.693e-3	6	-1.6e-3	6
289	N165	max	-.005	5	-.005	7	.005	6	-8.008e-4	7	-3.508e-4	7	-1.364e-3	7
290		min	-.006	8	-.006	6	.003	7	-1.384e-3	6	-1.677e-3	6	-1.597e-3	6
291	N166	max	.158	6	0	5	0	3	-3.207e-4	7	-6.49e-4	7	-2.055e-4	8
292		min	.146	7	0	8	0	4	-8.227e-4	6	-1.104e-3	6	-2.304e-4	5
293	N167	max	.003	8	-.257	1	.061	8	5.523e-4	5	5.825e-3	8	2.129e-4	6
294		min	-.02	5	-.257	6	-.031	5	-1.331e-3	8	4.173e-3	5	-3.542e-4	7
295	N168	max	.006	6	-.285	5	.06	8	5.161e-4	5	5.928e-3	8	2.456e-4	6
296		min	-.019	7	-.286	8	-.039	5	-1.315e-3	8	4.276e-3	5	-3.222e-4	7
297	N169	max	.013	6	-.309	5	.045	6	4.732e-4	5	6.025e-3	8	2.811e-4	6
298		min	-.013	7	-.311	8	-.06	7	-1.304e-3	8	4.377e-3	5	-2.827e-4	7
299	N170	max	.023	6	-.324	5	.018	6	4.282e-4	5	6.111e-3	8	3.176e-4	6
300		min	-.002	7	-.328	8	-.089	7	-1.294e-3	8	4.47e-3	5	-2.38e-4	7
301	N171	max	.208	3	-.303	5	-.614	3	-2.828e-5	5	7.229e-3	8	1.141e-3	6
302		min	.167	4	-.334	8	-.733	4	-7.923e-4	8	6.006e-3	5	7.686e-4	7
303	N172	max	.212	3	-.299	5	-.675	3	-5.864e-5	7	7.317e-3	8	1.237e-3	6
304		min	.167	4	-.331	8	-.797	4	-7.409e-4	6	6.154e-3	5	8.816e-4	7
305	N173	max	.194	3	-.296	5	-.734	3	-8.419e-5	7	7.404e-3	8	1.343e-3	6
306		min	.145	4	-.331	8	-.859	4	-6.929e-4	6	6.303e-3	5	1.005e-3	7
307	N174	max	.158	5	-.295	5	-.783	3	-1.001e-4	7	7.49e-3	8	1.46e-3	6
308		min	.102	8	-.334	8	-.909	4	-6.403e-4	6	6.453e-3	5	1.135e-3	7
309	N175	max	.08	6	.051	6	-.031	7	-5.17e-4	7	-5.724e-4	7	-1.414e-3	7
310		min	.069	7	.051	7	-.062	6	-1.107e-3	6	-1.455e-3	6	-1.552e-3	6
311	N176	max	.089	6	.055	1	-.033	7	-5.038e-4	7	-5.901e-4	7	-1.424e-3	7
312		min	.077	7	.055	2	-.065	6	-1.089e-3	6	-1.435e-3	6	-1.54e-3	6
313	N177	max	.097	6	.055	7	-.033	7	-4.921e-4	7	-6.049e-4	7	-1.427e-3	7
314		min	.085	7	.055	6	-.066	6	-1.07e-3	6	-1.415e-3	6	-1.52e-3	6
315	N178	max	.105	6	.052	7	-.032	7	-4.801e-4	7	-6.173e-4	7	-1.418e-3	7
316		min	.093	7	.051	6	-.063	6	-1.05e-3	6	-1.396e-3	6	-1.488e-3	6
317	N179	max	.112	6	.046	7	-.03	7	-4.667e-4	7	-6.282e-4	7	-1.392e-3	7
318		min	.099	7	.045	6	-.058	6	-1.03e-3	6	-1.378e-3	6	-1.441e-3	6
319	N180	max	-.014	7	-.071	5	-1.24	8	5.912e-3	8	-1.065e-3	7	9.843e-5	7
320		min	-.019	6	-.076	8	-1.247	5	5.606e-3	5	-1.474e-3	6	-4.384e-4	6
321	N181	max	-.938	1	.006	3	.577	5	3.74e-4	3	6.648e-3	5	4.264e-3	1
322		min	-.95	2	.003	4	.41	8	8.849e-5	4	5.906e-3	8	4.144e-3	2
323	N182	max	-.926	6	.009	3	.538	5	3.706e-4	3	6.5e-3	5	4.315e-3	1
324		min	-.937	7	.006	4	.375	8	6.516e-5	4	5.711e-3	8	4.2e-3	2

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
2:24 PM
Checked By:_____

Envelope Joint Displacements (Continued)

	Joint		X [in]	Ic	Y [in]	Ic	Z [in]	Ic	X Rotation ...	Ic	Y Rotation ...	Ic	Z Rotation ...	Ic
325	N183	max	-.897	6	.013	3	.506	5	3.716e-4	5	6.341e-3	5	4.36e-3	1
326		min	-.909	7	.01	4	.347	8	4.49e-5	8	5.509e-3	8	4.252e-3	2
327	N184	max	.008	6	-.002	7	-.12	7	-5.048e-4	7	-1.293e-3	7	1.143e-3	6
328		min	.005	7	-.004	6	-.23	6	-9.406e-4	6	-1.909e-3	6	1.044e-3	7
329	N185	max	.015	6	-.004	7	-.123	7	-5.273e-4	7	-1.338e-3	7	1.17e-3	6
330		min	.011	7	-.007	6	-.232	6	-9.998e-4	6	-2.014e-3	6	1.069e-3	7
331	N186	max	.025	6	-.004	7	-.123	7	-5.463e-4	7	-1.367e-3	7	1.193e-3	6
332		min	.018	7	-.009	6	-.23	6	-1.052e-3	6	-2.094e-3	6	1.091e-3	7
333	N187	max	.033	6	-.004	7	-.121	7	-5.614e-4	7	-1.382e-3	7	1.211e-3	6
334		min	.025	7	-.009	6	-.225	6	-1.098e-3	6	-2.154e-3	6	1.107e-3	7
335	N188	max	.04	6	-.003	7	-.116	7	-5.728e-4	7	-1.388e-3	7	1.223e-3	6
336		min	.031	7	-.008	6	-.217	6	-1.137e-3	6	-2.2e-3	6	1.118e-3	7
337	N189	max	.014	6	-.003	7	-.595	5	-6.034e-4	7	-1.517e-3	7	6.416e-4	1
338		min	.009	7	-.007	6	-.63	8	-1.115e-3	6	-2.119e-3	6	4.103e-4	2
339	N190	max	-.774	5	-.116	6	.734	7	4.371e-3	7	6.085e-4	5	-5.283e-4	8
340		min	-.785	8	-.139	7	-.137	6	1.969e-3	6	-1.675e-3	8	-1.986e-3	5
341	N191	max	.02	6	-.004	7	-.596	5	-7.842e-4	7	-1.819e-3	7	6.589e-4	1
342		min	.013	7	-.01	6	-.631	8	-1.28e-3	6	-2.395e-3	6	4.266e-4	2
343	N192	max	.026	6	-.006	7	-.593	5	-9.92e-4	7	-2.168e-3	7	6.748e-4	1
344		min	.018	7	-.012	6	-.629	8	-1.464e-3	6	-2.7e-3	6	4.423e-4	2
345	N193	max	.031	6	-.007	7	-.588	5	-1.209e-3	7	-2.534e-3	7	6.887e-4	1
346		min	.022	7	-.013	6	-.623	8	-1.653e-3	6	-3.016e-3	6	4.571e-4	2
347	N194	max	-.744	5	-.071	6	.757	7	4.22e-3	7	6.913e-4	5	-5.494e-4	8
348		min	-.762	8	-.093	7	-.126	6	1.755e-3	6	-1.693e-3	8	-2.029e-3	5
349	N195	max	0	5	0	8	0	7	7.874e-3	7	-1.203e-3	7	2.118e-4	7
350		min	0	8	0	5	0	8	6.689e-3	6	-2.259e-3	6	-1.287e-3	6
351	N196	max	0	8	-.031	5	-.056	6	7.959e-3	7	-1.236e-3	7	2.033e-4	7
352		min	-.005	5	-.033	8	-.061	7	6.936e-3	6	-2.307e-3	6	-1.227e-3	6
353	N197	max	0	6	0	5	-1.42	8	4.391e-3	8	-7.997e-4	7	7.055e-5	7
354		min	0	7	0	8	-1.426	5	4.155e-3	5	-1.071e-3	6	-3.09e-4	6
355	N198	max	.012	6	.048	8	-1.537	8	3.154e-3	8	-5.759e-4	7	5.06e-5	7
356		min	.009	7	.046	5	-1.544	5	2.985e-3	5	-7.654e-4	6	-2.216e-4	6
357	N199	max	-.004	7	-.018	5	.181	5	1.911e-3	8	-3.51e-4	7	3.055e-5	7
358		min	-.005	6	-.019	8	.181	6	1.809e-3	5	-4.589e-4	6	-1.338e-4	6
359	N200	max	.333	6	.072	6	.057	3	2.171e-4	7	1.068e-5	4	1.281e-3	1
360		min	.319	7	.071	7	.017	4	8.839e-5	6	-2.533e-4	3	1.207e-3	2
361	N201	max	.358	6	.05	6	.056	3	2.515e-4	7	1.818e-5	4	1.121e-3	1
362		min	.343	7	.049	7	.014	4	1.506e-4	6	-1.978e-4	3	1.043e-3	2
363	N202	max	.378	6	.029	6	.053	3	2.864e-4	7	2.466e-5	4	9.541e-4	1
364		min	.363	7	.028	7	.01	4	2.063e-4	6	-1.456e-4	3	8.816e-4	2
365	N203	max	.39	6	.011	6	.036	3	3.048e-4	7	9.365e-6	4	7.658e-4	1
366		min	.373	7	.01	7	-.007	4	2.429e-4	6	-1.176e-4	3	7.04e-4	2
367	N204	max	.396	6	.001	6	.013	3	2.758e-4	7	-6.709e-6	4	5.555e-4	1
368		min	.379	7	0	7	-.031	4	2.313e-4	6	-9.442e-5	3	5.092e-4	2
369	N205	max	.398	6	0	1	-.012	3	1.824e-4	7	-9.583e-6	4	3.278e-4	1
370		min	.38	7	0	2	-.056	4	1.56e-4	6	-6.082e-5	3	3.e-4	2
371	N206	max	0	1	0	1	0	5	0	7	0	4	0	1
372		min	0	2	0	1	0	6	0	6	0	3	0	2
373	N207	max	0	6	0	8	0	7	3.1e-3	7	1.971e-3	5	3.425e-3	5
374		min	0	7	0	5	0	6	1.677e-4	6	3.848e-4	8	2.392e-3	8
375	N208	max	0	5	-1.713	5	0	7	1.17e-3	5	4.327e-3	8	-4.12e-5	8
376		min	0	8	-1.746	8	0	6	-1.779e-3	8	2.734e-3	5	-9.428e-4	5
377	N209	max	.009	5	.073	1	.012	5	1.046e-3	5	4.597e-3	8	-1.945e-5	8
378		min	0	8	.073	1	-.02	8	-1.685e-3	8	2.993e-3	5	-8.126e-4	5
379	N210	max	.092	5	-.296	5	-.843	3	-1.145e-4	7	7.613e-3	8	1.635e-3	6
380		min	.026	8	-.34	8	-.969	4	-5.574e-4	6	6.668e-3	5	1.323e-3	7
381	N211	max	-.312	6	.075	1	.157	5	4.281e-4	7	3.434e-3	7	4.13e-3	2

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Joint Displacements (Continued)

	Joint		X [in]	Ic	Y [in]	Ic	Z [in]	Ic	X Rotation ...	Ic	Y Rotation ...	Ic	Z Rotation ...	Ic
382		min	-.326	7	.071	2	.087	8	-2.727e-4	6	2.284e-3	6	4.06e-3	1
383	N212	max	.082	8	.004	6	1.445	5	-1.304e-4	7	7.749e-3	8	1.827e-3	6
384		min	.074	5	.001	7	1.276	8	-4.663e-4	6	6.905e-3	5	1.529e-3	7
385	N214	max	0	5	0	6	-.462	5	5.234e-4	6	1.086e-3	5	-3.178e-4	1
386		min	0	8	0	7	-.498	8	3.806e-4	7	5.961e-4	8	-4.659e-4	2
387	N215	max	.073	5	-.045	7	-.358	5	-3.222e-5	7	-3.571e-4	8	-1.079e-3	1
388		min	.025	8	-.048	6	-.393	8	-7.749e-5	6	-9.086e-4	5	-1.161e-3	2
389	N216	max	.017	5	-.012	7	-.361	7	-3.586e-4	7	-1.725e-4	8	-1.125e-3	5
390		min	-.009	8	-.013	6	-.381	6	-4.142e-4	6	-1.136e-3	5	-1.2e-3	8
391	N217	max	0	1	0	7	-.324	7	-1.394e-4	7	5.795e-4	8	-1.021e-3	5
392		min	0	2	0	6	-.344	6	-1.797e-4	6	9.462e-5	5	-1.089e-3	8
393	N218	max	0	1	0	6	-.164	7	2.925e-4	6	-1.831e-3	5	-5.719e-4	5
394		min	0	2	0	7	-.183	6	2.796e-4	7	-2.611e-3	8	-6.098e-4	8
395	N219	max	-.412	5	-.003	2	-.003	7	-9.056e-4	7	-3.278e-4	7	-1.181e-4	1
396		min	-.606	8	-.003	1	-.021	6	-9.156e-4	6	-1.88e-3	6	-1.259e-4	2
397	N220	max	-.412	5	0	2	0	7	-9.065e-4	7	-9.565e-5	7	-1.103e-4	1
398		min	-.609	8	0	1	-.015	6	-9.168e-4	6	-1.661e-3	6	-1.175e-4	2
399	N221	max	-.409	5	0	2	.002	7	-9.024e-4	7	9.385e-5	7	-1.081e-4	1
400		min	-.608	8	0	1	-.009	6	-9.132e-4	6	-1.439e-3	6	-1.148e-4	2
401	N222	max	-.401	5	0	8	0	7	-8.899e-4	7	2.662e-4	7	-1.295e-4	1
402		min	-.6	8	0	5	0	6	-9.017e-4	6	-9.849e-4	6	-1.351e-4	2
403	N223	max	-.272	5	0	5	0	3	-6.792e-4	7	-7.049e-4	5	-1.607e-4	7
404		min	-.47	8	0	8	0	4	-7.08e-4	6	-1.526e-3	8	-1.629e-4	6
405	N224	max	-.098	5	0	8	0	7	-3.971e-4	5	8.467e-3	8	1.49e-4	8
406		min	-.296	8	0	5	0	6	-4.509e-4	8	2.91e-3	5	1.402e-4	5
407	N225	max	-.035	5	-.008	5	-.198	5	-2.937e-4	5	1.03e-2	8	-1.244e-4	5
408		min	-.233	8	-.009	8	-.681	8	-3.57e-4	8	2.176e-3	5	-2.143e-4	8
409	N226	max	-.029	5	-.008	5	-.204	5	-2.863e-4	5	9.824e-3	8	-1.032e-4	5
410		min	-.216	8	-.009	8	-.711	8	-3.513e-4	8	1.899e-3	5	-2.057e-4	8
411	N227	max	-.022	5	-.007	5	-.203	5	-2.806e-4	5	9.302e-3	8	-7.671e-5	5
412		min	-.184	8	-.008	8	-.721	8	-3.467e-4	8	1.623e-3	5	-1.95e-4	8
413	N228	max	0	5	0	5	-.176	5	-2.576e-4	5	5.041e-3	8	1.252e-4	5
414		min	0	8	0	8	-.695	8	-3.009e-4	8	4.005e-4	5	-1.151e-4	8
415	N229	max	0	5	0	5	.163	5	1.031e-5	8	7.754e-4	1	2.738e-3	5
416		min	0	8	0	8	-.356	8	-1.567e-5	5	-3.022e-4	2	9.193e-4	8
417	N230	max	0	1	0	8	.41	5	-6.478e-4	5	6.842e-4	2	4.637e-3	5
418		min	0	2	0	5	-.109	8	-7.639e-4	8	-5.536e-4	1	1.671e-3	8
419	N231	max	0	6	0	5	.502	5	4.076e-4	8	1.763e-4	1	5.35e-3	5
420		min	0	7	0	8	-.016	8	9.536e-5	5	-7.185e-4	2	1.954e-3	8
421	N232	max	.012	1	-.006	5	.556	5	4.958e-4	2	3.926e-4	1	5.766e-3	5
422		min	-.045	2	-.024	8	.038	8	2.167e-4	1	-6.087e-4	2	2.118e-3	8
423	N233	max	.016	1	-.01	5	.566	5	5.122e-4	7	3.917e-4	1	5.748e-3	5
424		min	-.05	2	-.027	8	.048	8	2.668e-4	6	-4.353e-4	2	2.118e-3	8
425	N234	max	.098	1	.031	8	.532	5	9.78e-3	5	2.004e-3	5	2.093e-3	2
426		min	-.022	2	.031	5	.087	8	1.457e-3	8	-3.866e-4	8	-2.683e-4	1
427	N235	max	0	1	0	5	.626	5	-9.046e-4	8	-2.888e-4	8	5.116e-3	5
428		min	0	2	0	8	.108	8	-2.049e-3	5	-1.074e-3	5	2.119e-3	8
429	N236	max	-.025	6	.066	5	.661	5	1.648e-3	5	3.368e-4	1	4.737e-3	5
430		min	-.055	7	.022	8	.144	8	4.373e-4	8	-3.946e-4	2	2.119e-3	8
431	N237	max	0	6	0	5	.73	5	-1.325e-4	3	9.193e-4	4	6.931e-3	5
432		min	0	7	0	8	.212	8	-4.857e-4	4	2.907e-4	3	2.645e-3	8
433	N238	max	.102	7	-.092	6	.118	7	9.358e-4	5	3.112e-4	6	-6.743e-4	7
434		min	.102	6	-.098	7	.012	6	8.594e-4	8	-2.135e-4	7	-7.197e-4	6
435	N239	max	.01	4	.005	6	.737	5	9.568e-5	7	1.268e-3	1	7.171e-3	5
436		min	.003	3	0	7	.22	8	-5.558e-4	6	3.188e-4	2	2.702e-3	8
437	N240	max	.005	1	.031	8	.653	5	1.118e-2	5	1.664e-3	5	2.906e-3	7
438		min	-.036	2	.031	5	.161	8	2.671e-3	8	-7.188e-5	8	1.281e-3	6

Company : DMJM H&N
Designer : Kevin M. Jones
Job Number : 145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis

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Envelope Joint Displacements (Continued)

	Joint		X [in]	Ic	Y [in]	Ic	Z [in]	Ic	X Rotation ...	Ic	Y Rotation ...	Ic	Z Rotation ...	Ic
439	N241	max	.149	1	.031	8	.662	5	1.217e-2	5	3.274e-3	5	7.969e-4	7
440		min	.07	2	.031	5	.22	8	3.878e-3	8	9.465e-4	8	-1.014e-3	6
441	N242	max	0	5	0	6	.008	7	6.961e-4	1	1.154e-3	1	1.498e-4	6
442		min	0	8	0	7	-.102	6	6.184e-4	2	1.114e-3	2	1.28e-4	7
443	N243	max	.109	7	-.086	6	.103	7	1.001e-3	5	6.534e-4	6	-5.592e-4	7
444		min	.104	6	-.091	7	-.006	6	9.286e-4	8	4.202e-4	7	-5.947e-4	6
445	N244	max	.11	7	-.09	6	.11	7	9.81e-4	5	5.408e-4	6	-6.009e-4	7
446		min	.106	6	-.096	7	0	6	9.074e-4	8	2.175e-4	7	-6.403e-4	6
447	N245	max	.107	7	-.093	6	.115	7	9.604e-4	5	4.248e-4	6	-6.388e-4	7
448		min	.105	6	-.098	7	.007	6	8.854e-4	8	3.092e-6	7	-6.82e-4	6
449	N246	max	.096	6	-.089	6	.117	7	9.055e-4	5	2.051e-4	6	-7.116e-4	7
450		min	.096	7	-.095	7	.015	6	8.28e-4	8	-4.22e-4	7	-7.56e-4	6
451	N247	max	0	6	0	7	0	7	4.844e-4	6	-1.11e-4	6	-9.74e-4	6
452		min	0	7	0	6	0	6	1.864e-4	7	-1.251e-3	7	-1.251e-3	7
453	N248	max	-.148	5	0	8	0	7	-9.996e-5	6	1.327e-3	7	2.936e-3	7
454		min	-.149	8	0	5	0	6	-8.748e-4	7	-5.727e-4	6	1.901e-3	6
455	N249	max	-.263	5	-.299	6	.244	7	-5.504e-4	6	2.796e-3	7	5.028e-3	7
456		min	-.264	8	-.54	7	-.126	6	-1.693e-3	7	-1.233e-3	6	1.956e-3	6
457	N250	max	-.271	6	-.308	6	.258	7	-5.751e-4	6	2.841e-3	7	4.869e-3	7
458		min	-.275	7	-.567	7	-.133	6	-1.738e-3	7	-1.201e-3	6	1.729e-3	6
459	N251	max	-.281	6	-.313	6	.266	7	-5.993e-4	6	2.89e-3	7	4.689e-3	7
460		min	-.296	7	-.587	7	-.141	6	-1.785e-3	7	-1.159e-3	6	1.489e-3	6
461	N252	max	-.291	6	-.312	6	.267	7	-6.185e-4	6	2.942e-3	7	4.493e-3	7
462		min	-.322	7	-.597	7	-.148	6	-1.829e-3	7	-1.109e-3	6	1.245e-3	6
463	N253	max	-.299	6	-.307	6	.26	7	-6.295e-4	6	2.994e-3	7	4.289e-3	7
464		min	-.348	7	-.596	7	-.153	6	-1.868e-3	7	-1.056e-3	6	1.004e-3	6
465	N274	max	.399	6	0	7	-.021	3	1.347e-4	7	-7.074e-6	4	2.42e-4	1
466		min	.381	7	0	6	-.065	4	1.152e-4	6	-4.489e-5	3	2.215e-4	2
467	N254	max	-.117	6	-.122	6	-.109	5	6.874e-5	6	4.541e-3	7	-2.104e-4	7
468		min	-.643	7	-.411	7	-.265	8	-2.424e-3	7	6.066e-4	6	-1.67e-3	6
469	N255	max	-.107	6	-.115	6	-.114	5	8.083e-5	6	4.587e-3	7	-2.553e-4	7
470		min	-.637	7	-.402	7	-.27	8	-2.384e-3	7	6.608e-4	6	-1.64e-3	6
471	N256	max	-.098	6	-.109	6	-.115	5	8.741e-5	6	4.623e-3	7	-2.94e-4	7
472		min	-.622	7	-.389	7	-.269	8	-2.34e-3	7	7.119e-4	6	-1.601e-3	6
473	N257	max	-.091	6	-.104	6	-.112	5	8.876e-5	6	4.65e-3	7	-3.327e-4	7
474		min	-.601	7	-.375	7	-.263	8	-2.296e-3	7	7.551e-4	6	-1.556e-3	6
475	N258	max	-.086	6	-.101	6	-.105	5	8.655e-5	6	4.672e-3	7	-3.749e-4	7
476		min	-.576	7	-.36	7	-.253	8	-2.253e-3	7	7.883e-4	6	-1.509e-3	6
477	N259	max	-.03	6	-.077	6	.062	7	1.502e-4	6	3.655e-3	7	-5.805e-4	5
478		min	-.153	7	-.125	7	-.065	6	-1.998e-3	7	6.826e-4	6	-1.377e-3	8
479	N260	max	-.016	6	-.062	6	.061	7	3.102e-4	6	2.908e-3	7	-4.633e-4	5
480		min	-.086	7	-.076	7	-.044	6	-1.878e-3	7	5.405e-4	6	-1.477e-3	8
481	N261	max	-.027	6	-.076	6	.071	7	1.882e-4	6	3.504e-3	7	-5.462e-4	5
482		min	-.133	7	-.111	7	-.058	6	-1.982e-3	7	6.522e-4	6	-1.414e-3	8
483	N262	max	-.023	6	-.073	6	.074	7	2.306e-4	6	3.328e-3	7	-5.175e-4	5
484		min	-.113	7	-.096	7	-.052	6	-1.956e-3	7	6.203e-4	6	-1.453e-3	8
485	N263	max	-.02	6	-.068	6	.07	7	2.73e-4	6	3.126e-3	7	-4.914e-4	5
486		min	-.097	7	-.084	7	-.047	6	-1.921e-3	7	5.835e-4	6	-1.478e-3	8
487	N264	max	-.003	6	-.014	6	-.012	7	2.621e-4	6	1.137e-3	7	-1.413e-4	6
488		min	-.023	7	-.027	7	-.028	6	-1.082e-3	7	1.721e-4	6	-9.79e-4	7
489	N265	max	-.002	6	-.008	6	-.017	7	2.102e-4	6	9.244e-4	7	-1.145e-4	6
490		min	-.017	7	-.02	7	-.025	6	-9.209e-4	7	1.288e-4	6	-8.528e-4	7
491	N266	max	-.001	6	-.003	6	-.018	7	1.529e-4	6	7.312e-4	7	-9.143e-5	6
492		min	-.01	7	-.012	7	-.021	6	-7.437e-4	7	9.175e-5	6	-7.137e-4	7
493	N267	max	0	6	0	6	-.015	7	9.677e-5	6	5.47e-4	7	-6.812e-5	6
494		min	-.005	7	-.005	7	-.015	6	-5.5e-4	7	6.098e-5	6	-5.447e-4	7
495	N268	max	0	6	0	6	-.009	5	4.857e-5	6	3.493e-4	7	-4.207e-5	6

Envelope Joint Displacements (Continued)

	Joint		X [in]	lc	Y [in]	lc	Z [in]	lc	X Rotation ...	lc	Y Rotation ...	lc	Z Rotation ...	lc
496		min	-.002	7	-.002	7	-.009	8	-3.419e-4	7	3.435e-5	6	-3.397e-4	7
497	N269	max	0	6	0	5	0	5	0	6	0	7	0	6
498		min	0	7	0	8	0	8	0	7	0	6	0	7
499	N270	max	0	5	0	8	0	5	1.541e-2	5	2.004e-3	5	-1.574e-4	2
500		min	0	8	0	5	0	8	2.564e-3	8	-3.866e-4	8	-3.617e-3	1
501	N271	max	0	5	0	8	0	5	1.934e-2	5	1.664e-3	5	1.949e-4	2
502		min	0	8	0	5	0	8	4.809e-3	8	-7.188e-5	8	-1.055e-3	1
503	N272	max	0	5	0	8	0	5	1.92e-2	5	3.274e-3	5	-2.51e-3	8
504		min	0	8	0	5	0	8	6.458e-3	8	9.465e-4	8	-5.69e-3	5
505	N273	max	0	6	0	8	-.084	5	7.235e-4	6	9.892e-5	5	8.376e-4	5
506		min	0	7	0	5	-.602	8	7.097e-4	7	-2.124e-3	8	1.67e-4	8

Envelope Member Section Stresses

	Member	Sec		Axial[...	lc	y Shear[...	lc	z Shear[k...	lc	y-T...	lc	y-Bot[ksi]	lc	z-Top[ksi]	lc	z-Bot[ksi]	lc
1	M1	1	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
2			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
3		2	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
4			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
5		3	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
6			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
7		4	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
8			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
9		5	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
10			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
11	M2	1	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
12			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
13		2	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
14			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
15		3	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
16			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
17		4	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
18			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
19		5	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
20			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
21	M3	1	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
22			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
23		2	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
24			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
25		3	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
26			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
27		4	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
28			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
29		5	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
30			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
31	M4	1	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
32			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
33		2	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
34			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
35		3	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
36			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
37		4	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
38			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
39		5	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
40			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
41	M5	1	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
42			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
43		2	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
44			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
45		3	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
46			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
47		4	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
48			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
49		5	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
50			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
51	M6	1	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
52			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
53		2	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
54			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
55		3	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
56			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
57		4	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
58			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
59		5	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
60			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
61	M7	1	...	.097	8	.261	1	-.251	2	-.794	7	1.932	6	3.908	6	-1.978	7
62			...	.029	5	.031	2	-.692	1	-1.9...	6	.794	7	1.978	7	-3.908	6
63		2	...	.097	8	.26	1	-.251	2	-.758	7	1.874	6	3.729	6	-1.851	7
64			...	.029	5	.031	2	-.692	1	-1.8...	6	.758	7	1.851	7	-3.729	6
65		3	...	.097	8	.259	1	-.252	2	-.723	7	1.815	6	3.55	6	-1.725	7
66			...	.029	5	.03	2	-.691	1	-1.8...	6	.723	7	1.725	7	-3.55	6
67		4	...	.097	8	.259	1	-.252	2	-.688	7	1.757	6	3.371	6	-1.599	7
68			...	.029	5	.029	2	-.691	1	-1.7...	6	.688	7	1.599	7	-3.371	6
69		5	...	.098	8	.258	1	-.252	2	-.653	7	1.698	6	3.192	6	-1.472	7
70			...	.028	5	.029	2	-.691	1	-1.6...	6	.653	7	1.472	7	-3.192	6
71	M8	1	...	-.116	2	-.112	2	-.053	5	.239	8	-.218	5	1.695	8	0	5
72			...	-.359	1	-.128	1	-.199	8	.218	5	-.239	8	0	5	-1.695	8
73		2	...	-.115	2	-.129	2	-.047	5	-.626	2	.725	1	.253	8	.356	5
74			...	-.352	1	-.138	1	-.205	8	-.725	1	.626	2	-.356	5	-.253	8
75		3	...	-.115	2	-.145	5	-.041	5	-1.6...	2	1.741	1	-.668	5	1.232	8
76			...	-.345	1	-.148	8	-.211	8	-1.7...	1	1.607	2	-1.232	8	.668	5
77		4	...	-.114	2	-.155	5	-.035	5	-2.7...	2	2.826	1	-.936	5	2.761	8
78			...	-.338	1	-.165	8	-.218	8	-2.8...	1	2.709	2	-2.761	8	.936	5
79		5	...	-.113	2	-.166	5	-.028	5	-3.92	5	3.993	8	-1.16	5	4.335	8
80			...	-.331	1	-.181	8	-.224	8	-3.9...	8	3.92	5	-4.335	8	1.16	5
81	M9	1	...	.155	7	-.371	6	.989	7	-.655	7	1.333	6	2.039	6	-.665	7
82			...	.122	6	-.54	7	.662	6	-1.3...	6	.655	7	.665	7	-2.039	6
83		2	...	.155	7	-.373	6	.989	7	-1.3...	7	1.831	6	2.925	6	-1.988	7
84			...	.122	6	-.542	7	.663	6	-1.8...	6	1.379	7	1.988	7	-2.925	6
85		3	...	.154	7	-.375	6	.988	7	-2.1...	7	2.331	6	3.812	6	-3.31	7
86			...	.122	6	-.543	7	.663	6	-2.3...	6	2.104	7	3.31	7	-3.812	6
87		4	...	.154	7	-.376	6	.987	7	-2.7...	5	2.922	8	4.739	8	-4.593	5
88			...	.123	6	-.545	7	.664	6	-2.9...	8	2.743	5	4.593	5	-4.739	8
89		5	...	.154	7	-.378	6	.987	7	-3.3...	6	3.562	7	5.952	7	-5.589	6
90			...	.123	6	-.546	7	.665	6	-3.5...	7	3.337	6	5.589	6	-5.952	7
91	M10	1	...	.564	7	.018	2	-.248	6	.324	2	-.291	1	9.264	7	-7.979	6
92			...	.384	6	0	1	-.305	7	.291	1	-.324	2	7.979	6	-9.264	7
93		2	...	.566	7	-.005	2	-.256	6	.436	2	-.178	1	4.081	2	-3.54	1
94			...	.393	6	-.012	1	-.297	7	.178	1	-.436	2	3.54	1	-4.081	2
95		3	...	.567	7	-.023	1	-.264	5	.135	2	.13	1	-.922	4	1.08	3
96			...	.402	6	-.029	2	-.289	8	-.13	1	-.135	2	-1.08	3	.922	4
97		4	...	.569	7	-.034	1	-.256	5	-.578	7	.636	6	-5.523	5	6.101	8
98			...	.41	6	-.053	2	-.297	8	-.636	6	.578	7	-6.101	8	5.523	5
99		5	...	.571	7	-.046	1	-.244	3	-1.3...	1	1.711	2	-9.9	5	11.346	8

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
100			...	.419	6	-.077	2	-.309	4	-1.7...	2	1.331	1	-11.346	8	9.9	5
101	M11	1	...	.002	5	.328	8	-.046	6	-7.3...	5	7.727	8	1.894	6	-1.403	7
102			...	-.002	8	.296	5	-.073	7	-7.7...	8	7.311	5	1.403	7	-1.894	6
103		2	...	.003	5	.326	8	-.048	6	-6.9...	5	7.313	8	1.835	6	-1.311	7
104			...	-.003	8	.294	5	-.072	7	-7.3...	8	6.937	5	1.311	7	-1.835	6
105		3	...	.003	5	.323	8	-.049	6	-6.5...	5	6.901	8	1.774	6	-1.22	7
106			...	-.003	8	.292	5	-.071	7	-6.9...	8	6.565	5	1.22	7	-1.774	6
107		4	...	.004	5	.321	8	-.05	6	-6.1...	5	6.493	8	1.711	6	-1.131	7
108			...	-.004	8	.289	5	-.07	7	-6.4...	8	6.197	5	1.131	7	-1.711	6
109		5	...	.005	5	.319	8	-.051	6	-5.8...	5	6.087	8	1.647	6	-1.043	7
110			...	-.005	8	.287	5	-.069	7	-6.0...	8	5.831	5	1.043	7	-1.647	6
111	M12	1	...	.102	8	.239	8	-.05	8	-5.2...	5	5.379	8	1.507	5	-1.345	8
112			...	.102	5	.199	5	-.067	5	-5.3...	8	5.221	5	1.345	8	-1.507	5
113		2	...	.1	5	.233	8	-.043	8	-3.0...	8	3.389	5	.934	6	-.776	7
114			...	.093	8	.179	5	-.074	5	-3.3...	5	3.089	8	.776	7	-.934	6
115		3	...	.098	5	.226	8	-.036	8	-.862	8	1.747	5	.503	8	-.063	5
116			...	.083	8	.159	5	-.082	5	-1.7...	5	.862	8	.063	5	-.503	8
117		4	...	.096	5	.22	8	-.029	8	1.3...	8	.298	5	.185	8	.762	5
118			...	.074	8	.14	5	-.089	5	-.298	5	-1.301	8	-.762	5	-.185	8
119		5	...	.094	5	.213	8	-.022	8	3.4	8	-.96	5	-.064	8	1.655	5
120			...	.064	8	.12	5	-.096	5	.96	5	-3.4	8	-1.655	5	.064	8
121	M13	1	...	.065	1	.065	5	.065	8	.5	8	1.362	5	-1.252	7	3.674	6
122			...	.065	1	-.065	8	-.065	7	-1.3...	5	-.5	8	-3.674	6	1.252	7
123		2	...	.062	1	.062	5	.062	8	.29	8	1.152	5	-1.462	7	3.464	6
124			...	.062	1	-.062	8	-.062	7	-1.1...	5	-.29	8	-3.464	6	1.462	7
125		3	...	.059	1	.059	5	.059	8	.09	8	.952	5	-1.662	7	3.264	6
126			...	.059	1	-.059	8	-.059	7	-.952	5	-.09	8	-3.264	6	1.662	7
127		4	...	.056	1	.056	5	.056	8	-.101	8	.761	5	-1.852	7	3.073	6
128			...	.056	1	-.056	8	-.056	7	-.761	5	.101	8	-3.073	6	1.852	7
129		5	...	.054	1	.054	5	.054	8	-.152	6	.71	7	-2.033	7	2.892	6
130			...	.054	1	-.054	8	-.054	7	-.71	7	.152	6	-2.892	6	2.033	7
131	M14	1	...	.028	1	.028	5	.028	6	-.098	6	.457	7	-1.307	7	1.86	6
132			...	.028	1	-.028	8	-.028	5	-.457	7	.098	6	-1.86	6	1.307	7
133		2	...	.026	1	.026	5	.026	6	-.054	6	.5	7	-1.351	7	1.816	6
134			...	.026	1	-.026	8	-.026	5	-.5	7	.054	6	-1.816	6	1.351	7
135		3	...	.024	1	.024	5	.024	6	-.013	6	.542	7	-1.392	7	1.775	6
136			...	.024	1	-.024	8	-.024	5	-.542	7	.013	6	-1.775	6	1.392	7
137		4	...	.022	1	.022	5	.022	6	.025	6	.58	7	-1.431	7	1.737	6
138			...	.022	1	-.022	8	-.022	5	-.58	7	-.025	6	-1.737	6	1.431	7
139		5	...	.021	1	.021	5	.021	6	.061	6	.615	7	-1.466	7	1.701	6
140			...	.021	1	-.021	8	-.021	5	-.615	7	-.061	6	-1.701	6	1.466	7
141	M15	1	...	.009	1	.009	5	.009	6	.094	6	.956	7	-2.28	7	2.646	6
142			...	.009	1	-.009	7	-.009	5	-.956	7	-.094	6	-2.646	6	2.28	7
143		2	...	.007	1	.007	5	.007	6	.115	6	.977	7	-2.3	7	2.625	6
144			...	.007	1	-.007	7	-.007	5	-.977	7	-.115	6	-2.625	6	2.3	7
145		3	...	.005	1	.005	5	.005	6	.129	6	.991	7	-2.315	7	2.611	6
146			...	.005	1	-.005	7	-.005	5	-.991	7	-.129	6	-2.611	6	2.315	7
147		4	...	.002	1	.002	5	.002	6	.138	6	1	7	-2.324	7	2.602	6
148			...	.002	1	-.002	7	-.002	5	-1	7	-.138	6	-2.602	6	2.324	7
149		5	...	0	1	0	1	0	1	.141	6	1.003	7	-2.326	7	2.599	6
150			...	0	1	0	1	0	1	-1.0...	7	-.141	6	-2.599	6	2.326	7
151	M16	1	...	0	1	0	1	0	1	.141	6	1.003	7	-2.326	7	2.599	6
152			...	0	1	0	1	0	1	-1.0...	7	-.141	6	-2.599	6	2.326	7
153		2	...	-.001	1	.001	7	.001	5	.14	6	1.002	7	-2.326	7	2.6	6
154			...	-.001	1	-.001	5	-.001	6	-1.0...	7	-.14	6	-2.6	6	2.326	7
155		3	...	-.002	1	.002	7	.002	5	.138	6	1	7	-2.324	7	2.602	6
156			...	-.002	1	-.002	5	-.002	6	-1	7	-.138	6	-2.602	6	2.324	7

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	lc	y Shear[...	lc	z Shear[k...	lc	y-T...	lc	y-Bot[ksi]	lc	z-Top[ksi]	lc	z-Bot[ksi]	lc
157		4	...	-.003	1	.003	7	.003	5	.135	6	.997	7	-2.32	7	2.605	6
158			...	-.003	1	-.003	5	-.003	6	-.997	7	-.135	6	-2.605	6	2.32	7
159		5	...	-.005	1	.005	7	.005	5	.13	6	.992	7	-2.315	7	2.61	6
160			...	-.005	1	-.005	5	-.005	6	-.992	7	-.13	6	-2.61	6	2.315	7
161	M17	1	...	-.005	1	.005	7	.005	5	.13	6	.992	7	-2.315	7	2.61	6
162			...	-.005	2	-.005	6	-.005	6	-.992	7	-.13	6	-2.61	6	2.315	7
163		2	...	-.009	1	.009	7	.009	5	.097	6	.959	7	-2.282	7	2.643	6
164			...	-.009	2	-.009	6	-.009	6	-.959	7	-.097	6	-2.643	6	2.282	7
165		3	...	-.013	1	.013	7	.013	5	.042	6	.904	7	-2.227	7	2.698	6
166			...	-.013	2	-.013	6	-.013	6	-.904	7	-.042	6	-2.698	6	2.227	7
167		4	...	-.018	1	.018	7	.018	5	-.034	6	.828	7	-2.151	7	2.774	6
168			...	-.018	2	-.018	6	-.018	6	-.828	7	.034	6	-2.774	6	2.151	7
169		5	...	-.022	1	.022	7	.022	5	-.132	6	.73	7	-2.054	7	2.872	6
170			...	-.022	2	-.022	6	-.022	6	-.73	7	.132	6	-2.872	6	2.054	7
171	M18	1	...	-.009	6	-.017	8	.024	5	-.219	6	.723	7	-1.679	7	2.583	6
172			...	-.026	7	-.051	5	-.024	8	-.723	7	.219	6	-2.583	6	1.679	7
173		2	...	-.01	6	-.02	8	.028	5	-.37	8	.872	5	-1.573	7	2.69	6
174			...	-.03	7	-.059	5	-.028	8	-.872	5	.37	8	-2.69	6	1.573	7
175		3	...	-.011	6	-.022	8	.031	5	-.456	8	1.129	5	-1.452	7	2.811	6
176			...	-.033	7	-.067	5	-.031	8	-1.1...	5	.456	8	-2.811	6	1.452	7
177		4	...	-.012	6	-.025	8	.035	5	-.552	8	1.418	5	-1.316	7	2.947	6
178			...	-.037	7	-.075	5	-.035	8	-1.4...	5	.552	8	-2.947	6	1.316	7
179		5	...	-.014	6	-.027	8	.039	5	-.659	8	1.739	5	-1.164	7	3.098	6
180			...	-.041	7	-.082	5	-.039	8	-1.7...	5	.659	8	-3.098	6	1.164	7
181	M19	1	...	.294	5	.403	5	.036	5	-.155	6	2.324	7	-2.342	7	4.075	6
182			...	-.006	8	.01	8	-.051	8	-2.3...	7	.155	6	-4.075	6	2.342	7
183		2	...	.293	5	.402	5	.036	5	.05	6	2.274	7	-2.328	7	4.099	6
184			...	-.006	8	.009	8	-.052	8	-2.2...	7	-.05	6	-4.099	6	2.328	7
185		3	...	.293	5	.401	5	.037	5	.255	6	2.225	7	-2.313	7	4.123	6
186			...	-.007	8	.009	8	-.052	8	-2.2...	7	-.255	6	-4.123	6	2.313	7
187		4	...	.293	5	.4	5	.037	5	.458	6	2.176	7	-2.298	7	4.148	6
188			...	-.008	8	.009	8	-.053	8	-2.1...	7	-.458	6	-4.148	6	2.298	7
189		5	...	.293	5	.398	5	.038	5	.679	5	2.145	8	-2.282	7	4.173	6
190			...	-.008	8	.008	8	-.053	8	-2.1...	8	-.679	5	-4.173	6	2.282	7
191	M20	1	...	.194	5	.58	5	.13	5	-3.2...	5	4.098	8	-.047	7	2.635	6
192			...	.013	8	-.022	8	-.045	8	-4.0...	8	3.293	5	-2.635	6	.047	7
193		2	...	.194	6	.576	5	.133	5	-2.0...	5	4.15	8	-.036	7	2.46	6
194			...	.011	7	-.025	8	-.048	8	-4.15	8	2.026	5	-2.46	6	.036	7
195		3	...	.194	6	.573	5	.135	5	-.766	5	4.21	8	-.026	7	2.284	6
196			...	.009	7	-.029	8	-.051	8	-4.21	8	.766	5	-2.284	6	.026	7
197		4	...	.194	6	.57	5	.138	5	.487	5	4.277	8	-.017	7	2.107	6
198			...	.007	7	-.033	8	-.053	8	-4.2...	8	-.487	5	-2.107	6	.017	7
199		5	...	.195	6	.567	5	.141	5	1.7...	5	4.353	8	-.009	7	1.929	6
200			...	.005	7	-.036	8	-.056	8	-4.3...	8	-1.733	5	-1.929	6	.009	7
201	M21	1	...	0	1	0	1	0	1	-.587	8	.749	5	-1.004	8	1.952	5
202			...	0	1	0	1	0	1	-.749	5	.587	8	-1.952	5	1.004	8
203		2	...	0	5	-.002	1	.001	7	-.589	8	.751	5	-1.003	8	1.952	5
204			...	0	6	-.002	1	-.001	5	-.751	5	.589	8	-1.952	5	1.003	8
205		3	...	.001	5	-.005	1	.002	7	-.594	8	.756	5	-1	8	1.955	5
206			...	-.001	6	-.005	1	-.002	5	-.756	5	.594	8	-1.955	5	1	8
207		4	...	.002	5	-.007	1	.003	7	-.603	8	.765	5	-.996	8	1.96	5
208			...	-.002	6	-.007	1	-.003	5	-.765	5	.603	8	-1.96	5	.996	8
209		5	...	.002	5	-.009	1	.005	7	-.616	8	.778	5	-.99	8	1.966	5
210			...	-.002	6	-.009	1	-.005	5	-.778	5	.616	8	-1.966	5	.99	8
211	M22	1	...	.002	7	-.009	8	.005	7	-.616	8	.778	5	-.99	8	1.966	5
212			...	-.002	6	-.009	1	-.005	6	-.778	5	.616	8	-1.966	5	.99	8
213		2	...	.004	7	-.014	8	.007	7	-.656	8	.818	5	-.97	8	1.986	5

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[..	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
214			...	-.004	6	-.014	1	-.007	6	-.818	5	.656	8	-1.986	5	.97	8
215		3	...	.005	7	-.019	8	.009	7	-.713	8	.875	5	-.941	8	2.014	5
216			...	-.005	6	-.019	1	-.009	6	-.875	5	.713	8	-2.014	5	.941	8
217		4	...	.006	7	-.024	8	.012	7	-.787	8	.949	5	-.904	8	2.051	5
218			...	-.006	6	-.024	1	-.012	6	-.949	5	.787	8	-2.051	5	.904	8
219		5	...	.007	7	-.029	8	.014	7	-.878	8	1.04	5	-.859	8	2.097	5
220			...	-.007	6	-.029	1	-.014	6	-1.04	5	.878	8	-2.097	5	.859	8
221	M23	1	...	.007	5	.069	5	.079	6	-.878	8	1.04	5	-.859	8	2.097	5
222			...	-.007	6	.048	8	.003	7	-1.04	5	.878	8	-2.097	5	.859	8
223		2	...	.009	5	.06	5	.075	6	-.624	8	.67	5	-.815	8	1.668	5
224			...	-.009	6	.04	8	.007	7	-.67	5	.624	8	-1.668	5	.815	8
225		3	...	.011	5	.052	5	.071	6	-.348	5	.417	8	-.748	8	1.263	5
226			...	-.011	6	.032	8	.012	7	-.417	8	.348	5	-1.263	5	.748	8
227		4	...	.013	5	.044	5	.067	6	-.073	5	.258	8	-.657	8	.881	5
228			...	-.013	6	.024	8	.016	7	-.258	8	.073	5	-.881	5	.657	8
229		5	...	.015	5	.036	5	.063	6	.155	5	.145	8	-.355	6	.71	7
230			...	-.015	6	.016	8	.02	7	-.145	8	-.155	5	-.71	7	.355	6
231	M24	1	...	.025	7	-.002	5	.044	6	.155	5	.145	8	-.355	6	.71	7
232			...	-.025	6	-.022	8	.039	7	-.145	8	-.155	5	-.71	7	.355	6
233		2	...	.027	7	-.009	5	.044	8	.127	5	.273	8	-.146	6	.51	7
234			...	-.027	6	-.029	8	.038	5	-.273	8	-.127	5	-.51	7	.146	6
235		3	...	.028	7	-.016	5	.048	8	.064	5	.436	8	.045	6	.292	7
236			...	-.028	6	-.037	8	.034	5	-.436	8	-.064	5	-.292	7	-.045	6
237		4	...	.03	7	-.023	5	.052	8	-.034	5	.635	8	.218	6	.056	7
238			...	-.03	6	-.044	8	.031	5	-.635	8	.034	5	-.056	7	-.218	6
239		5	...	.032	7	-.031	5	.055	8	-.168	5	.868	8	.409	8	-.161	5
240			...	-.032	6	-.051	8	.027	5	-.868	8	.168	5	.161	5	-.409	8
241	M25	1	...	-.019	5	.058	8	.067	7	.905	5	-.495	8	.925	7	-.362	6
242			...	-.029	8	.024	5	-.067	6	.495	8	-.905	5	.362	6	-.925	7
243		2	...	-.024	5	.064	8	.073	7	1.07	5	-.969	8	1.469	7	.181	6
244			...	-.034	8	.019	5	-.073	6	.969	8	-1.07	5	-.181	6	-1.469	7
245		3	...	-.03	5	.07	8	.078	7	1.5...	7	-1.154	6	2.055	7	.768	6
246			...	-.04	8	.013	5	-.078	6	1.1...	6	-1.526	7	-.768	6	-2.055	7
247		4	...	-.035	5	.075	8	.084	7	2.0...	7	-1.251	6	2.685	7	1.398	6
248			...	-.045	8	.007	5	-.084	6	1.2...	6	-2.069	7	-1.398	6	-2.685	7
249		5	...	-.041	5	.081	8	.09	7	2.6...	7	-1.305	6	3.358	7	2.07	6
250			...	-.051	8	.002	5	-.09	6	1.3...	6	-2.655	7	-2.07	6	-3.358	7
251	M26	1	...	.052	5	1.062	5	-.027	8	-2.2...	7	2.891	6	.496	8	-.063	5
252			...	.014	8	.112	8	-.059	5	-2.8...	6	2.235	7	.063	5	-.496	8
253		2	...	.053	5	1.06	5	-.027	8	-.611	5	2.696	8	.454	8	.028	5
254			...	.013	8	.11	8	-.059	5	-2.6...	8	.611	5	-.028	5	-.454	8
255		3	...	.053	5	1.057	5	-.028	8	1.0...	5	2.526	8	.411	8	.119	5
256			...	.012	8	.108	8	-.058	5	-2.5...	8	-1.033	5	-.119	5	-.411	8
257		4	...	.054	5	1.055	5	-.028	8	2.6...	5	2.361	8	.367	8	.209	5
258			...	.012	8	.106	8	-.058	5	-2.3...	8	-2.673	5	-.209	5	-.367	8
259		5	...	.055	5	1.053	5	-.029	8	4.3...	5	2.198	8	.323	8	.298	5
260			...	.011	8	.103	8	-.057	5	-2.1...	8	-4.309	5	-.298	5	-.323	8
261	M29	1	...	0	8	0	1	0	1	0	1	0	1	0	1	0	1
262			...	0	5	0	1	0	1	0	1	0	1	0	1	0	1
263		2	...	0	8	0	1	0	1	0	1	0	1	0	1	0	1
264			...	0	5	0	1	0	1	0	1	0	1	0	1	0	1
265		3	...	0	8	0	1	0	1	0	1	0	1	0	1	0	1
266			...	0	5	0	1	0	1	0	1	0	1	0	1	0	1
267		4	...	0	8	0	1	0	1	0	1	0	1	0	1	0	1
268			...	0	5	0	1	0	1	0	1	0	1	0	1	0	1
269		5	...	0	8	0	1	0	1	0	1	0	1	0	1	0	1
270			...	0	5	0	1	0	1	0	1	0	1	0	1	0	1

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[..	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
271	M30	1	...	.144	8	-.01	7	.034	6	.479	7	1.523	6	1.825	6	2.12	7
272			...	-.138	5	-.058	6	-.041	7	-1.5...	6	-.479	7	-2.12	7	-1.825	6
273		2	...	.142	8	-.014	7	.032	6	.456	7	1.641	6	1.888	6	2.197	7
274			...	-.136	5	-.063	6	-.039	7	-1.6...	6	-.456	7	-2.197	7	-1.888	6
275		3	...	.141	8	-.018	7	.029	6	.424	7	1.767	6	1.948	6	2.271	7
276			...	-.135	5	-.067	6	-.037	7	-1.7...	6	-.424	7	-2.271	7	-1.948	6
277		4	...	.14	8	-.022	7	.027	6	.385	7	1.902	6	2.003	6	2.34	7
278			...	-.134	5	-.071	6	-.034	7	-1.9...	6	-.385	7	-2.34	7	-2.003	6
279		5	...	.139	8	-.027	7	.025	6	.337	7	2.045	6	2.054	6	2.405	7
280			...	-.133	5	-.075	6	-.032	7	-2.0...	6	-.337	7	-2.405	7	-2.054	6
281	M31	1	...	.139	8	.228	6	.025	6	.337	7	2.045	6	2.054	6	2.405	7
282			...	-.133	5	-.02	7	-.032	7	-2.0...	6	-.337	7	-2.405	7	-2.054	6
283		2	...	.136	8	.216	6	.019	6	.181	7	.72	6	2.186	6	2.58	7
284			...	-.13	5	-.033	7	-.026	7	-.72	6	-.181	7	-2.58	7	-2.186	6
285		3	...	.133	8	.203	6	.012	6	.528	6	.052	7	2.279	6	2.715	7
286			...	-.127	5	-.045	7	-.02	7	-.052	7	-.528	6	-2.715	7	-2.279	6
287		4	...	.13	8	.19	6	.006	6	1.7	6	.361	7	2.333	6	2.813	7
288			...	-.124	5	-.058	7	-.013	7	-.361	7	-1.7	6	-2.813	7	-2.333	6
289		5	...	.126	8	.177	6	.012	8	2.7...	6	.747	7	2.349	6	2.872	7
290			...	-.12	5	-.071	7	-.019	5	-.747	7	-2.794	6	-2.872	7	-2.349	6
291	M32	1	...	.092	8	.04	6	.081	8	4.5...	6	2.975	7	1.794	6	2.431	7
292			...	-.086	5	-.208	7	-.088	5	-2.9...	7	-4.522	6	-2.431	7	-1.794	6
293		2	...	.091	8	.035	6	.083	8	4.6...	6	3.451	7	1.636	6	2.288	7
294			...	-.085	5	-.213	7	-.09	5	-3.4...	7	-4.606	6	-2.288	7	-1.636	6
295		3	...	.09	8	.03	6	.086	8	4.6...	6	3.937	7	1.471	6	2.14	7
296			...	-.084	5	-.218	7	-.093	5	-3.9...	7	-4.679	6	-2.14	7	-1.471	6
297		4	...	.088	8	.025	6	.088	8	4.7...	6	4.435	7	1.302	6	1.987	7
298			...	-.082	5	-.223	7	-.095	5	-4.4...	7	-4.741	6	-1.987	7	-1.302	6
299		5	...	.087	8	.02	6	.09	8	4.7...	6	4.943	7	1.127	6	1.828	7
300			...	-.081	5	-.228	7	-.098	5	-4.9...	7	-4.793	6	-1.828	7	-1.127	6
301	M33	1	...	.087	8	.271	8	.09	8	4.7...	6	4.943	7	1.127	6	1.828	7
302			...	-.081	5	-.27	5	-.098	5	-4.9...	7	-4.793	6	-1.828	7	-1.127	6
303		2	...	.086	8	.264	8	.094	8	4.2...	6	4.378	7	.882	6	1.606	7
304			...	-.08	5	-.277	5	-.101	5	-4.3...	7	-4.211	6	-1.606	7	-.882	6
305		3	...	.084	8	.258	8	.097	8	3.6...	6	3.833	7	.628	6	1.373	7
306			...	-.078	5	-.283	5	-.104	5	-3.8...	7	-3.609	6	-1.373	7	-.628	6
307		4	...	.082	8	.251	8	.1	8	2.9...	6	3.307	7	.879	8	1.646	5
308			...	-.076	5	-.29	5	-.107	5	-3.3...	7	-2.987	6	-1.646	5	-.879	8
309		5	...	.081	8	.245	8	.104	8	3.0...	8	3.505	5	1.188	8	1.977	5
310			...	-.075	5	-.296	5	-.111	5	-3.5...	5	-3.049	8	-1.977	5	-1.188	8
311	M34	1	...	.129	8	.016	6	.145	5	.046	6	.088	7	3.574	8	4.471	5
312			...	-.163	5	-.033	7	-.157	8	-.088	7	-.046	6	-4.471	5	-3.574	8
313		2	...	.121	8	.019	6	.134	5	.211	6	.476	7	2.148	8	3.157	5
314			...	-.175	5	-.049	7	-.146	8	-.476	7	-.211	6	-3.157	5	-2.148	8
315		3	...	.113	8	.022	6	.124	5	.402	6	1.019	7	.817	8	1.939	5
316			...	-.186	5	-.066	7	-.136	8	-1.0...	7	-.402	6	-1.939	5	-.817	8
317		4	...	.105	8	.024	6	.114	5	.62	6	1.715	7	1.367	7	2.602	6
318			...	-.197	5	-.082	7	-.126	8	-1.7...	7	-.62	6	-2.602	6	-1.367	7
319		5	...	.097	8	.027	6	.104	5	.864	6	2.565	7	2.302	7	3.65	6
320			...	-.208	5	-.098	7	-.116	8	-2.5...	7	-.864	6	-3.65	6	-2.302	7
321	M35	1	...	.04	7	.16	6	.352	5	.881	6	5.608	7	1.107	5	3.037	8
322			...	-.04	6	.16	7	-.228	8	-5.6...	7	-.881	6	-3.037	8	-1.107	5
323		2	...	.039	7	.158	6	.353	5	1.0...	6	5.391	7	1.587	5	3.347	8
324			...	-.039	6	.158	7	-.229	8	-5.3...	7	-1.098	6	-3.347	8	-1.587	5
325		3	...	.039	7	.155	6	.354	5	1.3...	6	5.178	7	2.068	5	3.659	8
326			...	-.039	6	.155	7	-.23	8	-5.1...	7	-1.311	6	-3.659	8	-2.068	5
327		4	...	.038	7	.153	6	.355	5	1.52	6	4.969	7	2.551	5	3.973	8

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	lc	y Shear[..	lc	z Shear[k...	lc	y-T...	lc	y-Bot[ksi]	lc	z-Top[ksi]	lc	z-Bot[ksi]	lc
328			...	-.038	6	.153	7	-.231	8	-4.9...	7	-1.52	6	-3.973	8	-2.551	5
329		5	...	.038	7	.15	6	.357	5	1.7...	6	4.762	7	3.036	5	4.289	8
330			...	-.038	6	.15	7	-.232	8	-4.7...	7	-1.727	6	-4.289	8	-3.036	5
331	M36	1	...	.193	5	.091	6	.045	6	-.204	7	.535	6	1.004	5	1.463	8
332			...	-.131	8	.091	7	-.045	7	-.535	6	.204	7	-1.463	8	-1.004	5
333		2	...	.195	5	.085	6	.042	6	.093	7	.238	6	.856	5	1.315	8
334			...	-.133	8	.085	7	-.042	7	-.238	6	-.093	7	-1.315	8	-.856	5
335		3	...	.196	5	.078	6	.039	6	.369	7	-.039	6	.718	5	1.176	8
336			...	-.134	8	.078	7	-.039	7	.039	6	-.369	7	-1.176	8	-.718	5
337		4	...	.198	5	.072	6	.036	6	.625	7	-.294	6	.59	5	1.049	8
338			...	-.136	8	.072	7	-.036	7	.294	6	-.625	7	-1.049	8	-.59	5
339		5	...	.199	5	.066	6	.033	6	.86	7	-.53	6	.472	5	.931	8
340			...	-.137	8	.066	7	-.033	7	.53	6	-.86	7	-.931	8	-.472	5
341	M37	1	...	.015	7	.06	5	.03	8	2.5...	6	3.069	7	1.982	5	2.777	8
342			...	-.015	6	.06	2	-.03	6	-3.0...	7	-2.562	6	-2.777	8	-1.982	5
343		2	...	.014	7	.055	5	.028	8	2.7	6	2.931	7	1.913	5	2.708	8
344			...	-.014	6	.055	2	-.028	6	-2.9...	7	-2.7	6	-2.708	8	-1.913	5
345		3	...	.013	7	.051	5	.026	8	2.8...	6	2.803	7	1.849	5	2.644	8
346			...	-.013	6	.051	2	-.026	6	-2.8...	7	-2.828	6	-2.644	8	-1.849	5
347		4	...	.012	7	.047	5	.023	8	2.9...	6	2.685	7	1.791	5	2.585	8
348			...	-.012	6	.047	2	-.023	6	-2.6...	7	-2.946	6	-2.585	8	-1.791	5
349		5	...	.011	7	.042	5	.021	8	3.0...	6	2.578	7	1.737	5	2.531	8
350			...	-.011	6	.042	2	-.021	6	-2.5...	7	-3.053	6	-2.531	8	-1.737	5
351	M38	1	...	.015	5	.058	7	.094	8	-.658	6	1.516	7	1.548	5	1.645	8
352			...	-.015	8	.058	6	-.1	5	-1.5...	7	.658	6	-1.645	8	-1.548	5
353		2	...	.011	5	.045	7	.087	8	-.276	6	1.134	7	.829	5	.973	8
354			...	-.011	8	.045	6	-.094	5	-1.1...	7	.276	6	-.973	8	-.829	5
355		3	...	.008	5	.031	7	.081	8	.007	6	.851	7	.18	6	.371	7
356			...	-.008	8	.031	6	-.087	5	-.851	7	-.007	6	-.371	7	-.18	6
357		4	...	.005	5	.018	7	.074	8	.191	6	.667	7	.223	8	.461	5
358			...	-.005	8	.018	6	-.08	5	-.667	7	-.191	6	-.461	5	-.223	8
359		5	...	.001	5	.005	7	.067	8	.276	6	.582	7	.747	8	1.032	5
360			...	-.001	8	.005	6	-.074	5	-.582	7	-.276	6	-1.032	5	-.747	8
361	M39	1	...	-.042	8	.24	7	.039	5	-.273	6	.839	7	.872	8	.165	5
362			...	-.059	5	.146	6	-.039	6	-.839	7	.273	6	-.165	5	-.872	8
363		2	...	-.041	8	.242	7	.037	5	-.08	6	.518	7	.822	8	.114	5
364			...	-.058	5	.144	6	-.037	6	-.518	7	.08	6	-.114	5	-.822	8
365		3	...	-.04	8	.243	7	.036	5	.111	6	.196	7	.773	8	.066	5
366			...	-.056	5	.143	6	-.036	6	-.196	7	-.111	6	-.066	5	-.773	8
367		4	...	-.038	8	.244	7	.034	5	.299	6	-.128	7	.726	8	.019	5
368			...	-.055	5	.141	6	-.034	6	-.128	7	-.299	6	-.019	5	-.726	8
369		5	...	-.037	8	.246	7	.033	5	.549	8	-.391	5	.681	8	-.026	5
370			...	-.053	5	.14	6	-.033	6	.391	5	-.549	8	.026	5	-.681	8
371	M40	1	...	.115	5	-.162	8	.023	7	1.2...	6	-.492	7	.509	8	.895	5
372			...	.071	8	-.195	5	-.122	6	.492	7	-1.247	6	-.895	5	-.509	8
373		2	...	.117	5	-.168	8	.027	7	.702	6	-.024	7	.178	8	.839	5
374			...	.069	8	-.201	5	-.125	6	.024	7	-.702	6	-.839	5	-.178	8
375		3	...	.119	5	-.174	8	.03	7	.141	6	.46	7	-.159	8	.777	5
376			...	.068	8	-.207	5	-.129	6	-.46	7	-.141	6	-.777	5	.159	8
377		4	...	.121	5	-.18	8	.034	7	-.437	6	.962	7	-.502	8	.71	5
378			...	.066	8	-.213	5	-.133	6	-.962	7	.437	6	-.71	5	.502	8
379		5	...	.122	5	-.186	8	.038	7	-1.0...	8	1.497	5	-.453	7	1.034	6
380			...	.064	8	-.219	5	-.136	6	-1.4...	5	1.015	8	-1.034	6	.453	7
381	M41	1	...	.114	5	-.151	8	.094	6	1.6...	7	-1.398	6	-.483	5	.944	8
382			...	.098	8	-.235	5	-.094	7	1.3...	6	-1.696	7	-.944	8	.483	5
383		2	...	.116	5	-.149	8	.096	6	1.4...	7	-1.086	6	-.522	6	.905	7
384			...	.099	8	-.236	5	-.096	7	1.0...	6	-1.412	7	-.905	7	.522	6

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[..	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
385		3	...	.118	5	-.148	8	.097	6	1.13	7	-.771	6	-.373	6	1.054	7
386			...	.101	8	-.238	5	-.097	7	.771	6	-1.13	7	-1.054	7	.373	6
387		4	...	.119	5	-.146	8	.099	6	.85	7	-.453	6	-.221	6	1.206	7
388			...	.103	8	-.24	5	-.099	7	.453	6	-.85	7	-1.206	7	.221	6
389		5	...	.121	5	-.144	8	.101	6	.582	8	-.125	5	-.066	6	1.361	7
390			...	.104	8	-.241	5	-.101	7	.125	5	-.582	8	-1.361	7	.066	6
391	M42	1	...	.065	6	-.267	8	.27	5	-.139	6	2.201	7	-.432	7	1.53	6
392			...	-.065	7	-.3	5	.115	8	-2.2...	7	.139	6	-1.53	6	.432	7
393		2	...	.066	6	-.27	8	.272	5	-.653	6	2.668	7	-.177	7	1.121	6
394			...	-.066	7	-.304	5	.114	8	-2.6...	7	.653	6	-1.121	6	.177	7
395		3	...	.067	6	-.274	8	.274	5	-1.1...	6	3.141	7	.075	7	.71	6
396			...	-.067	7	-.307	5	.112	8	-3.1...	7	1.173	6	-.71	6	-.075	7
397		4	...	.068	6	-.278	8	.276	5	-1.7	6	3.621	7	.369	5	.341	8
398			...	-.068	7	-.311	5	.11	8	-3.6...	7	1.7	6	-.341	8	-.369	5
399		5	...	.069	6	-.282	8	.278	5	-2.2...	6	4.107	7	.845	5	.153	8
400			...	-.069	7	-.315	5	.108	8	-4.1...	7	2.233	6	-.153	8	-.845	5
401	M43	1	...	.081	6	.572	5	-.061	8	-5.1...	8	7.055	5	3.431	5	-.6	8
402			...	-.081	7	.24	8	-.189	5	-7.0...	5	5.179	8	.6	8	-3.431	5
403		2	...	.084	6	.563	5	-.066	8	-4.1...	8	4.58	5	2.619	5	-.323	8
404			...	-.084	7	.231	8	-.184	5	-4.58	5	4.152	8	.323	8	-2.619	5
405		3	...	.086	6	.553	5	-.071	8	-2.0...	7	3.281	6	1.827	5	-.025	8
406			...	-.086	7	.221	8	-.179	5	-3.2...	6	2.032	7	.025	8	-1.827	5
407		4	...	.088	6	.544	5	-.075	8	.357	7	2.334	6	1.055	5	.293	8
408			...	-.088	7	.212	8	-.175	5	-2.3...	6	-.357	7	-.293	8	-1.055	5
409		5	...	.091	6	.535	5	-.08	8	2.7...	7	1.427	6	.304	5	.631	8
410			...	-.091	7	.203	8	-.17	5	-1.4...	6	-2.706	7	-.631	8	-.304	5
411	M44	1	...	-.093	8	.162	5	.19	6	.27	8	-.107	5	4.363	7	-.437	6
412			...	-.259	5	.088	8	-.19	7	.107	5	-.27	8	.437	6	-4.363	7
413		2	...	-.088	8	.157	5	.195	6	.822	5	-.676	8	3.5	7	-1.3	6
414			...	-.254	5	.093	8	-.195	7	.676	8	-.822	5	1.3	6	-3.5	7
415		3	...	-.083	8	.152	5	.199	6	1.5...	5	-1.105	8	2.615	7	-2.185	6
416			...	-.249	5	.098	8	-.199	7	1.1...	8	-1.516	5	2.185	6	-2.615	7
417		4	...	-.079	8	.147	5	.204	6	2.1...	5	-1.555	8	3.199	8	-1.601	5
418			...	-.245	5	.103	8	-.204	7	1.5...	8	-2.189	5	1.601	5	-3.199	8
419		5	...	-.074	8	.142	5	.209	6	2.8...	5	-2.027	8	4.127	8	-.673	5
420			...	-.24	5	.107	8	-.209	7	2.0...	8	-2.839	5	.673	5	-4.127	8
421	M45	1	...	.109	6	.463	5	-.113	6	5.8...	8	-1.921	5	-1.142	7	1.611	6
422			...	-.109	7	.131	8	-.137	7	1.9...	5	-5.824	8	-1.611	6	1.142	7
423		2	...	.109	6	.461	5	-.112	6	5.9...	8	-2.377	5	-1.278	7	1.722	6
424			...	-.109	7	.129	8	-.138	7	2.3...	5	-5.953	8	-1.722	6	1.278	7
425		3	...	.11	6	.459	5	-.111	6	6.0...	8	-2.831	5	-1.414	7	1.832	6
426			...	-.11	7	.127	8	-.139	7	2.8...	5	-6.079	8	-1.832	6	1.414	7
427		4	...	.11	6	.457	5	-.11	6	6.2...	8	-3.283	5	-1.552	7	1.941	6
428			...	-.11	7	.125	8	-.14	7	3.2...	5	-6.203	8	-1.941	6	1.552	7
429		5	...	.111	6	.455	5	-.109	6	6.3...	8	-3.732	5	-1.691	7	2.049	6
430			...	-.111	7	.123	8	-.141	7	3.7...	5	-6.325	8	-2.049	6	1.691	7
431	M46	1	...	.164	7	.045	8	.336	8	2.4...	6	1.469	7	.822	5	5.983	8
432			...	-.186	6	-.317	5	.106	5	-1.4...	7	-2.423	6	-5.983	8	-.822	5
433		2	...	.164	7	.043	8	.335	8	2.4...	6	1.721	7	.909	5	5.711	8
434			...	-.185	6	-.319	5	.108	5	-1.7...	7	-2.454	6	-5.711	8	-.909	5
435		3	...	.163	7	.041	8	.333	8	2.4...	6	1.976	7	.997	5	5.44	8
436			...	-.185	6	-.322	5	.109	5	-1.9...	7	-2.482	6	-5.44	8	-.997	5
437		4	...	.163	7	.038	8	.332	8	2.5...	6	2.232	7	1.086	5	5.171	8
438			...	-.184	6	-.324	5	.111	5	-2.2...	7	-2.509	6	-5.171	8	-1.086	5
439		5	...	.162	7	.036	8	.331	8	2.5...	6	2.491	7	1.176	5	4.902	8
440			...	-.183	6	-.327	5	.112	5	-2.4...	7	-2.534	6	-4.902	8	-1.176	5
441	M47	1	...	.247	7	.006	8	.435	8	.999	6	2.624	7	1.574	5	6.042	8

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[..	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
442			...	-.134	6	-.197	5	.007	5	-2.6...	7	-.999	6	-6.042	8	-1.574	5
443		2	...	.246	7	.004	8	.433	8	.963	6	2.745	7	1.58	5	5.69	8
444			...	-.133	6	-.2	5	.008	5	-2.7...	7	-.963	6	-5.69	8	-1.58	5
445		3	...	.246	7	.002	8	.432	8	.926	6	2.868	7	1.587	5	5.34	8
446			...	-.132	6	-.202	5	.01	5	-2.8...	7	-.926	6	-5.34	8	-1.587	5
447		4	...	.246	7	0	8	.43	8	.888	6	2.993	7	1.596	5	4.991	8
448			...	-.13	6	-.204	5	.012	5	-2.9...	7	-.888	6	-4.991	8	-1.596	5
449		5	...	.246	7	-.002	8	.428	8	.848	6	3.121	7	1.606	5	4.643	8
450			...	-.129	6	-.206	5	.013	5	-3.1...	7	-.848	6	-4.643	8	-1.606	5
451	M48	1	...	.267	7	.123	8	.447	8	-1.0...	6	2.428	7	2.45	5	4.702	8
452			...	-.052	6	-.132	5	-.119	5	-2.4...	7	1.035	6	-4.702	8	-2.45	5
453		2	...	.267	7	.121	8	.446	8	-1.0...	6	2.452	7	2.367	5	4.388	8
454			...	-.051	6	-.133	5	-.118	5	-2.4...	7	1.019	6	-4.388	8	-2.367	5
455		3	...	.267	7	.119	8	.445	8	-1.0...	6	2.477	7	2.285	5	4.075	8
456			...	-.049	6	-.134	5	-.116	5	-2.4...	7	1.004	6	-4.075	8	-2.285	5
457		4	...	.268	7	.117	8	.443	8	-.989	6	2.503	7	2.204	5	3.763	8
458			...	-.048	6	-.136	5	-.115	5	-2.5...	7	.989	6	-3.763	8	-2.204	5
459		5	...	.268	7	.115	8	.442	8	-.974	6	2.532	7	2.124	5	3.453	8
460			...	-.047	6	-.137	5	-.113	5	-2.5...	7	.974	6	-3.453	8	-2.124	5
461	M49	1	...	.261	7	.171	8	.339	8	-.985	5	2.521	8	2.611	5	2.882	8
462			...	.041	6	-.185	5	-.165	5	-2.5...	8	.985	5	-2.882	8	-2.611	5
463		2	...	.262	7	.165	8	.336	8	-1.3...	5	2.197	8	2.297	5	2.231	8
464			...	.044	6	-.187	5	-.162	5	-2.1...	8	1.344	5	-2.231	8	-2.297	5
465		3	...	.263	7	.159	8	.333	8	-1.5...	6	2.023	7	1.988	5	1.586	8
466			...	.047	6	-.189	5	-.159	5	-2.0...	7	1.568	6	-1.586	8	-1.988	5
467		4	...	.264	7	.153	8	.331	8	-1.3...	6	2.284	7	1.684	5	.946	8
468			...	.05	6	-.191	5	-.156	5	-2.2...	7	1.374	6	-.946	8	-1.684	5
469		5	...	.265	7	.147	8	.328	8	-1.1...	6	2.556	7	1.386	5	.311	8
470			...	.053	6	-.193	5	-.153	5	-2.5...	7	1.183	6	-.311	8	-1.386	5
471	M50	1	...	.244	5	-.149	6	.149	5	2.4...	5	-.677	8	-.736	6	1.476	7
472			...	.007	8	-.268	7	-.323	8	.677	8	-2.426	5	-1.476	7	.736	6
473		2	...	.251	5	-.157	6	.141	5	1.2...	5	.43	8	-.657	5	2.498	8
474			...	.015	8	-.26	7	-.315	8	-.43	8	-1.276	5	-2.498	8	.657	5
475		3	...	.259	5	-.165	6	.133	5	.084	5	1.495	8	.081	5	4.18	8
476			...	.023	8	-.252	7	-.307	8	-1.4...	8	-.084	5	-4.18	8	-.081	5
477		4	...	.267	5	-.173	6	.125	5	-1.1...	5	2.516	8	.777	5	5.819	8
478			...	.031	8	-.244	7	-.299	8	-2.5...	8	1.151	5	-5.819	8	-.777	5
479		5	...	.275	5	-.177	8	.117	5	-2.43	5	3.495	8	1.429	5	7.414	8
480			...	.039	8	-.24	5	-.291	8	-3.4...	8	2.43	5	-7.414	8	-1.429	5
481	M51	1	...	-.048	1	-.006	8	.025	6	1.2...	5	.807	8	6.054	7	.649	6
482			...	-.048	6	-.056	5	-.199	7	-.807	8	-1.257	5	-.649	6	-6.054	7
483		2	...	-.036	1	.006	8	.037	6	.752	5	.81	8	4.369	7	.395	6
484			...	-.036	6	-.068	5	-.212	7	-.81	8	-.752	5	-.395	6	-4.369	7
485		3	...	-.024	1	.018	8	.049	6	.148	5	.715	8	2.585	7	.042	6
486			...	-.024	6	-.08	5	-.224	7	-.715	8	-.148	5	-.042	6	-2.585	7
487		4	...	-.012	1	.03	8	.061	6	-.377	2	.698	1	.928	4	-.183	3
488			...	-.012	6	-.092	5	-.236	7	-.698	1	.377	2	.183	3	-.928	4
489		5	...	0	1	.042	8	.073	6	-.229	8	1.355	5	.971	8	1.291	5
490			...	0	6	-.104	5	-.248	7	-1.3...	5	.229	8	-1.291	5	-.971	8
491	M52	1	...	-.058	1	.051	6	.053	3	-.205	8	1.379	5	.995	8	1.315	5
492			...	-.058	6	-.051	7	-.053	4	-1.3...	5	.205	8	-1.315	5	-.995	8
493		2	...	-.054	1	.047	6	.053	3	-.329	8	1.255	5	.871	8	1.191	5
494			...	-.054	6	-.047	7	-.053	4	-1.2...	5	.329	8	-1.191	5	-.871	8
495		3	...	-.051	1	.043	6	.053	3	-.443	8	1.14	5	.757	8	1.076	5
496			...	-.051	6	-.043	7	-.053	4	-1.14	5	.443	8	-1.076	5	-.757	8
497		4	...	-.047	1	.04	6	.053	3	-.548	8	1.035	5	.652	8	.971	5
498			...	-.047	6	-.04	7	-.053	4	-1.0...	5	.548	8	-.971	5	-.652	8

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[..	Jc	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
499		5	...	-.043	1	.036	6	.053	3	-.644	8	.94	5	.556	8	.876	5
500			...	-.043	6	-.036	7	-.053	4	-.94	5	.644	8	-.876	5	-.556	8
501	M53	1	...	.02	7	.073	7	.046	4	1.0...	8	-.565	5	-2.029	6	2.215	7
502			...	-.02	6	.073	6	-.046	3	.565	5	-1.094	8	-2.215	7	2.029	6
503		2	...	.016	7	.06	7	.036	4	1.3...	8	-.857	5	-1.881	8	2.363	5
504			...	-.016	6	.06	6	-.036	3	.857	5	-1.386	8	-2.363	5	1.881	8
505		3	...	.013	7	.047	7	.027	4	1.6...	8	-1.092	5	-1.752	8	2.492	5
506			...	-.013	6	.047	6	-.027	3	1.0...	5	-1.621	8	-2.492	5	1.752	8
507		4	...	.009	7	.034	7	.019	8	1.8	8	-1.271	5	-1.654	8	2.59	5
508			...	-.009	6	.034	6	-.019	5	1.2...	5	-1.8	8	-2.59	5	1.654	8
509		5	...	.008	2	.022	7	.012	8	1.9...	8	-1.394	5	-1.587	8	2.657	5
510			...	-.008	1	.022	6	-.012	5	1.3...	5	-1.923	8	-2.657	5	1.587	8
511	M54	1	...	.001	7	.007	6	.006	2	1.0...	8	.198	5	-1.549	8	2.695	5
512			...	-.001	6	.007	7	-.006	1	-.198	5	-1.043	8	-2.695	5	1.549	8
513		2	...	.001	7	.005	6	.005	2	1.0...	8	.194	5	-1.547	8	2.696	5
514			...	-.001	6	.005	7	-.005	1	-.194	5	-1.047	8	-2.696	5	1.547	8
515		3	...	0	7	.004	6	.003	2	1.0...	8	.191	5	-1.546	8	2.697	5
516			...	0	6	.004	7	-.003	1	-.191	5	-1.049	8	-2.697	5	1.546	8
517		4	...	0	7	.002	6	.002	2	1.0...	8	.19	5	-1.546	8	2.698	5
518			...	0	6	.002	7	-.002	1	-.19	5	-1.051	8	-2.698	5	1.546	8
519		5	...	0	1	0	1	0	1	1.0...	8	.189	5	-1.545	8	2.698	5
520			...	0	1	0	1	0	1	-.189	5	-1.051	8	-2.698	5	1.545	8
521	M55	1	...	.003	6	.079	5	.247	2	1.0...	8	.228	5	-1.561	8	2.683	5
522			...	-.003	5	-.004	8	.178	1	-.228	5	-1.013	8	-2.683	5	1.561	8
523		2	...	.007	6	.058	5	.228	2	.915	6	-.256	7	.088	8	1.291	5
524			...	-.007	5	-.025	8	.197	1	.256	7	-.915	6	-1.291	5	-.088	8
525		3	...	.011	6	.037	5	.231	6	.876	3	-.38	4	1.677	8	-.162	5
526			...	-.011	5	-.046	8	.194	7	.38	4	-.876	3	.162	5	-1.677	8
527		4	...	.016	6	.016	5	.239	6	.785	5	-.256	8	3.206	8	-1.675	5
528			...	-.016	5	-.067	8	.186	7	.256	8	-.785	5	1.675	5	-3.206	8
529		5	...	.02	6	-.005	5	.251	1	.821	5	.297	8	4.709	6	-3.213	7
530			...	-.02	5	-.088	8	.174	2	-.297	8	-.821	5	3.213	7	-4.709	6
531	M56	1	...	.202	1	-.145	2	.045	5	1.3...	2	-1.211	1	5.254	6	-3.408	7
532			...	.135	2	-.172	1	-.045	6	1.2...	1	-1.391	2	3.408	7	-5.254	6
533		2	...	.21	1	-.163	2	.051	5	.668	2	-.39	1	5.029	6	-3.633	7
534			...	.133	2	-.178	1	-.051	6	.39	1	-.668	2	3.633	7	-5.029	6
535		3	...	.219	1	-.18	8	.056	5	-.138	2	.459	1	4.778	6	-3.884	7
536			...	.132	2	-.185	5	-.056	6	-.459	1	.138	2	3.884	7	-4.778	6
537		4	...	.228	1	-.19	1	.062	5	-1.0...	2	1.335	1	4.502	6	-4.16	7
538			...	.13	2	-.199	2	-.062	6	-1.3...	1	1.028	2	4.16	7	-4.502	6
539		5	...	.236	1	-.196	1	.067	5	-2.0...	2	2.239	1	4.678	5	-3.984	8
540			...	.128	2	-.217	2	-.067	6	-2.2...	1	2.002	2	3.984	8	-4.678	5
541	M57	1	...	.01	6	.014	2	.011	4	.019	2	.019	1	.041	4	-.013	3
542			...	.01	7	-.014	1	-.011	3	-.019	1	-.019	2	.013	3	-.041	4
543		2	...	.016	6	.022	2	.019	4	.066	2	.066	1	.08	4	.027	3
544			...	.016	7	-.022	1	-.019	3	-.066	1	-.066	2	-.027	3	-.08	4
545		3	...	.021	6	.03	2	.027	4	.134	2	.134	1	.141	4	.088	3
546			...	.021	7	-.03	1	-.027	3	-.134	1	-.134	2	-.088	3	-.141	4
547		4	...	.027	6	.038	2	.035	4	.223	2	.223	1	.223	4	.169	3
548			...	.027	7	-.038	1	-.035	3	-.223	1	-.223	2	-.169	3	-.223	4
549		5	...	.033	6	.046	2	.044	4	.333	2	.333	1	.325	4	.272	3
550			...	.033	7	-.046	1	-.044	3	-.333	1	-.333	2	-.272	3	-.325	4
551	M58	1	...	.019	8	.094	6	.038	6	.402	3	.074	4	.066	6	.066	7
552			...	-.019	5	.094	7	-.038	7	-.074	4	-.402	3	-.066	7	-.066	6
553		2	...	.018	8	.092	6	.037	6	.441	3	.034	4	.081	6	.081	7
554			...	-.018	5	.092	7	-.037	7	-.034	4	-.441	3	-.081	7	-.081	6
555		3	...	.018	8	.091	6	.036	6	.48	3	-.004	4	.097	6	.097	7

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[..	Ic	z Shear[k...	Ic	y-T,...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
556			...	-.018	5	.091	7	-.036	7	.004	4	-.48	3	-.097	7	-.097	6
557		4	...	.018	8	.089	6	.035	6	.518	3	-.042	4	.112	6	.112	7
558			...	-.018	5	.089	7	-.035	7	.042	4	-.518	3	-.112	7	-.112	6
559		5	...	.017	8	.087	6	.035	6	.555	3	-.079	4	.127	6	.127	7
560			...	-.017	5	.087	7	-.035	7	.079	4	-.555	3	-.127	7	-.127	6
561	M59	1	...	.041	6	.051	1	.018	7	.227	3	-.012	4	.076	6	.076	7
562			...	-.041	7	.035	2	-.018	6	.012	4	-.227	3	-.076	7	-.076	6
563		2	...	.039	6	.047	1	.019	7	.273	3	-.058	4	.055	6	.055	7
564			...	-.039	7	.03	2	-.019	6	.058	4	-.273	3	-.055	7	-.055	6
565		3	...	.038	6	.042	1	.02	7	.313	3	-.098	4	.033	5	.033	8
566			...	-.038	7	.026	2	-.02	6	.098	4	-.313	3	-.033	8	-.033	5
567		4	...	.037	6	.037	1	.021	7	.348	3	-.133	4	.021	5	.021	8
568			...	-.037	7	.021	2	-.021	6	.133	4	-.348	3	-.021	8	-.021	5
569		5	...	.035	6	.032	1	.022	7	.378	3	-.163	4	.015	7	.015	6
570			...	-.035	7	.016	2	-.022	6	.163	4	-.378	3	-.015	6	-.015	7
571	M60	1	...	.041	8	.051	2	.018	8	.227	3	-.012	4	.076	5	.076	8
572			...	-.041	5	.035	1	-.018	5	.012	4	-.227	3	-.076	8	-.076	5
573		2	...	.039	8	.047	2	.019	8	.273	3	-.058	4	.055	5	.055	8
574			...	-.039	5	.03	1	-.019	5	.058	4	-.273	3	-.055	8	-.055	5
575		3	...	.038	8	.042	2	.02	8	.313	3	-.098	4	.033	6	.033	7
576			...	-.038	5	.026	1	-.02	5	.098	4	-.313	3	-.033	7	-.033	6
577		4	...	.037	8	.037	2	.021	8	.348	3	-.133	4	.021	6	.021	7
578			...	-.037	5	.021	1	-.021	5	.133	4	-.348	3	-.021	7	-.021	6
579		5	...	.035	8	.032	2	.022	8	.378	3	-.163	4	.015	8	.015	5
580			...	-.035	5	.016	1	-.022	5	.163	4	-.378	3	-.015	5	-.015	8
581	M61	1	...	0	1	0	1	0	1	1.1...	3	-.667	4	.362	6	.362	7
582			...	0	1	0	1	0	1	.667	4	-1.142	3	-.362	7	-.362	6
583		2	...	0	5	-.005	1	.003	2	1.14	3	-.664	4	.36	6	.36	7
584			...	0	6	-.005	1	-.003	1	.664	4	-1.14	3	-.36	7	-.36	6
585		3	...	.002	5	-.01	1	.007	2	1.1...	3	-.656	4	.357	6	.357	7
586			...	-.002	6	-.01	1	-.007	1	.656	4	-1.132	3	-.357	7	-.357	6
587		4	...	.003	5	-.014	1	.01	2	1.1...	3	-.643	4	.352	6	.352	7
588			...	-.003	6	-.014	1	-.01	1	.643	4	-1.119	3	-.352	7	-.352	6
589		5	...	.004	5	-.019	1	.014	2	1.1...	3	-.625	4	.345	6	.345	7
590			...	-.004	6	-.019	1	-.014	1	.625	4	-1.101	3	-.345	7	-.345	6
591	M62	1	...	.02	5	.007	1	.036	8	.505	2	-.235	1	.195	5	.195	8
592			...	-.02	8	-.026	2	-.036	5	.235	1	-.505	2	-.195	8	-.195	5
593		2	...	.02	5	.003	1	.038	8	.48	2	-.24	1	.162	5	.162	8
594			...	-.02	8	-.03	2	-.038	5	.24	1	-.48	2	-.162	8	-.162	5
595		3	...	.02	5	0	1	.04	8	.451	2	-.241	1	.126	5	.126	8
596			...	-.02	8	-.034	2	-.04	5	.241	1	-.451	2	-.126	8	-.126	5
597		4	...	.021	5	-.005	1	.043	8	.429	3	-.228	4	.089	5	.089	8
598			...	-.021	8	-.038	2	-.043	5	.228	4	-.429	3	-.089	8	-.089	5
599		5	...	.021	5	-.008	1	.045	8	.408	3	-.207	4	.064	6	.064	7
600			...	-.021	8	-.042	2	-.045	5	.207	4	-.408	3	-.064	7	-.064	6
601	M63	1	...	.051	5	-.075	1	.027	7	.266	3	-.064	4	.058	8	.058	5
602			...	-.051	8	-.108	2	-.027	6	.064	4	-.266	3	-.058	5	-.058	8
603		2	...	.052	5	-.079	1	.029	7	.18	3	.022	4	.051	8	.051	5
604			...	-.052	8	-.112	2	-.029	6	.022	4	.18	3	-.051	5	-.051	8
605		3	...	.053	5	-.083	1	.031	7	.094	1	.114	2	.058	7	.058	6
606			...	-.053	8	-.116	2	-.031	6	.114	2	-.094	1	-.058	6	-.058	7
607		4	...	.054	5	-.087	1	.034	7	.016	1	.222	2	.088	7	.088	6
608			...	-.054	8	-.12	2	-.034	6	.222	2	-.016	1	-.088	6	-.088	7
609		5	...	.055	5	-.091	1	.036	7	-.065	1	.334	2	.12	7	.12	6
610			...	-.055	8	-.124	2	-.036	6	-.334	2	.065	1	-.12	6	-.12	7
611	M64	1	...	.02	7	.007	2	.036	7	.505	1	-.235	2	.195	6	.195	7
612			...	-.02	6	-.026	1	-.036	6	.235	2	-.505	1	-.195	7	-.195	6

Company : **DMJM H&N**
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Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	lc	y Shear[...	lc	z Shear[k...	lc	y-T...	lc	y-Bot[ksi]	lc	z-Top[ksi]	lc	z-Bot[ksi]	lc
613		2	...	.02	7	.003	2	.038	7	.48	1	-.24	2	.162	6	.162	7
614			...	-.02	6	-.03	1	-.038	6	.24	2	-.48	1	-.162	7	-.162	6
615		3	...	.02	7	0	2	.04	7	.451	1	-.241	2	.126	6	.126	7
616			...	-.02	6	-.034	1	-.04	6	.241	2	-.451	1	-.126	7	-.126	6
617		4	...	.021	7	-.005	2	.043	7	.429	3	-.228	4	.089	6	.089	7
618			...	-.021	6	-.038	1	-.043	6	.228	4	-.429	3	-.089	7	-.089	6
619		5	...	.021	7	-.008	2	.045	7	.408	3	-.207	4	.064	5	.064	8
620			...	-.021	6	-.042	1	-.045	6	.207	4	-.408	3	-.064	8	-.064	5
621	M65	1	...	.051	7	-.075	2	.027	8	.266	3	-.064	4	.058	7	.058	6
622			...	-.051	6	-.108	1	-.027	5	.064	4	-.266	3	-.058	6	-.058	7
623		2	...	.052	7	-.079	2	.029	8	.18	3	.022	4	.051	7	.051	6
624			...	-.052	6	-.112	1	-.029	5	.022	4	-.18	3	-.051	6	-.051	7
625		3	...	.053	7	-.083	2	.031	8	.094	2	.114	1	.058	8	.058	5
626			...	-.053	6	-.116	1	-.031	5	-.114	1	-.094	2	-.058	5	-.058	8
627		4	...	.054	7	-.087	2	.034	8	.016	2	.222	1	.088	8	.088	5
628			...	-.054	6	-.12	1	-.034	5	-.222	1	-.016	2	-.088	5	-.088	8
629		5	...	.055	7	-.091	2	.036	8	-.065	2	.334	1	.12	8	.12	5
630			...	-.055	6	-.124	1	-.036	5	-.334	1	.065	2	-.12	5	-.12	8
631	M66	1	...	.048	7	-.215	1	.096	8	-.023	3	.499	4	.154	8	.154	5
632			...	-.048	6	-.215	8	-.096	6	-.499	4	.023	3	-.154	5	-.154	8
633		2	...	.049	7	-.218	1	.097	8	-.145	3	.62	4	.208	8	.208	5
634			...	-.049	6	-.218	8	-.097	6	-.62	4	.145	3	-.208	5	-.208	8
635		3	...	.049	7	-.22	1	.098	8	-.268	3	.743	4	.263	8	.263	5
636			...	-.049	6	-.22	8	-.098	6	-.743	4	.268	3	-.263	5	-.263	8
637		4	...	.05	7	-.222	1	.099	8	-.392	3	.868	4	.319	8	.319	5
638			...	-.05	6	-.222	8	-.099	6	-.868	4	.392	3	-.319	5	-.319	8
639		5	...	.05	7	-.225	1	.1	8	-.518	3	.993	4	.375	8	.375	5
640			...	-.05	6	-.225	8	-.1	6	-.993	4	.518	3	-.375	5	-.375	8
641	M67	1	...	.526	7	.068	6	-.045	6	.137	1	.137	2	1.386	4	-1.011	3
642			...	.456	6	-.072	7	-.095	7	-.137	2	-.137	1	1.011	3	-1.386	4
643		2	...	.522	7	.065	6	-.044	3	.191	1	.199	2	1.198	4	-.915	3
644			...	.452	6	-.069	7	-.096	4	-.199	2	-.191	1	.915	3	-1.198	4
645		3	...	.517	7	.061	6	-.038	3	.232	1	.249	2	1.092	5	-.737	8
646			...	.447	6	-.065	7	-.102	4	-.249	2	-.232	1	.737	8	-1.092	5
647		4	...	.513	7	.058	6	-.032	3	.293	6	.318	7	1.004	5	-.541	8
648			...	.443	6	-.062	7	-.108	4	-.318	7	-.293	6	.541	8	-1.004	5
649		5	...	.508	7	.054	6	-.025	3	.407	6	.439	7	.924	5	-.339	8
650			...	.439	6	-.058	7	-.114	4	-.439	7	-.407	6	.339	8	-.924	5
651	M68	1	...	.027	7	1.004	7	-.016	3	2.1...	6	-1.395	7	.422	7	.691	6
652			...	-.025	6	.864	6	-.124	4	1.3...	7	-2.182	6	-.691	6	-.422	7
653		2	...	.025	7	.997	7	-.011	3	3.5...	6	-2.966	7	.306	7	.795	6
654			...	-.023	6	.857	6	-.129	4	2.9...	7	-3.533	6	-.795	6	-.306	7
655		3	...	.023	7	.99	7	-.006	3	4.8...	6	-4.526	7	.195	7	.903	6
656			...	-.021	6	.85	6	-.134	4	4.5...	7	-4.874	6	-.903	6	-.195	7
657		4	...	.022	7	.983	7	-.001	3	6.2...	8	-6.045	5	.089	7	1.016	6
658			...	-.02	6	.843	6	-.139	4	6.0...	5	-6.234	8	-1.016	6	-.089	7
659		5	...	.02	7	.976	7	.004	3	7.7...	2	-7.423	1	-.012	7	1.134	6
660			...	-.018	6	.837	6	-.143	4	7.4...	1	-7.715	2	-1.134	6	.012	7
661	M69	1	...	-.112	2	1.036	5	-.043	5	6.1...	2	-5.864	1	-.618	7	2.465	6
662			...	-.258	1	.891	8	-.296	8	5.8...	1	-6.175	2	-2.465	6	.618	7
663		2	...	-.112	2	1.033	5	-.042	5	6.7...	2	-6.485	1	-.684	7	2.61	6
664			...	-.258	1	.888	8	-.297	8	6.4...	1	-6.751	2	-2.61	6	.684	7
665		3	...	-.112	2	-.156	1	.247	4	6.99	2	-6.758	1	-.73	7	2.625	6
666			...	-.258	1	-.192	2	-.088	3	6.7...	1	-6.99	2	-2.625	6	.73	7
667		4	...	-.112	2	-.159	1	.245	4	6.8...	2	-6.66	1	-.754	7	2.502	6
668			...	-.258	1	-.195	2	-.086	3	6.66	1	-6.869	2	-2.502	6	.754	7
669		5	...	-.112	2	-.162	1	.243	4	6.7...	7	-6.556	6	-.777	7	2.379	6

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
670			...	-.258	1	-.198	2	-.084	3	6.5...	6	-6.752	7	-2.379	6	.777	7
671	M70	1	...	.022	2	-.31	1	.151	4	6.6...	7	-6.447	6	-1.501	7	3.073	6
672			...	-.143	1	-.379	2	-.158	3	6.4...	6	-6.627	7	-3.073	6	1.501	7
673		2	...	.022	2	-.319	1	.145	4	5.9...	7	-5.836	6	-1.722	7	2.866	6
674			...	-.143	1	-.387	2	-.152	3	5.8...	6	-5.926	7	-2.866	6	1.722	7
675		3	...	.022	2	-.327	1	.139	4	5.2...	5	-5.146	8	-1.937	7	2.665	6
676			...	-.143	1	-.395	2	-.146	3	5.1...	8	-5.273	5	-2.665	6	1.937	7
677		4	...	.022	2	-.335	1	.133	4	4.6...	1	-4.408	2	-1.975	8	2.641	5
678			...	-.143	1	-.403	2	-.14	3	4.4...	2	-4.637	1	-2.641	5	1.975	8
679		5	...	.022	2	-.343	1	.127	4	3.9...	1	-3.641	2	-1.787	8	2.844	5
680			...	-.143	1	-.412	2	-.135	3	3.6...	2	-3.999	1	-2.844	5	1.787	8
681	M71	1	...	.03	2	-.456	1	.056	4	1.0...	1	-.68	2	-.054	7	.659	6
682			...	-.033	1	-.47	2	-.061	3	.68	2	-1.032	1	-.659	6	.054	7
683		2	...	.03	2	-.458	1	.054	4	.88	1	-.523	2	-.068	7	.647	6
684			...	-.033	1	-.472	2	-.06	3	.523	2	-.88	1	-.647	6	.068	7
685		3	...	.03	2	-.46	1	.053	4	.728	1	-.366	2	-.082	7	.635	6
686			...	-.033	1	-.474	2	-.059	3	.366	2	-.728	1	-.635	6	.082	7
687		4	...	.03	2	-.462	1	.052	4	.574	1	-.208	2	-.096	7	.623	6
688			...	-.033	1	-.476	2	-.057	3	.208	2	-.574	1	-.623	6	.096	7
689		5	...	.03	2	-.463	1	.051	4	.421	1	-.05	2	-.11	7	.611	6
690			...	-.033	1	-.478	2	-.056	3	.05	2	-.421	1	-.611	6	.11	7
691	M80	1	...	.223	8	.06	7	.085	6	0	1	0	1	0	1	0	1
692			...	-.214	5	-.009	6	-.095	7	0	1	0	1	0	1	0	1
693		2	...	.218	8	.041	7	.075	6	.317	7	.117	6	.502	6	.566	7
694			...	-.209	5	-.028	6	-.086	7	-.117	6	-.317	7	-.566	7	-.502	6
695		3	...	.213	8	.023	7	.066	6	.519	7	.349	6	.946	6	1.074	7
696			...	-.205	5	-.046	6	-.076	7	-.349	6	-.519	7	-1.074	7	-.946	6
697		4	...	.209	8	.005	7	.057	6	.605	7	.697	6	1.333	6	1.525	7
698			...	-.2	5	-.065	6	-.067	7	-.697	6	-.605	7	-1.525	7	-1.333	6
699		5	...	.204	8	-.014	7	.048	6	.575	7	1.161	6	1.662	6	1.918	7
700			...	-.196	5	-.083	6	-.058	7	-1.1...	6	-.575	7	-1.918	7	-1.662	6
701	M81	1	...	.297	6	.089	6	.262	7	1.2...	6	.33	7	1.318	6	1.571	7
702			...	-.358	7	-.036	7	-.221	6	-.33	7	-1.259	6	-1.571	7	-1.318	6
703		2	...	.296	6	.086	6	.263	7	1.3...	6	.382	7	1.012	6	1.208	7
704			...	-.357	7	-.039	7	-.222	6	-.382	7	-1.379	6	-1.208	7	-1.012	6
705		3	...	.296	6	.083	6	.264	7	1.4...	6	.437	7	.705	6	.843	7
706			...	-.356	7	-.042	7	-.222	6	-.437	7	-1.495	6	-.843	7	-.705	6
707		4	...	.295	6	.08	6	.265	7	1.6...	6	.497	7	.397	6	.478	7
708			...	-.355	7	-.045	7	-.223	6	-.497	7	-1.607	6	-.478	7	-.397	6
709		5	...	.294	6	.077	6	.266	7	1.7...	6	.56	7	.183	5	.207	8
710			...	-.354	7	-.047	7	-.224	6	-.56	7	-1.715	6	-.207	8	-.183	5
711	M82	1	...	.249	7	.089	6	.186	7	1.2...	6	.33	7	1.032	6	1.301	7
712			...	-.183	6	-.036	7	-.14	6	-.33	7	-1.259	6	-1.301	7	-1.032	6
713		2	...	.249	7	.086	6	.188	7	1.3...	6	.382	7	.837	6	1.042	7
714			...	-.183	6	-.039	7	-.142	6	-.382	7	-1.379	6	-1.042	7	-.837	6
715		3	...	.25	7	.083	6	.19	7	1.4...	6	.437	7	.639	6	.782	7
716			...	-.184	6	-.042	7	-.144	6	-.437	7	-1.495	6	-.782	7	-.639	6
717		4	...	.25	7	.08	6	.191	7	1.6...	6	.497	7	.439	6	.518	7
718			...	-.184	6	-.045	7	-.146	6	-.497	7	-1.607	6	-.518	7	-.439	6
719		5	...	.251	7	.077	6	.193	7	1.7...	6	.56	7	.236	6	.252	7
720			...	-.184	6	-.047	7	-.148	6	-.56	7	-1.715	6	-.252	7	-.236	6
721	M83	1	...	.288	6	.032	6	.188	6	1.9...	6	.908	7	.02	5	.063	8
722			...	-.348	7	-.092	7	-.237	7	-.908	7	-1.985	6	-.063	8	-.02	5
723		2	...	.288	6	.029	6	.186	6	2.0...	6	1.037	7	.263	6	.374	7
724			...	-.347	7	-.095	7	-.235	7	-1.0...	7	-2.027	6	-.374	7	-.263	6
725		3	...	.287	6	.026	6	.185	6	2.0...	6	1.171	7	.52	6	.697	7
726			...	-.347	7	-.098	7	-.233	7	-1.1...	7	-2.064	6	-.697	7	-.52	6

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Jc	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
727		4	...	.287	6	.023	6	.183	6	2.0...	6	1.309	7	.774	6	1.018	7
728			...	-.346	7	-.101	7	-.231	7	-1.3...	7	-2.098	6	-1.018	7	-.774	6
729		5	...	.287	6	.02	6	.181	6	2.1...	6	1.451	7	1.025	6	1.336	7
730			...	-.346	7	-.104	7	-.229	7	-1.4...	7	-2.128	6	-1.336	7	-1.025	6
731	M84	1	...	.267	7	.032	6	.118	6	1.9...	6	.908	7	.125	6	.161	7
732			...	-.202	6	-.092	7	-.171	7	-.908	7	-1.985	6	-.161	7	-.125	6
733		2	...	.268	7	.029	6	.117	6	2.0...	6	1.037	7	.288	6	.396	7
734			...	-.203	6	-.095	7	-.17	7	-1.0...	7	-2.027	6	-.396	7	-.288	6
735		3	...	.269	7	.026	6	.116	6	2.0...	6	1.171	7	.45	6	.631	7
736			...	-.204	6	-.098	7	-.169	7	-1.1...	7	-2.064	6	-.631	7	-.45	6
737		4	...	.27	7	.023	6	.116	6	2.0...	6	1.309	7	.61	6	.864	7
738			...	-.205	6	-.101	7	-.168	7	-1.3...	7	-2.098	6	-.864	7	-.61	6
739		5	...	.271	7	.02	6	.115	6	2.1...	6	1.451	7	.769	6	1.095	7
740			...	-.206	6	-.104	7	-.167	7	-1.4...	7	-2.128	6	-1.095	7	-.769	6
741	M85	1	...	.314	6	.077	6	.015	8	1.8...	6	.589	7	.183	5	.207	8
742			...	-.378	7	-.047	7	-.018	5	-.589	7	-1.825	6	-.207	8	-.183	5
743		2	...	.314	6	.074	6	.016	8	1.9...	6	.657	7	.157	5	.186	8
744			...	-.377	7	-.051	7	-.02	5	-.657	7	-1.929	6	-.186	8	-.157	5
745		3	...	.305	6	.038	6	.034	8	2.03	6	.73	7	.129	5	.162	8
746			...	-.369	7	-.086	7	-.037	5	-.73	7	-2.03	6	-.162	8	-.129	5
747		4	...	.304	6	.035	6	.035	8	2.0...	6	.852	7	.075	5	.114	8
748			...	-.368	7	-.089	7	-.039	5	-.852	7	-2.081	6	-.114	8	-.075	5
749		5	...	.303	6	.032	6	.037	8	2.1...	6	.979	7	.02	5	.063	8
750			...	-.367	7	-.092	7	-.041	5	-.979	7	-2.127	6	-.063	8	-.02	5
751	M86	1	...	.269	7	.077	6	.01	8	1.8...	6	.589	7	.236	6	.252	7
752			...	-.199	6	-.047	7	-.013	5	-.589	7	-1.825	6	-.252	7	-.236	6
753		2	...	.269	7	.074	6	.011	8	1.9...	6	.657	7	.223	6	.244	7
754			...	-.199	6	-.051	7	-.015	5	-.657	7	-1.929	6	-.244	7	-.223	6
755		3	...	.278	7	.038	6	.029	8	2.03	6	.73	7	.208	6	.234	7
756			...	-.208	6	-.086	7	-.032	5	-.73	7	-2.03	6	-.234	7	-.208	6
757		4	...	.279	7	.035	6	.03	8	2.0...	6	.852	7	.167	6	.198	7
758			...	-.209	6	-.089	7	-.034	5	-.852	7	-2.081	6	-.198	7	-.167	6
759		5	...	.28	7	.032	6	.032	8	2.1...	6	.979	7	.125	6	.161	7
760			...	-.21	6	-.092	7	-.036	5	-.979	7	-2.127	6	-.161	7	-.125	6
761	M87	1	...	.103	8	.041	6	.232	5	4.1...	6	5.161	7	.668	7	3.999	6
762			...	-.244	5	-.151	7	-.238	8	-5.1...	7	-4.151	6	-3.999	6	-.668	7
763		2	...	.102	8	.041	6	.232	5	4.17	6	5.232	7	.663	7	3.997	6
764			...	-.244	5	-.151	7	-.238	8	-5.2...	7	-4.17	6	-3.997	6	-.663	7
765		3	...	.102	8	.04	6	.232	5	4.1...	6	5.304	7	.739	5	4.076	8
766			...	-.245	5	-.151	7	-.238	8	-5.3...	7	-4.189	6	-4.076	8	-.739	5
767		4	...	.102	8	.04	6	.232	5	4.2...	6	5.376	7	.849	5	4.189	8
768			...	-.245	5	-.152	7	-.238	8	-5.3...	7	-4.209	6	-4.189	8	-.849	5
769		5	...	.102	8	.04	6	.232	5	4.2...	6	5.448	7	.959	5	4.302	8
770			...	-.246	5	-.152	7	-.238	8	-5.4...	7	-4.228	6	-4.302	8	-.959	5
771	M88	1	...	.093	7	.199	8	.236	5	5.1...	6	4.602	7	.184	5	3.426	8
772			...	-.203	6	-.418	5	-.232	8	-4.6...	7	-5.193	6	-3.426	8	-.184	5
773		2	...	.093	7	.198	8	.236	5	5.11	6	4.623	7	.296	5	3.536	8
774			...	-.203	6	-.418	5	-.232	8	-4.6...	7	-5.11	6	-3.536	8	-.296	5
775		3	...	.092	7	.197	8	.236	5	5.0...	6	4.644	7	.408	5	3.646	8
776			...	-.203	6	-.418	5	-.233	8	-4.6...	7	-5.027	6	-3.646	8	-.408	5
777		4	...	.092	7	.196	8	.237	5	4.9...	6	4.666	7	.52	5	3.756	8
778			...	-.203	6	-.419	5	-.233	8	-4.6...	7	-4.943	6	-3.756	8	-.52	5
779		5	...	.091	7	.195	8	.237	5	4.8...	6	4.688	7	.633	5	3.867	8
780			...	-.203	6	-.419	5	-.233	8	-4.6...	7	-4.859	6	-3.867	8	-.633	5
781	M89	1	...	.08	7	.222	8	.221	5	4.7...	6	3.997	7	-.027	5	2.434	8
782			...	-.142	6	-.514	5	-.214	8	-3.9...	7	-4.783	6	-2.434	8	.027	5
783		2	...	.08	7	.221	8	.221	5	4.6...	6	3.98	7	.083	5	2.54	8

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
784			...	-.142	6	-.515	5	-.214	8	-3.98	7	-4.621	6	-2.54	8	-.083	5
785		3	...	.08	7	.22	8	.222	5	4.4...	6	3.964	7	.193	5	2.646	8
786			...	-.142	6	-.515	5	-.214	8	-3.9...	7	-4.458	6	-2.646	8	-.193	5
787		4	...	.079	7	.219	8	.222	5	4.2...	6	3.947	7	.303	5	2.753	8
788			...	-.142	6	-.516	5	-.215	8	-3.9...	7	-4.294	6	-2.753	8	-.303	5
789		5	...	.079	7	.218	8	.222	5	4.13	6	3.931	7	.413	5	2.86	8
790			...	-.142	6	-.517	5	-.215	8	-3.9...	7	-4.13	6	-2.86	8	-.413	5
791	M90	1	...	.065	5	.189	8	.208	5	3.9...	6	3.392	7	.998	7	2.496	6
792			...	-.073	8	-.512	5	-.198	8	-3.3...	7	-3.975	6	-2.496	6	-.998	7
793		2	...	.064	5	.187	8	.209	5	3.82	8	3.583	5	.812	7	2.3	6
794			...	-.072	8	-.514	5	-.199	8	-3.5...	5	-3.82	8	-2.3	6	-.812	7
795		3	...	.064	5	.185	8	.21	5	4.0...	8	4.132	5	.626	7	2.103	6
796			...	-.072	8	-.516	5	-.2	8	-4.1...	5	-4.019	8	-2.103	6	-.626	7
797		4	...	.063	5	.183	8	.211	5	4.2...	8	4.682	5	.671	5	2.138	8
798			...	-.071	8	-.518	5	-.201	8	-4.6...	5	-4.215	8	-2.138	8	-.671	5
799		5	...	.063	5	.182	8	.212	5	4.4...	8	5.234	5	.895	5	2.353	8
800			...	-.071	8	-.52	5	-.202	8	-5.2...	5	-4.409	8	-2.353	8	-.895	5
801	M91	1	...	.199	5	.066	6	.104	6	.513	7	-.356	6	.472	5	.931	8
802			...	-.138	8	.066	8	-.08	7	.356	6	-.513	7	-.931	8	-.472	5
803		2	...	.199	5	.066	6	.104	6	.532	7	-.375	6	.485	5	.937	8
804			...	-.138	8	.066	8	-.08	7	.375	6	-.532	7	-.937	8	-.485	5
805		3	...	.199	5	.065	6	.104	6	.551	7	-.394	6	.498	5	.943	8
806			...	-.138	8	.065	8	-.08	7	.394	6	-.551	7	-.943	8	-.498	5
807		4	...	.199	5	.065	6	.104	6	.569	7	-.412	6	.511	5	.949	8
808			...	-.138	8	.065	8	-.08	7	.412	6	-.569	7	-.949	8	-.511	5
809		5	...	.199	5	.064	6	.104	6	.587	7	-.431	6	.524	5	.956	8
810			...	-.138	8	.064	8	-.079	7	.431	6	-.587	7	-.956	8	-.524	5
811	M92	1	...	.175	5	.064	6	.232	6	.123	8	.235	5	.524	5	.956	8
812			...	-.123	8	.064	8	-.163	7	-.235	5	-.123	8	-.956	8	-.524	5
813		2	...	.175	5	.064	6	.232	6	.141	8	.217	5	.58	5	.991	8
814			...	-.123	8	.064	8	-.163	7	-.217	5	-.141	8	-.991	8	-.58	5
815		3	...	.175	5	.063	6	.232	6	.159	8	.199	5	.635	5	1.028	8
816			...	-.124	8	.063	8	-.163	7	-.199	5	-.159	8	-1.028	8	-.635	5
817		4	...	.175	5	.063	6	.232	6	.177	8	.181	5	.691	5	1.064	8
818			...	-.124	8	.063	8	-.163	7	-.181	5	-.177	8	-1.064	8	-.691	5
819		5	...	.175	5	.062	6	.232	6	.194	8	.164	5	.747	5	1.1	8
820			...	-.124	8	.062	8	-.163	7	-.164	5	-.194	8	-1.1	8	-.747	5
821	M93	1	...	.124	5	.062	2	.325	6	-.282	6	.812	7	.747	5	1.1	8
822			...	-.09	8	.062	5	-.222	7	-.812	7	.282	6	-1.1	8	-.747	5
823		2	...	.124	5	.062	2	.325	6	-.264	6	.794	7	.837	5	1.16	8
824			...	-.09	8	.062	5	-.222	7	-.794	7	.264	6	-1.16	8	-.837	5
825		3	...	.124	5	.061	2	.325	6	-.247	6	.776	7	.927	5	1.221	8
826			...	-.09	8	.061	5	-.222	7	-.776	7	.247	6	-1.221	8	-.927	5
827		4	...	.124	5	.061	2	.325	6	-.229	6	.759	7	1.017	5	1.281	8
828			...	-.09	8	.061	5	-.222	7	-.759	7	.229	6	-1.281	8	-1.017	5
829		5	...	.124	5	.06	2	.325	6	-.212	6	.742	7	1.107	5	1.342	8
830			...	-.09	8	.06	5	-.222	7	-.742	7	.212	6	-1.342	8	-1.107	5
831	M94	1	...	.054	5	.06	3	.388	5	-.573	6	1.35	7	1.107	5	1.342	8
832			...	-.042	8	.06	8	-.266	8	-1.35	7	.573	6	-1.342	8	-1.107	5
833		2	...	.054	5	.06	3	.388	5	-.556	6	1.333	7	1.217	5	1.418	8
834			...	-.042	8	.06	8	-.267	8	-1.3	7	.556	6	-1.418	8	-1.217	5
835		3	...	.054	5	.059	3	.389	5	-.539	6	1.316	7	1.327	5	1.494	8
836			...	-.042	8	.059	8	-.267	8	-1.3...	7	.539	6	-1.494	8	-1.327	5
837		4	...	.054	5	.059	3	.389	5	-.522	6	1.299	7	1.438	5	1.569	8
838			...	-.042	8	.059	8	-.267	8	-1.2...	7	.522	6	-1.569	8	-1.438	5
839		5	...	.054	5	.058	3	.389	5	-.506	6	1.283	7	1.548	5	1.645	8
840			...	-.041	8	.058	8	-.268	8	-1.2...	7	.506	6	-1.645	8	-1.548	5

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Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
841	M95	1	...	0	1	0	1	0	1	1.9...	6	1.658	7	1.113	5	1.631	8
842			...	0	1	0	1	0	1	-1.6...	7	-1.963	6	-1.631	8	-1.113	5
843		2	...	0	6	-.003	5	.001	5	1.9...	6	1.659	7	1.114	5	1.632	8
844			...	0	5	-.003	6	-.001	7	-1.6...	7	-1.962	6	-1.632	8	-1.114	5
845		3	...	.001	6	-.005	5	.003	5	1.9...	6	1.664	7	1.116	5	1.634	8
846			...	-.001	5	-.005	6	-.003	7	-1.6...	7	-1.957	6	-1.634	8	-1.116	5
847		4	...	.002	6	-.008	5	.004	5	1.95	6	1.671	7	1.12	5	1.638	8
848			...	-.002	5	-.008	6	-.004	7	-1.6...	7	-1.95	6	-1.638	8	-1.12	5
849		5	...	.003	6	-.01	5	.005	5	1.9...	6	1.682	7	1.125	5	1.643	8
850			...	-.003	5	-.01	6	-.005	7	-1.6...	7	-1.939	6	-1.643	8	-1.125	5
851	M96	1	...	.012	5	.09	5	-.132	6	.842	8	-.639	5	.163	5	.7	8
852			...	-.012	6	.057	8	-.254	7	.639	5	-.842	8	-.7	8	-.163	5
853		2	...	.012	5	.089	5	-.131	6	.887	8	-.709	5	.033	5	.874	8
854			...	-.012	6	.055	8	-.255	7	.709	5	-.887	8	-.874	8	-.033	5
855		3	...	.012	5	.087	5	-.13	6	.949	6	-.76	7	-.096	5	1.049	8
856			...	-.012	6	.054	8	-.256	7	.76	7	-.949	6	-1.049	8	.096	5
857		4	...	.011	5	.085	5	-.129	6	1.0...	6	-.803	7	-.225	5	1.225	8
858			...	-.011	6	.052	8	-.257	7	.803	7	-1.014	6	-1.225	8	.225	5
859		5	...	.011	5	.083	5	-.128	6	1.0...	6	-.846	7	-.353	5	1.401	8
860			...	-.011	6	.05	8	-.257	7	.846	7	-1.079	6	-1.401	8	.353	5
861	M97	1	...	.003	5	.051	5	-.112	6	1.0...	6	-.846	7	-.353	5	1.401	8
862			...	-.003	8	.017	8	-.274	7	.846	7	-1.079	6	-1.401	8	.353	5
863		2	...	.002	5	.048	5	-.111	6	1.1...	6	-.868	7	-.522	5	1.681	8
864			...	-.002	8	.015	8	-.275	7	.868	7	-1.133	6	-1.681	8	.522	5
865		3	...	.001	5	.046	5	-.109	6	1.1...	6	-.888	7	-.689	5	1.962	8
866			...	-.001	8	.012	8	-.276	7	.888	7	-1.184	6	-1.962	8	.689	5
867		4	...	0	5	.043	5	-.108	6	1.2...	6	-.904	7	-.855	5	2.245	8
868			...	0	8	.01	8	-.278	7	.904	7	-1.232	6	-2.245	8	.855	5
869		5	...	0	1	.041	5	-.107	6	1.2...	6	-.917	7	-1.019	5	2.53	8
870			...	0	1	.007	8	-.279	7	.917	7	-1.278	6	-2.53	8	1.019	5
871	M98	1	...	0	1	0	1	0	1	1.2...	6	-.917	7	-1.019	5	2.53	8
872			...	0	1	0	1	0	1	.917	7	-1.278	6	-2.53	8	1.019	5
873		2	...	0	6	-.002	1	0	5	1.2...	6	-.916	7	-1.019	5	2.53	8
874			...	0	5	-.002	1	0	7	.916	7	-1.277	6	-2.53	8	1.019	5
875		3	...	0	6	-.004	1	.002	5	1.2...	6	-.914	7	-1.017	5	2.531	8
876			...	0	5	-.004	1	-.002	7	.914	7	-1.274	6	-2.531	8	1.017	5
877		4	...	.001	6	-.006	1	.003	5	1.27	6	-.91	7	-1.015	5	2.533	8
878			...	-.001	5	-.006	1	-.003	7	.91	7	-1.27	6	-2.533	8	1.015	5
879		5	...	.002	6	-.008	1	.004	5	1.2...	6	-.904	7	-1.012	5	2.536	8
880			...	-.002	5	-.008	1	-.004	7	.904	7	-1.264	6	-2.536	8	1.012	5
881	M99	1	...	.002	6	-.008	7	.004	6	1.2...	6	-.904	7	-1.012	5	2.536	8
882			...	-.002	5	-.008	6	-.004	7	.904	7	-1.264	6	-2.536	8	1.012	5
883		2	...	.002	6	-.01	7	.005	6	1.2...	6	-.894	7	-1.008	5	2.541	8
884			...	-.002	5	-.01	6	-.005	7	.894	7	-1.255	6	-2.541	8	1.008	5
885		3	...	.003	6	-.012	7	.006	6	1.2...	6	-.882	7	-1.002	5	2.547	8
886			...	-.003	5	-.012	6	-.006	7	.882	7	-1.243	6	-2.547	8	1.002	5
887		4	...	.004	6	-.015	7	.007	6	1.2...	6	-.868	7	-.994	5	2.554	8
888			...	-.004	5	-.015	1	-.007	7	.868	7	-1.228	6	-2.554	8	.994	5
889		5	...	.004	6	-.017	7	.008	6	1.2...	6	-.851	7	-.986	5	2.563	8
890			...	-.004	5	-.017	1	-.008	7	.851	7	-1.211	6	-2.563	8	.986	5
891	M100	1	...	.002	5	.01	1	.005	7	-.502	7	.944	6	1.182	8	.126	5
892			...	-.002	6	.01	2	-.005	5	-.944	6	.502	7	-.126	5	-1.182	8
893		2	...	.002	5	.007	1	.004	7	-.492	7	.933	6	1.187	8	.131	5
894			...	-.002	6	.007	2	-.004	5	-.933	6	.492	7	-.131	5	-1.187	8
895		3	...	.001	5	.005	1	.002	7	-.485	7	.926	6	1.191	8	.135	5
896			...	-.001	6	.005	2	-.002	5	-.926	6	.485	7	-.135	5	-1.191	8
897		4	...	0	5	.002	1	.001	7	-.481	7	.922	6	1.193	8	.137	5

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[..	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
898			...	0	6	.002	2	-.001	5	-.922	6	.481	7	-.137	5	-1.193	8
899		5	...	0	1	0	1	0	1	-.479	7	.92	6	1.193	8	.138	5
900			...	0	1	0	1	0	1	-.92	6	.479	7	-.138	5	-1.193	8
901	M101	1	...	0	1	0	1	0	1	-.479	7	.92	6	1.193	8	.138	5
902			...	0	1	0	1	0	1	-.92	6	.479	7	-.138	5	-1.193	8
903		2	...	0	6	-.002	1	0	5	-.48	7	.921	6	1.193	8	.138	5
904			...	0	5	-.002	1	0	7	-.921	6	.48	7	-.138	5	-1.193	8
905		3	...	0	6	-.004	1	.002	5	-.483	7	.924	6	1.192	8	.136	5
906			...	0	5	-.004	1	-.002	7	-.924	6	.483	7	-.136	5	-1.192	8
907		4	...	.001	6	-.006	1	.003	5	-.487	7	.928	6	1.19	8	.134	5
908			...	-.001	5	-.006	1	-.003	7	-.928	6	.487	7	-.134	5	-1.19	8
909		5	...	.002	6	-.008	1	.004	5	-.493	7	.934	6	1.187	8	.131	5
910			...	-.002	5	-.008	1	-.004	7	-.934	6	.493	7	-.131	5	-1.187	8
911	M102	1	...	.002	8	-.008	2	.004	5	-.493	7	.934	6	1.187	8	.131	5
912			...	-.002	5	-.008	8	-.004	7	-.934	6	.493	7	-.131	5	-1.187	8
913		2	...	.003	8	-.01	2	.005	5	-.504	7	.945	6	1.181	8	.126	5
914			...	-.003	5	-.01	8	-.005	7	-.945	6	.504	7	-.126	5	-1.181	8
915		3	...	.003	8	-.013	2	.006	5	-.517	7	.958	6	1.174	8	.119	5
916			...	-.003	5	-.013	8	-.006	7	-.958	6	.517	7	-.119	5	-1.174	8
917		4	...	.004	8	-.015	2	.008	5	-.534	7	.975	6	1.166	8	.111	5
918			...	-.004	5	-.015	8	-.008	7	-.975	6	.534	7	-.111	5	-1.166	8
919		5	...	.004	8	-.018	2	.009	5	-.554	7	.995	6	1.156	8	.101	5
920			...	-.004	5	-.018	8	-.009	7	-.995	6	.554	7	-.101	5	-1.156	8
921	M103	1	...	.013	6	-.051	3	.025	5	-.554	7	.995	6	1.156	8	.101	5
922			...	-.013	7	-.051	6	-.025	8	-.995	6	.554	7	-.101	5	-1.156	8
923		2	...	.013	6	-.051	3	.026	5	-.566	7	1.007	6	1.15	8	.095	5
924			...	-.013	7	-.051	6	-.026	8	-1.0...	6	.566	7	-.095	5	-1.15	8
925		3	...	.013	6	-.052	3	.026	5	-.578	7	1.019	6	1.144	8	.089	5
926			...	-.013	7	-.052	6	-.026	8	-1.0...	6	.578	7	-.089	5	-1.144	8
927		4	...	.013	6	-.052	3	.026	5	-.59	7	1.031	6	1.138	8	.083	5
928			...	-.013	7	-.052	6	-.026	8	-1.0...	6	.59	7	-.083	5	-1.138	8
929		5	...	.013	6	-.053	3	.026	5	-.602	7	1.043	6	1.132	8	.077	5
930			...	-.013	7	-.053	6	-.026	8	-1.0...	6	.602	7	-.077	5	-1.132	8
931	M104	1	...	.018	6	-.047	6	.026	6	-.602	7	1.043	6	1.4	8	-.129	5
932			...	-.008	5	-.057	7	-.026	8	-1.0...	6	.602	7	.129	5	-1.4	8
933		2	...	.018	6	-.047	6	.027	6	-.629	7	1.065	6	1.387	8	-.142	5
934			...	-.008	5	-.058	7	-.027	8	-1.0...	6	.629	7	.142	5	-1.387	8
935		3	...	.019	6	-.048	6	.027	6	-.657	7	1.088	6	1.375	8	-.155	5
936			...	-.008	5	-.059	7	-.027	8	-1.0...	6	.657	7	.155	5	-1.375	8
937		4	...	.019	6	-.049	6	.028	6	-.685	7	1.111	6	1.361	8	-.168	5
938			...	-.008	5	-.06	7	-.028	8	-1.1...	6	.685	7	.168	5	-1.361	8
939		5	...	.019	6	-.05	6	.028	6	-.714	7	1.135	6	1.348	8	-.181	5
940			...	-.008	5	-.061	7	-.028	8	-1.1...	6	.714	7	.181	5	-1.348	8
941	M105	1	...	.028	6	-.031	6	.028	5	-.714	7	1.135	6	1.718	8	-.566	5
942			...	.004	7	-.063	5	-.028	7	-1.1...	6	.714	7	.566	5	-1.718	8
943		2	...	.028	6	-.032	6	.029	5	-.744	7	1.15	6	1.704	8	-.58	5
944			...	.004	7	-.064	5	-.029	7	-1.15	6	.744	7	.58	5	-1.704	8
945		3	...	.029	6	-.033	6	.029	5	-.774	7	1.165	6	1.691	8	-.594	5
946			...	.004	7	-.065	5	-.029	7	-1.1...	6	.774	7	.594	5	-1.691	8
947		4	...	.029	6	-.033	6	.03	5	-.806	7	1.18	6	1.677	8	-.608	5
948			...	.004	7	-.066	5	-.03	7	-1.18	6	.806	7	.608	5	-1.677	8
949		5	...	.03	6	-.034	6	.03	5	-.837	7	1.196	6	1.662	8	-.622	5
950			...	.004	7	-.067	5	-.03	7	-1.1...	6	.837	7	.622	5	-1.662	8
951	M106	1	...	.034	8	-.009	6	.03	5	-.837	7	1.196	6	1.775	8	-.917	5
952			...	.017	5	-.059	7	-.03	8	-1.1...	6	.837	7	.917	5	-1.775	8
953		2	...	.034	8	-.009	6	.031	5	-.865	7	1.2	6	1.76	8	-.932	5
954			...	.017	5	-.06	7	-.031	8	-1.2	6	.865	7	.932	5	-1.76	8

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
955		3	...	.035	8	-.009	6	.031	5	-.894	7	1.204	6	1.746	8	-.946	5
956			...	.017	5	-.061	7	-.031	8	-1.2...	6	.894	7	.946	5	-1.746	8
957		4	...	.035	8	-.009	6	.032	5	-.923	7	1.209	6	1.731	8	-.961	5
958			...	.018	5	-.062	7	-.032	8	-1.2...	6	.923	7	.961	5	-1.731	8
959		5	...	.036	8	-.009	6	.032	5	-.953	7	1.213	6	1.715	8	-.977	5
960			...	.018	5	-.063	7	-.032	8	-1.2...	6	.953	7	.977	5	-1.715	8
961	M107	1	...	.035	8	.019	6	.032	5	-.953	7	1.213	6	1.562	8	-1.127	5
962			...	.029	7	-.045	7	-.032	8	-1.2...	6	.953	7	1.127	5	-1.562	8
963		2	...	.036	8	.019	6	.033	5	-.974	7	1.204	6	1.547	8	-1.143	5
964			...	.029	7	-.045	7	-.033	8	-1.2...	6	.974	7	1.143	5	-1.547	8
965		3	...	.036	8	.02	6	.033	5	-.996	7	1.194	6	1.531	8	-1.159	5
966			...	.03	7	-.046	7	-.033	8	-1.1...	6	.996	7	1.159	5	-1.531	8
967		4	...	.037	8	.02	6	.034	5	-1.0...	7	1.185	6	1.515	8	-1.175	5
968			...	.03	7	-.047	7	-.034	8	-1.1...	6	1.018	7	1.175	5	-1.515	8
969		5	...	.037	8	.02	6	.035	5	-1.04	7	1.175	6	1.499	8	-1.191	5
970			...	.03	7	-.047	7	-.035	8	-1.1...	6	1.04	7	1.191	5	-1.499	8
971	M108	1	...	.035	5	.035	8	.035	6	-1.1...	6	1.35	7	-1.04	7	1.175	6
972			...	.035	2	-.035	6	-.035	7	-1.35	7	1.183	6	-1.175	6	1.04	7
973		2	...	.035	5	.035	8	.035	6	-1.2...	6	1.318	7	-1.072	7	1.144	6
974			...	.035	2	-.035	6	-.035	7	-1.3...	7	1.215	6	-1.144	6	1.072	7
975		3	...	.036	5	.036	8	.036	6	-1.2...	6	1.285	7	-1.092	8	1.124	5
976			...	.036	2	-.036	6	-.036	7	-1.2...	7	1.247	6	-1.124	5	1.092	8
977		4	...	.037	5	.037	8	.037	6	-1.2...	8	1.299	5	-1.058	8	1.157	5
978			...	.037	2	-.037	6	-.037	7	-1.2...	5	1.233	8	-1.157	5	1.058	8
979		5	...	.038	5	.038	8	.038	6	-1.1...	8	1.334	5	-1.024	8	1.192	5
980			...	.038	2	-.038	6	-.038	7	-1.3...	5	1.198	8	-1.192	5	1.024	8
981	M109	1	...	-.034	7	.053	5	-.14	6	.681	8	-.026	5	-.192	5	.469	8
982			...	-.054	6	-.018	8	-.246	7	.026	5	-.681	8	-.469	8	.192	5
983		2	...	-.034	7	.052	5	-.139	6	.673	8	-.051	5	-.274	5	.57	8
984			...	-.054	6	-.018	8	-.246	7	.051	5	-.673	8	-.57	8	.274	5
985		3	...	-.033	7	.052	5	-.139	6	.665	8	-.076	5	-.356	5	.671	8
986			...	-.053	6	-.017	8	-.247	7	.076	5	-.665	8	-.671	8	.356	5
987		4	...	-.033	7	.051	5	-.138	6	.656	8	-.1	5	-.438	5	.772	8
988			...	-.052	6	-.017	8	-.247	7	.1	5	-.656	8	-.772	8	.438	5
989		5	...	-.032	7	.05	5	-.138	6	.648	8	-.124	5	-.519	5	.873	8
990			...	-.052	6	-.017	8	-.248	7	.124	5	-.648	8	-.873	8	.519	5
991	M110	1	...	-.021	7	.083	5	-.138	6	.648	8	-.124	5	-.082	5	.633	8
992			...	-.05	6	.013	8	-.248	7	.124	5	-.648	8	-.633	8	.082	5
993		2	...	-.021	7	.082	5	-.137	6	.654	8	-.163	5	-.163	5	.734	8
994			...	-.049	6	.013	8	-.248	7	.163	5	-.654	8	-.734	8	.163	5
995		3	...	-.021	7	.081	5	-.137	6	.66	8	-.201	5	-.244	5	.836	8
996			...	-.049	6	.012	8	-.249	7	.201	5	-.66	8	-.836	8	.244	5
997		4	...	-.021	7	.08	5	-.136	6	.666	8	-.239	5	-.325	5	.938	8
998			...	-.048	6	.012	8	-.249	7	.239	5	-.666	8	-.938	8	.325	5
999		5	...	-.02	7	.079	5	-.136	6	.672	8	-.277	5	-.405	5	1.04	8
1000			...	-.048	6	.012	8	-.25	7	.277	5	-.672	8	-1.04	8	.405	5
1001	M111	1	...	-.007	7	.098	5	-.136	6	.672	8	-.277	5	.069	5	.672	8
1002			...	-.039	6	.038	8	-.25	7	.277	5	-.672	8	-.672	8	-.069	5
1003		2	...	-.007	7	.097	5	-.135	6	.69	8	-.323	5	-.011	5	.775	8
1004			...	-.038	6	.038	8	-.25	7	.323	5	-.69	8	-.775	8	.011	5
1005		3	...	-.007	7	.096	5	-.135	6	.708	8	-.368	5	-.091	5	.878	8
1006			...	-.038	6	.037	8	-.251	7	.368	5	-.708	8	-.878	8	.091	5
1007		4	...	-.007	7	.094	5	-.134	6	.725	8	-.413	5	-.171	5	.981	8
1008			...	-.037	6	.036	8	-.251	7	.413	5	-.725	8	-.981	8	.171	5
1009		5	...	-.007	7	.093	5	-.134	6	.742	8	-.458	5	-.25	5	1.084	8
1010			...	-.037	6	.036	8	-.252	7	.458	5	-.742	8	-1.084	8	.25	5
1011	M112	1	...	.007	7	.098	5	-.134	6	.742	8	-.458	5	.237	5	.582	8

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[..	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
1012			...	-.022	6	.055	8	-.252	7	.458	5	-.742	8	-.582	8	-.237	5
1013		2	...	.007	7	.097	5	-.133	6	.768	8	-.504	5	.158	5	.686	8
1014			...	-.022	6	.054	8	-.252	7	.504	5	-.768	8	-.686	8	-.158	5
1015		3	...	.007	7	.096	5	-.133	6	.793	8	-.549	5	.079	5	.79	8
1016			...	-.021	6	.053	8	-.253	7	.549	5	-.793	8	-.79	8	-.079	5
1017		4	...	.006	7	.094	5	-.132	6	.818	8	-.594	5	0	5	.894	8
1018			...	-.021	6	.052	8	-.253	7	.594	5	-.818	8	-.894	8	0	5
1019		5	...	.006	7	.093	5	-.132	6	.842	8	-.639	5	-.078	5	.998	8
1020			...	-.021	6	.051	8	-.254	7	.639	5	-.842	8	-.998	8	.078	5
1021	M113	1	...	.272	7	.195	8	.328	8	-1.1...	6	2.556	7	1.772	5	.274	8
1022			...	.03	6	.006	5	-.153	5	-2.5...	7	1.183	6	-.274	8	-1.772	5
1023		2	...	.273	7	.193	8	.327	8	-1.0...	6	2.5	7	1.649	5	.011	8
1024			...	.032	6	.006	5	-.152	5	-2.5	7	1.077	6	-.011	8	-1.649	5
1025		3	...	.274	7	.191	8	.325	8	-.971	6	2.446	7	1.527	5	-.252	8
1026			...	.033	6	.006	5	-.151	5	-2.4...	7	.971	6	.252	8	-1.527	5
1027		4	...	.275	7	.189	8	.324	8	-.829	8	2.431	5	1.406	5	-.514	8
1028			...	.034	6	.006	5	-.15	5	-2.4...	5	.829	8	.514	8	-1.406	5
1029		5	...	.276	7	.187	8	.323	8	-.677	8	2.426	5	1.286	7	-.774	6
1030			...	.036	6	.006	5	-.149	5	-2.4...	5	.677	8	.774	6	-1.286	7
1031	M114	1	...	.001	5	.005	1	.002	8	.276	6	.582	7	.747	8	1.032	5
1032			...	-.001	6	.005	8	-.002	5	-.582	7	-.276	6	-1.032	5	-.747	8
1033		2	...	0	5	.004	1	.002	8	.279	6	.579	7	.749	8	1.034	5
1034			...	0	6	.004	8	-.002	5	-.579	7	-.279	6	-1.034	5	-.749	8
1035		3	...	0	5	.002	1	.001	8	.281	6	.577	7	.75	8	1.035	5
1036			...	0	6	.002	8	-.001	5	-.577	7	-.281	6	-1.035	5	-.75	8
1037		4	...	0	5	.001	1	0	8	.282	6	.576	7	.75	8	1.035	5
1038			...	0	6	.001	8	0	5	-.576	7	-.282	6	-1.035	5	-.75	8
1039		5	...	0	1	0	1	0	1	.283	6	.575	7	.751	8	1.036	5
1040			...	0	1	0	1	0	1	-.575	7	-.283	6	-1.036	5	-.751	8
1041	M115	1	...	0	1	0	1	0	1	.283	6	.575	7	.751	8	1.036	5
1042			...	0	1	0	1	0	1	-.575	7	-.283	6	-1.036	5	-.751	8
1043		2	...	0	6	-.002	1	0	5	.282	6	.577	7	.75	8	1.035	5
1044			...	0	5	-.002	1	0	7	-.577	7	-.282	6	-1.035	5	-.75	8
1045		3	...	0	6	-.004	1	.002	5	.278	6	.58	7	.749	8	1.034	5
1046			...	0	5	-.004	1	-.002	7	-.58	7	-.278	6	-1.034	5	-.749	8
1047		4	...	.001	6	-.006	1	.003	5	.273	6	.585	7	.746	8	1.031	5
1048			...	-.001	5	-.006	1	-.003	7	-.585	7	-.273	6	-1.031	5	-.746	8
1049		5	...	.002	6	-.008	1	.004	5	.266	6	.592	7	.742	8	1.028	5
1050			...	-.002	5	-.008	1	-.004	7	-.592	7	-.266	6	-1.028	5	-.742	8
1051	M116	1	...	.002	6	-.008	5	.004	6	.266	6	.592	7	.742	8	1.028	5
1052			...	-.002	5	-.008	1	-.004	8	-.592	7	-.266	6	-1.028	5	-.742	8
1053		2	...	.002	6	-.01	5	.005	6	.257	6	.601	7	.738	8	1.023	5
1054			...	-.002	5	-.01	1	-.005	8	-.601	7	-.257	6	-1.023	5	-.738	8
1055		3	...	.003	6	-.011	5	.006	6	.246	6	.612	7	.732	8	1.018	5
1056			...	-.003	5	-.011	1	-.006	8	-.612	7	-.246	6	-1.018	5	-.732	8
1057		4	...	.003	6	-.013	5	.007	6	.233	6	.625	7	.726	8	1.011	5
1058			...	-.003	5	-.013	1	-.007	8	-.625	7	-.233	6	-1.011	5	-.726	8
1059		5	...	.004	6	-.015	5	.008	6	.219	6	.639	7	.719	8	1.004	5
1060			...	-.004	5	-.015	1	-.008	8	-.639	7	-.219	6	-1.004	5	-.719	8
1061	M117	1	...	.011	8	-.044	5	.022	5	.141	6	.411	7	.462	8	.645	5
1062			...	-.011	5	-.044	1	-.022	8	-.411	7	-.141	6	-.645	5	-.462	8
1063		2	...	.012	8	-.048	5	.024	5	.068	6	.484	7	.426	8	.609	5
1064			...	-.012	5	-.048	1	-.024	8	-.484	7	-.068	6	-.609	5	-.426	8
1065		3	...	.013	8	-.051	5	.026	5	-.009	6	.561	7	.387	8	.57	5
1066			...	-.013	5	-.051	1	-.026	8	-.561	7	.009	6	-.57	5	-.387	8
1067		4	...	.014	8	-.055	5	.027	5	-.092	6	.644	7	.346	8	.529	5
1068			...	-.014	5	-.055	1	-.027	8	-.644	7	.092	6	-.529	5	-.346	8

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	lc	y Shear[...	lc	z Shear[k...	lc	y-T...	lc	y-Bot[ksi]	lc	z-Top[ksi]	lc	z-Bot[ksi]	lc
1069		5	...	.014	8	-.058	5	.029	5	-.181	6	.732	7	.302	8	.485	5
1070			...	-.014	5	-.058	1	-.029	8	-.732	7	.181	6	-.485	5	-.302	8
1071	M118	1	...	.112	8	.196	8	.097	7	3.0...	8	3.491	5	1.219	8	1.993	5
1072			...	-.113	5	-.248	5	-.105	6	-3.4...	5	-3.037	8	-1.993	5	-1.219	8
1073		2	...	.112	8	.195	8	.097	7	3.1...	8	3.585	5	1.252	8	2.03	5
1074			...	-.113	5	-.249	5	-.105	6	-3.5...	5	-3.111	8	-2.03	5	-1.252	8
1075		3	...	.112	8	.195	8	.098	7	3.1...	8	3.679	5	1.286	8	2.067	5
1076			...	-.113	5	-.25	5	-.106	6	-3.6...	5	-3.184	8	-2.067	5	-1.286	8
1077		4	...	.111	8	.194	8	.098	7	3.2...	8	3.774	5	1.32	8	2.104	5
1078			...	-.113	5	-.251	5	-.106	6	-3.7...	5	-3.257	8	-2.104	5	-1.32	8
1079		5	...	.111	8	.193	8	.098	7	3.33	8	3.869	5	1.354	8	2.141	5
1080			...	-.113	5	-.252	5	-.107	6	-3.8...	5	-3.33	8	-2.141	5	-1.354	8
1081	M119	1	...	.149	8	.188	7	.126	7	3.1...	8	3.683	5	1.695	8	2.403	5
1082			...	-.165	5	-.238	6	-.136	6	-3.6...	5	-3.169	8	-2.403	5	-1.695	8
1083		2	...	.149	8	.188	7	.126	7	3.1...	8	3.723	5	1.713	8	2.425	5
1084			...	-.165	5	-.238	6	-.137	6	-3.7...	5	-3.191	8	-2.425	5	-1.713	8
1085		3	...	.149	8	.187	7	.126	7	3.2...	8	3.764	5	1.732	8	2.448	5
1086			...	-.166	5	-.238	6	-.137	6	-3.7...	5	-3.212	8	-2.448	5	-1.732	8
1087		4	...	.148	8	.186	7	.127	7	3.2...	8	3.804	5	1.751	8	2.471	5
1088			...	-.166	5	-.238	6	-.137	6	-3.8...	5	-3.233	8	-2.471	5	-1.751	8
1089		5	...	.148	8	.185	7	.127	7	3.2...	8	3.845	5	1.77	8	2.494	5
1090			...	-.166	5	-.239	6	-.137	6	-3.8...	5	-3.254	8	-2.494	5	-1.77	8
1091	M120	1	...	.146	8	.08	7	.162	7	2.13	8	2.531	5	3.029	8	3.793	5
1092			...	-.175	5	-.108	6	-.175	6	-2.5...	5	-2.13	8	-3.793	5	-3.029	8
1093		2	...	.146	8	.079	7	.161	7	2.1...	8	2.516	5	3.008	8	3.777	5
1094			...	-.175	5	-.108	6	-.175	6	-2.5...	5	-2.104	8	-3.777	5	-3.008	8
1095		3	...	.145	8	.078	7	.161	7	2.0...	8	2.501	5	2.987	8	3.761	5
1096			...	-.176	5	-.108	6	-.175	6	-2.5...	5	-2.079	8	-3.761	5	-2.987	8
1097		4	...	.145	8	.078	7	.161	7	2.0...	8	2.487	5	2.966	8	3.745	5
1098			...	-.176	5	-.108	6	-.175	6	-2.4...	5	-2.053	8	-3.745	5	-2.966	8
1099		5	...	.145	8	.077	7	.161	7	2.0...	8	2.473	5	2.945	8	3.73	5
1100			...	-.177	5	-.108	6	-.175	6	-2.4...	5	-2.027	8	-3.73	5	-2.945	8
1101	M121	1	...	.147	5	-.129	7	.037	7	-1.01	8	1.494	5	-.165	7	.632	6
1102			...	.086	8	-.166	6	-.137	6	-1.4...	5	1.01	8	-.632	6	.165	7
1103		2	...	.147	5	-.13	7	.038	7	-1.0...	8	1.55	5	-.151	7	.684	6
1104			...	.086	8	-.166	6	-.137	6	-1.55	5	1.065	8	-.684	6	.151	7
1105		3	...	.147	5	-.131	7	.038	7	-1.1...	8	1.607	5	-.137	7	.736	6
1106			...	.085	8	-.167	6	-.138	6	-1.6...	5	1.121	8	-.736	6	.137	7
1107		4	...	.148	5	-.131	7	.039	7	-1.1...	8	1.663	5	-.122	7	.788	6
1108			...	.085	8	-.168	6	-.138	6	-1.6...	5	1.177	8	-.788	6	.122	7
1109		5	...	.148	5	-.132	7	.039	7	-1.2...	8	1.72	5	-.108	7	.84	6
1110			...	.085	8	-.169	6	-.139	6	-1.72	5	1.233	8	-.84	6	.108	7
1111	M122	1	...	.166	5	.018	5	.039	7	-1.2...	8	1.72	5	.474	7	-.091	6
1112			...	.111	8	-.045	8	-.139	6	-1.72	5	1.233	8	.091	6	-.474	7
1113		2	...	.166	5	.017	5	.04	7	-1.25	8	1.713	5	.489	7	-.038	6
1114			...	.111	8	-.046	8	-.139	6	-1.7...	5	1.25	8	.038	6	-.489	7
1115		3	...	.167	5	.017	5	.04	7	-1.2...	8	1.707	5	.504	7	.014	6
1116			...	.111	8	-.047	8	-.14	6	-1.7...	5	1.268	8	-.014	6	-.504	7
1117		4	...	.167	5	.017	5	.041	7	-1.2...	8	1.7	5	.519	7	.067	6
1118			...	.112	8	-.048	8	-.14	6	-1.7	5	1.286	8	-.067	6	-.519	7
1119		5	...	.168	5	.017	5	.041	7	-1.3...	8	1.694	5	.534	7	.12	6
1120			...	.112	8	-.049	8	-.141	6	-1.6...	5	1.304	8	-.12	6	-.534	7
1121	M123	1	...	.141	5	.182	5	.041	7	-1.3...	8	1.694	5	1.133	8	-.662	5
1122			...	.109	8	.07	8	-.141	6	-1.6...	5	1.304	8	.662	5	-1.133	8
1123		2	...	.142	5	.182	5	.042	7	-1.2...	8	1.625	5	1.085	8	-.673	5
1124			...	.109	8	.069	8	-.141	6	-1.6...	5	1.278	8	.673	5	-1.085	8
1125		3	...	.142	5	.183	5	.042	7	-1.2...	8	1.556	5	1.036	8	-.684	5

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	lc	y Shear[...	lc	z Shear[k...	lc	y-T...	lc	y-Bot[ksi]	lc	z-Top[ksi]	lc	z-Bot[ksi]	lc
1126			...	.109	8	.068	8	-.142	6	-1.5...	5	1.252	8	.684	5	-1.036	8
1127		4	...	.142	5	.183	5	.043	7	-1.2...	6	1.497	7	1.028	7	-.655	6
1128			...	.11	8	.068	8	-.142	6	-1.4...	7	1.217	6	.655	6	-1.028	7
1129		5	...	.143	5	.183	5	.043	7	-1.1...	6	1.442	7	1.044	7	-.601	6
1130			...	.11	8	.067	8	-.143	6	-1.4...	7	1.177	6	.601	6	-1.044	7
1131	M124	1	...	.069	8	.489	5	-.08	8	2.7...	7	1.427	6	.433	5	.591	8
1132			...	-.141	5	.234	8	-.17	5	-1.4...	6	-2.706	7	-.591	8	-.433	5
1133		2	...	.07	8	.488	5	-.08	8	2.9...	7	1.316	6	.353	5	.629	8
1134			...	-.141	5	.233	8	-.169	5	-1.3...	6	-2.937	7	-.629	8	-.353	5
1135		3	...	.07	8	.487	5	-.081	8	3.1...	7	1.206	6	.273	5	.667	8
1136			...	-.142	5	.232	8	-.169	5	-1.2...	6	-3.168	7	-.667	8	-.273	5
1137		4	...	.07	8	.486	5	-.081	8	3.3...	7	1.095	6	.193	5	.706	8
1138			...	-.142	5	.232	8	-.168	5	-1.0...	6	-3.398	7	-.706	8	-.193	5
1139		5	...	.071	8	.485	5	-.082	8	3.6...	7	.986	6	.113	5	.744	8
1140			...	-.142	5	.231	8	-.168	5	-.986	6	-3.627	7	-.744	8	-.113	5
1141	M125	1	...	.021	8	.339	5	-.082	8	3.6...	7	.986	6	.342	5	.587	8
1142			...	-.224	5	.267	8	-.168	5	-.986	6	-3.627	7	-.587	8	-.342	5
1143		2	...	.022	8	.338	5	-.083	8	3.7...	7	.859	6	.263	5	.626	8
1144			...	-.224	5	.267	8	-.167	5	-.859	6	-3.787	7	-.626	8	-.263	5
1145		3	...	.022	8	.337	5	-.083	8	3.9...	7	.733	6	.184	5	.665	8
1146			...	-.224	5	.266	8	-.167	5	-.733	6	-3.947	7	-.665	8	-.184	5
1147		4	...	.023	8	.336	5	-.084	8	4.1...	7	.607	6	.105	5	.704	8
1148			...	-.223	5	.265	8	-.166	5	-.607	6	-4.106	7	-.704	8	-.105	5
1149		5	...	.023	8	.335	5	-.084	8	4.2...	7	.481	6	.026	5	.744	8
1150			...	-.223	5	.265	8	-.166	5	-.481	6	-4.265	7	-.744	8	-.026	5
1151	M126	1	...	-.029	8	.263	6	-.084	8	4.2...	7	.481	6	.227	5	.485	8
1152			...	-.27	5	.138	7	-.166	5	-.481	6	-4.265	7	-.485	8	-.227	5
1153		2	...	-.029	8	.263	6	-.085	8	4.33	7	.357	6	.149	5	.525	8
1154			...	-.27	5	.137	7	-.165	5	-.357	6	-4.33	7	-.525	8	-.149	5
1155		3	...	-.028	8	.262	6	-.085	8	4.3...	7	.232	6	.071	5	.565	8
1156			...	-.27	5	.136	7	-.165	5	-.232	6	-4.394	7	-.565	8	-.071	5
1157		4	...	-.028	8	.262	6	-.086	8	4.4...	7	.108	6	-.007	5	.606	8
1158			...	-.27	5	.135	7	-.164	5	-.108	6	-4.458	7	-.606	8	.007	5
1159		5	...	-.027	8	.262	6	-.086	8	4.5...	7	-.016	6	-.085	5	.646	8
1160			...	-.269	5	.134	7	-.164	5	.016	6	-4.522	7	-.646	8	.085	5
1161	M127	1	...	-.075	8	.221	6	-.086	8	4.5...	7	-.016	6	.105	5	.301	8
1162			...	-.274	5	-.082	7	-.164	5	.016	6	-4.522	7	-.301	8	-.105	5
1163		2	...	-.075	8	.222	6	-.087	8	4.4...	7	-.121	6	.028	5	.342	8
1164			...	-.274	5	-.083	7	-.163	5	.121	6	-4.483	7	-.342	8	-.028	5
1165		3	...	-.074	8	.222	6	-.087	8	4.4...	7	-.226	6	-.05	5	.383	8
1166			...	-.274	5	-.084	7	-.163	5	.226	6	-4.443	7	-.383	8	.05	5
1167		4	...	-.073	8	.222	6	-.088	8	4.4...	7	-.331	6	-.127	5	.425	8
1168			...	-.273	5	-.084	7	-.162	5	.331	6	-4.403	7	-.425	8	.127	5
1169		5	...	-.073	8	.223	6	-.088	8	4.3...	7	-.437	6	-.203	5	.466	8
1170			...	-.273	5	-.085	7	-.162	5	.437	6	-4.363	7	-.466	8	.203	5
1171	M128	1	...	-.052	8	.234	6	-.107	8	4.1...	8	-.673	5	-2.19	8	2.883	5
1172			...	-.256	5	-.112	7	-.142	5	.673	5	-4.127	8	-2.883	5	2.19	8
1173		2	...	-.051	8	.234	6	-.108	8	4.2...	8	-.62	5	-2.241	8	2.951	5
1174			...	-.255	5	-.112	7	-.142	5	.62	5	-4.238	8	-2.951	5	2.241	8
1175		3	...	-.051	8	.235	6	-.109	8	4.3...	8	-.567	5	-2.292	8	3.018	5
1176			...	-.255	5	-.113	7	-.141	5	.567	5	-4.349	8	-3.018	5	2.292	8
1177		4	...	-.05	8	.235	6	-.109	8	4.46	8	-.513	5	-2.344	8	3.085	5
1178			...	-.254	5	-.114	7	-.141	5	.513	5	-4.46	8	-3.085	5	2.344	8
1179		5	...	-.05	8	.235	6	-.11	8	4.5...	8	-.459	5	-2.395	8	3.151	5
1180			...	-.254	5	-.114	7	-.14	5	.459	5	-4.571	8	-3.151	5	2.395	8
1181	M129	1	...	-.001	8	.256	6	-.11	8	4.5...	8	-.459	5	-2.45	8	2.89	5
1182			...	-.256	5	.088	7	-.14	5	.459	5	-4.571	8	-2.89	5	2.45	8

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
1183		2	...	0	8	.255	6	-.11	8	4.6...	8	-.501	5	-2.502	8	2.956	5
1184			...	-.256	5	.087	7	-.14	5	.501	5	-4.692	8	-2.956	5	2.502	8
1185		3	...	0	8	.255	6	-.111	8	4.8...	8	-.542	5	-2.554	8	3.022	5
1186			...	-.256	5	.086	7	-.139	5	.542	5	-4.813	8	-3.022	5	2.554	8
1187		4	...	0	8	.255	6	-.111	8	4.9...	8	-.583	5	-2.607	8	3.088	5
1188			...	-.255	5	.085	7	-.139	5	.583	5	-4.934	8	-3.088	5	2.607	8
1189		5	...	.001	8	.255	6	-.112	8	5.0...	8	-.623	5	-2.659	8	3.154	5
1190			...	-.255	5	.084	7	-.138	5	.623	5	-5.055	8	-3.154	5	2.659	8
1191	M130	1	...	.05	8	.274	5	-.112	8	5.0...	8	-.623	5	-2.128	7	2.628	6
1192			...	-.22	5	.234	8	-.138	5	.623	5	-5.055	8	-2.628	6	2.128	7
1193		2	...	.05	8	.272	5	-.112	8	5.1...	8	-.752	5	-2.191	7	2.684	6
1194			...	-.219	5	.234	8	-.138	5	.752	5	-5.165	8	-2.684	6	2.191	7
1195		3	...	.051	8	.271	5	-.113	8	5.2...	8	-.881	5	-2.254	7	2.739	6
1196			...	-.219	5	.233	8	-.137	5	.881	5	-5.276	8	-2.739	6	2.254	7
1197		4	...	.051	8	.27	5	-.113	8	5.3...	8	-1.009	5	-2.317	7	2.794	6
1198			...	-.219	5	.233	8	-.137	5	1.0...	5	-5.386	8	-2.794	6	2.317	7
1199		5	...	.052	8	.269	5	-.114	8	5.4...	8	-1.137	5	-2.381	7	2.848	6
1200			...	-.219	5	.232	8	-.136	5	1.1...	5	-5.496	8	-2.848	6	2.381	7
1201	M131	1	...	.092	8	.416	5	-.114	8	5.4...	8	-1.137	5	-1.449	7	1.964	6
1202			...	-.151	5	.175	8	-.136	5	1.1...	5	-5.496	8	-1.964	6	1.449	7
1203		2	...	.093	8	.415	5	-.114	8	5.5...	8	-1.334	5	-1.513	7	2.019	6
1204			...	-.151	5	.174	8	-.136	5	1.3...	5	-5.579	8	-2.019	6	1.513	7
1205		3	...	.093	8	.414	5	-.114	6	5.6...	8	-1.53	5	-1.578	7	2.073	6
1206			...	-.151	5	.173	8	-.136	7	1.53	5	-5.661	8	-2.073	6	1.578	7
1207		4	...	.093	8	.413	5	-.114	6	5.7...	8	-1.726	5	-1.642	7	2.127	6
1208			...	-.152	5	.172	8	-.136	7	1.7...	5	-5.743	8	-2.127	6	1.642	7
1209		5	...	.094	8	.412	5	-.113	6	5.8...	8	-1.921	5	-1.707	7	2.18	6
1210			...	-.152	5	.171	8	-.137	7	1.9...	5	-5.824	8	-2.18	6	1.707	7
1211	M132	1	...	.077	6	-.314	8	.294	5	-2.2...	6	4.107	7	.845	5	.153	8
1212			...	-.077	7	-.348	5	.092	8	-4.1...	7	2.233	6	-.153	8	-.845	5
1213		2	...	.078	6	-.319	8	.296	5	-2.9...	6	4.799	7	1.484	5	-.042	8
1214			...	-.078	7	-.352	5	.089	8	-4.7...	7	2.985	6	.042	8	-1.484	5
1215		3	...	.079	6	-.324	8	.299	5	-3.7...	6	5.501	7	2.128	5	-.233	8
1216			...	-.079	7	-.357	5	.087	8	-5.5...	7	3.746	6	.233	8	-2.128	5
1217		4	...	.08	6	-.328	8	.301	5	-4.4...	8	6.267	5	2.777	5	-.419	8
1218			...	-.08	7	-.362	5	.085	8	-6.2...	5	4.463	8	.419	8	-2.777	5
1219		5	...	.081	6	-.333	8	.303	5	-5.1...	8	7.055	5	3.431	5	-.6	8
1220			...	-.081	7	-.366	5	.082	8	-7.0...	5	5.179	8	.6	8	-3.431	5
1221	M133	1	...	-.038	7	.065	7	.049	8	.986	6	-.225	7	.799	5	.579	8
1222			...	-.047	6	-.031	6	-.049	5	.225	7	-.986	6	-.579	8	-.799	5
1223		2	...	-.037	7	.064	7	.048	8	.977	6	-.243	7	.785	5	.565	8
1224			...	-.047	6	-.031	6	-.048	5	.243	7	-.977	6	-.565	8	-.785	5
1225		3	...	-.037	7	.063	7	.048	8	.969	6	-.261	7	.772	5	.552	8
1226			...	-.046	6	-.03	6	-.048	5	.261	7	-.969	6	-.552	8	-.772	5
1227		4	...	-.036	7	.063	7	.047	8	.96	6	-.279	7	.759	5	.538	8
1228			...	-.046	6	-.03	6	-.047	5	.279	7	-.96	6	-.538	8	-.759	5
1229		5	...	-.036	7	.062	7	.047	8	.952	6	-.296	7	.746	5	.525	8
1230			...	-.045	6	-.03	6	-.047	5	.296	7	-.952	6	-.525	8	-.746	5
1231	M134	1	...	-.022	7	.085	7	.047	8	.952	6	-.297	7	-.184	5	1.286	8
1232			...	-.047	6	.007	6	-.047	5	.297	7	-.952	6	-1.286	8	.184	5
1233		2	...	-.021	7	.084	7	.046	8	.954	6	-.32	7	-.197	5	1.273	8
1234			...	-.047	6	.007	6	-.046	5	.32	7	-.954	6	-1.273	8	.197	5
1235		3	...	-.021	7	.083	7	.046	4	.956	6	-.344	7	-.209	5	1.26	8
1236			...	-.046	6	.007	6	-.046	3	.344	7	-.956	6	-1.26	8	.209	5
1237		4	...	-.021	7	.082	7	.046	4	.958	6	-.367	7	-.222	5	1.248	8
1238			...	-.046	6	.007	6	-.046	3	.367	7	-.958	6	-1.248	8	.222	5
1239		5	...	-.021	7	.081	7	.046	4	.96	6	-.389	7	-.234	5	1.235	8

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[..	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
1240			...	-.045	6	.007	6	-.046	3	.389	7	-.96	6	-1.235	8	.234	5
1241	M135	1	...	-.004	7	.091	7	.046	4	.96	6	-.389	7	-1.131	5	1.803	8
1242			...	-.041	6	.042	6	-.046	3	.389	7	-.96	6	-1.803	8	1.131	5
1243		2	...	-.004	7	.09	7	.046	4	.972	6	-.414	7	-1.144	5	1.791	8
1244			...	-.04	6	.041	6	-.046	3	.414	7	-.972	6	-1.791	8	1.144	5
1245		3	...	-.004	7	.089	7	.046	4	.983	6	-.439	7	-1.156	5	1.779	8
1246			...	-.04	6	.041	6	-.046	3	.439	7	-.983	6	-1.779	8	1.156	5
1247		4	...	-.004	7	.088	7	.046	4	.995	6	-.464	7	-1.168	5	1.767	8
1248			...	-.039	6	.04	6	-.046	3	.464	7	-.995	6	-1.767	8	1.168	5
1249		5	...	-.004	7	.087	7	.046	4	1.01	8	-.485	5	-1.18	5	1.755	8
1250			...	-.039	6	.04	6	-.046	3	.485	5	-1.01	8	-1.755	8	1.18	5
1251	M136	1	...	.013	7	.083	7	.046	4	1.01	8	-.485	5	-1.901	5	2.053	8
1252			...	-.028	6	.067	6	-.046	3	.485	5	-1.01	8	-2.053	8	1.901	5
1253		2	...	.013	7	.082	7	.046	4	1.0...	8	-.505	5	-1.91	1	2.044	2
1254			...	-.028	6	.066	6	-.046	3	.505	5	-1.031	8	-2.044	2	1.91	1
1255		3	...	.013	7	.081	7	.046	4	1.0...	8	-.525	5	-1.912	1	2.041	2
1256			...	-.027	6	.065	6	-.046	3	.525	5	-1.052	8	-2.041	2	1.912	1
1257		4	...	.013	7	.08	7	.046	4	1.0...	8	-.545	5	-1.915	1	2.039	2
1258			...	-.027	6	.065	6	-.046	3	.545	5	-1.073	8	-2.039	2	1.915	1
1259		5	...	.012	7	.079	7	.046	4	1.0...	8	-.564	5	-1.918	1	2.036	2
1260			...	-.027	6	.064	6	-.046	3	.564	5	-1.094	8	-2.036	2	1.918	1
1261	M137	1	...	.007	2	.022	4	.012	8	1.8...	8	-1.182	5	-1.587	8	2.657	5
1262			...	-.007	1	.022	1	-.012	5	1.1...	5	-1.899	8	-2.657	5	1.587	8
1263		2	...	.007	2	.02	4	.012	8	1.9...	8	-1.191	5	-1.582	8	2.662	5
1264			...	-.007	1	.02	1	-.012	5	1.1...	5	-1.908	8	-2.662	5	1.582	8
1265		3	...	.006	2	.019	4	.011	8	1.9...	8	-1.199	5	-1.577	8	2.666	5
1266			...	-.006	1	.019	1	-.011	5	1.1...	5	-1.916	8	-2.666	5	1.577	8
1267		4	...	.006	2	.018	4	.01	8	1.9...	8	-1.206	5	-1.573	8	2.671	5
1268			...	-.006	1	.018	1	-.01	5	1.2...	5	-1.924	8	-2.671	5	1.573	8
1269		5	...	.006	2	.017	4	.009	8	1.9...	8	-1.214	5	-1.569	8	2.675	5
1270			...	-.006	1	.017	1	-.009	5	1.2...	5	-1.931	8	-2.675	5	1.569	8
1271	M138	1	...	.005	7	.017	7	.013	2	1.71	8	-.688	5	-1.569	8	2.675	5
1272			...	-.005	6	.017	3	-.013	1	.688	5	-1.71	8	-2.675	5	1.569	8
1273		2	...	.004	7	.016	7	.012	2	1.7...	8	-.694	5	-1.565	8	2.678	5
1274			...	-.004	6	.016	3	-.012	1	.694	5	-1.717	8	-2.678	5	1.565	8
1275		3	...	.004	7	.014	7	.011	2	1.7...	8	-.701	5	-1.562	8	2.682	5
1276			...	-.004	6	.014	3	-.011	1	.701	5	-1.723	8	-2.682	5	1.562	8
1277		4	...	.004	7	.013	7	.01	2	1.7...	8	-.706	5	-1.559	8	2.685	5
1278			...	-.004	6	.013	3	-.01	1	.706	5	-1.728	8	-2.685	5	1.559	8
1279		5	...	.003	7	.012	7	.009	2	1.7...	8	-.711	5	-1.556	8	2.688	5
1280			...	-.003	6	.012	3	-.009	1	.711	5	-1.734	8	-2.688	5	1.556	8
1281	M139	1	...	.003	7	.012	5	.01	2	1.3...	8	-.101	5	-1.556	8	2.688	5
1282			...	-.003	6	.012	3	-.01	1	.101	5	-1.305	8	-2.688	5	1.556	8
1283		2	...	.002	7	.011	5	.009	2	1.31	8	-.106	5	-1.554	8	2.69	5
1284			...	-.002	6	.011	3	-.009	1	.106	5	-1.31	8	-2.69	5	1.554	8
1285		3	...	.002	7	.009	5	.008	2	1.3...	8	-.11	5	-1.552	8	2.692	5
1286			...	-.002	6	.009	3	-.008	1	.11	5	-1.314	8	-2.692	5	1.552	8
1287		4	...	.002	7	.008	5	.007	2	1.3...	8	-.114	5	-1.55	8	2.694	5
1288			...	-.002	6	.008	3	-.007	1	.114	5	-1.317	8	-2.694	5	1.55	8
1289		5	...	.002	7	.007	5	.006	2	1.3...	8	-.117	5	-1.549	8	2.695	5
1290			...	-.002	6	.007	3	-.006	1	.117	5	-1.321	8	-2.695	5	1.549	8
1291	M140	1	...	.05	6	-.244	2	.249	1	1.0...	5	.057	8	4.83	6	-3.339	7
1292			...	.003	7	-.333	1	.172	2	-.057	8	-1.065	5	3.339	7	-4.83	6
1293		2	...	.05	6	-.245	2	.25	1	.959	5	.147	8	4.911	6	-3.4	7
1294			...	.003	7	-.334	1	.171	2	-.147	8	-.959	5	3.4	7	-4.911	6
1295		3	...	.05	6	-.246	2	.251	1	.854	5	.238	8	4.992	6	-3.461	7
1296			...	.003	7	-.335	1	.17	2	-.238	8	-.854	5	3.461	7	-4.992	6

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	lc	y Shear[...	lc	z Shear[k...	lc	y-T...	lc	y-Bot[ksi]	lc	z-Top[ksi]	lc	z-Bot[ksi]	lc
1297		4	...	.051	6	-.247	2	.252	1	.748	5	.329	8	5.074	6	-3.522	7
1298			...	.003	7	-.336	1	.169	2	-.329	8	-.748	5	3.522	7	-5.074	6
1299		5	...	.051	6	-.248	2	.252	1	.656	7	.434	6	5.155	6	-3.582	7
1300			...	.003	7	-.337	1	.168	2	-.434	6	-.656	7	3.582	7	-5.155	6
1301	M141	1	...	.122	6	-.217	2	.221	1	1.2...	7	-.243	6	5.323	6	-3.69	7
1302			...	.062	7	-.292	1	.147	2	.243	6	-1.245	7	3.69	7	-5.323	6
1303		2	...	.123	6	-.218	2	.221	1	1.1...	7	-.168	6	5.378	6	-3.738	7
1304			...	.062	7	-.293	1	.147	2	.168	6	-1.178	7	3.738	7	-5.378	6
1305		3	...	.123	6	-.219	2	.222	1	1.11	7	-.093	6	5.432	6	-3.786	7
1306			...	.062	7	-.294	1	.146	2	.093	6	-1.11	7	3.786	7	-5.432	6
1307		4	...	.123	6	-.22	2	.223	1	1.0...	7	-.018	6	5.487	6	-3.834	7
1308			...	.062	7	-.294	1	.145	2	.018	6	-1.042	7	3.834	7	-5.487	6
1309		5	...	.124	6	-.221	2	.223	1	.973	7	.058	6	5.542	6	-3.882	7
1310			...	.062	7	-.295	1	.145	2	-.058	6	-.973	7	3.882	7	-5.542	6
1311	M142	1	...	.17	6	-.176	2	.172	5	1.4...	7	-.637	6	5.477	6	-3.691	7
1312			...	.107	7	-.228	1	.087	8	.637	6	-1.425	7	3.691	7	-5.477	6
1313		2	...	.171	6	-.177	2	.173	5	1.3...	7	-.58	6	5.511	6	-3.73	7
1314			...	.107	7	-.229	1	.087	8	.58	6	-1.369	7	3.73	7	-5.511	6
1315		3	...	.171	6	-.178	2	.173	5	1.3...	7	-.522	6	5.544	6	-3.769	7
1316			...	.107	7	-.229	1	.086	8	.522	6	-1.314	7	3.769	7	-5.544	6
1317		4	...	.172	6	-.179	2	.174	5	1.2...	7	-.464	6	5.577	6	-3.808	7
1318			...	.107	7	-.23	1	.086	8	.464	6	-1.257	7	3.808	7	-5.577	6
1319		5	...	.172	6	-.18	2	.174	5	1.2...	7	-.406	6	5.611	6	-3.847	7
1320			...	.107	7	-.23	1	.085	8	.406	6	-1.201	7	3.847	7	-5.611	6
1321	M143	1	...	.196	1	-.146	2	.094	5	1.4...	7	-1.106	6	5.376	6	-3.486	7
1322			...	.133	2	-.178	1	.001	8	1.1...	6	-1.499	7	3.486	7	-5.376	6
1323		2	...	.196	1	-.147	2	.094	5	1.4...	7	-1.061	6	5.38	6	-3.509	7
1324			...	.133	2	-.179	1	0	8	1.0...	6	-1.454	7	3.509	7	-5.38	6
1325		3	...	.197	1	-.148	2	.095	5	1.4...	7	-1.014	6	5.383	6	-3.532	7
1326			...	.133	2	-.179	1	0	8	1.0...	6	-1.409	7	3.532	7	-5.383	6
1327		4	...	.197	1	-.149	2	.095	5	1.3...	7	-.968	6	5.387	6	-3.555	7
1328			...	.133	2	-.179	1	0	8	.968	6	-1.364	7	3.555	7	-5.387	6
1329		5	...	.198	1	-.15	2	.095	5	1.3...	7	-.922	6	5.391	6	-3.578	7
1330			...	.133	2	-.18	1	0	8	.922	6	-1.318	7	3.578	7	-5.391	6
1331	M144	1	...	.07	8	.256	1	-.273	2	-.551	7	1.573	6	3.262	6	-1.528	7
1332			...	-.04	5	.038	2	-.699	1	-1.5...	6	.551	7	1.528	7	-3.262	6
1333		2	...	.07	8	.255	1	-.273	2	-.52	7	1.521	6	3.099	6	-1.415	7
1334			...	-.04	5	.037	2	-.699	1	-1.5...	6	.52	7	1.415	7	-3.099	6
1335		3	...	.07	8	.255	1	-.273	2	-.489	7	1.468	6	2.937	6	-1.301	7
1336			...	-.04	5	.037	2	-.699	1	-1.4...	6	.489	7	1.301	7	-2.937	6
1337		4	...	.07	8	.254	1	-.273	2	-.459	7	1.416	6	2.774	6	-1.188	7
1338			...	-.04	5	.036	2	-.699	1	-1.4...	6	.459	7	1.188	7	-2.774	6
1339		5	...	.071	8	.254	1	-.274	2	-.429	7	1.364	6	2.612	6	-1.074	7
1340			...	-.04	5	.035	2	-.698	1	-1.3...	6	.429	7	1.074	7	-2.612	6
1341	M145	1	...	.009	8	.176	1	-.29	2	-.193	7	.999	6	2.787	6	-1.178	7
1342			...	-.17	5	.024	2	-.653	1	-.999	6	.193	7	1.178	7	-2.787	6
1343		2	...	.009	8	.176	1	-.29	2	-.174	7	.961	6	2.627	6	-1.07	7
1344			...	-.17	5	.023	2	-.652	1	-.961	6	.174	7	1.07	7	-2.627	6
1345		3	...	.009	8	.175	1	-.29	2	-.155	7	.923	6	2.467	6	-.962	7
1346			...	-.17	5	.022	2	-.652	1	-.923	6	.155	7	.962	7	-2.467	6
1347		4	...	.009	8	.175	1	-.291	2	-.137	5	.886	8	2.308	6	-.854	7
1348			...	-.17	5	.022	2	-.652	1	-.886	8	.137	5	.854	7	-2.308	6
1349		5	...	.009	8	.174	1	-.291	2	-.093	5	.874	8	2.162	8	-.732	5
1350			...	-.17	5	.021	2	-.652	1	-.874	8	.093	5	.732	5	-2.162	8
1351	M146	1	...	-.054	8	.032	1	-.267	2	.141	5	.41	8	2.312	8	-.781	5
1352			...	-.273	5	-.027	2	-.509	1	-.41	8	-.141	5	.781	5	-2.312	8
1353		2	...	-.054	8	.032	1	-.267	2	.145	5	.413	8	2.219	8	-.654	5

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
2:24 PM
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
1354			...	-.273	5	-.027	2	-.508	1	-.413	8	-.145	5	.654	5	-2.219	8
1355		3	...	-.054	8	.031	1	-.267	2	.149	5	.416	8	2.125	8	-.527	5
1356			...	-.272	5	-.028	2	-.508	1	-.416	8	-.149	5	.527	5	-2.125	8
1357		4	...	-.054	8	.031	1	-.267	2	.154	5	.42	8	2.031	8	-.4	5
1358			...	-.272	5	-.028	2	-.508	1	-.42	8	-.154	5	.4	5	-2.031	8
1359		5	...	-.054	8	.03	1	-.268	2	.158	5	.423	8	1.938	8	-.274	5
1360			...	-.272	5	-.029	2	-.508	1	-.423	8	-.158	5	.274	5	-1.938	8
1361	M147	1	...	-.1	2	-.085	8	-.167	7	.301	5	-.095	8	1.998	8	-.248	5
1362			...	-.342	1	-.101	5	-.29	6	.095	8	-.301	5	.248	5	-1.998	8
1363		2	...	-.1	2	-.085	8	-.167	7	.272	5	-.071	8	1.925	8	-.191	5
1364			...	-.342	1	-.102	5	-.29	6	.071	8	-.272	5	.191	5	-1.925	8
1365		3	...	-.1	2	-.086	8	-.167	7	.243	5	-.047	8	1.852	8	-.134	5
1366			...	-.342	1	-.102	5	-.29	6	.047	8	-.243	5	.134	5	-1.852	8
1367		4	...	-.1	2	-.087	8	-.166	7	.214	5	-.022	8	1.779	8	-.077	5
1368			...	-.342	1	-.103	5	-.29	6	.022	8	-.214	5	.077	5	-1.779	8
1369		5	...	-.1	2	-.087	8	-.166	7	.185	5	.003	8	1.706	8	-.021	5
1370			...	-.341	1	-.103	5	-.291	6	-.003	8	-.185	5	.021	5	-1.706	8
1371	M148	1	...	.294	7	-.324	6	.892	7	-3.1...	6	3.41	7	6.039	7	-5.677	6
1372			...	.218	6	-.474	7	.592	6	-3.41	7	3.184	6	5.677	6	-6.039	7
1373		2	...	.294	7	-.324	6	.892	7	-3.3...	6	3.584	7	6.366	7	-5.894	6
1374			...	.218	6	-.475	7	.592	6	-3.5...	7	3.303	6	5.894	6	-6.366	7
1375		3	...	.294	7	-.325	6	.892	7	-3.4...	6	3.758	7	6.693	7	-6.111	6
1376			...	.218	6	-.475	7	.592	6	-3.7...	7	3.422	6	6.111	6	-6.693	7
1377		4	...	.294	7	-.325	6	.891	7	-3.5...	6	3.932	7	7.02	7	-6.328	6
1378			...	.218	6	-.475	7	.592	6	-3.9...	7	3.541	6	6.328	6	-7.02	7
1379		5	...	.294	7	-.326	6	.891	7	-3.6...	6	4.106	7	7.347	7	-6.545	6
1380			...	.218	6	-.476	7	.592	6	-4.1...	7	3.661	6	6.545	6	-7.347	7
1381	M149	1	...	.507	7	-.135	6	.545	7	-2.6...	6	3.057	7	7.843	7	-6.998	6
1382			...	.358	6	-.202	7	.342	6	-3.0...	7	2.699	6	6.998	6	-7.843	7
1383		2	...	.507	7	-.135	6	.545	7	-2.7...	6	3.131	7	8.042	7	-7.123	6
1384			...	.358	6	-.203	7	.342	6	-3.1...	7	2.748	6	7.123	6	-8.042	7
1385		3	...	.507	7	-.136	6	.545	7	-2.7...	6	3.206	7	8.242	7	-7.249	6
1386			...	.358	6	-.203	7	.342	6	-3.2...	7	2.798	6	7.249	6	-8.242	7
1387		4	...	.507	7	-.136	6	.545	7	-2.8...	6	3.28	7	8.442	7	-7.374	6
1388			...	.359	6	-.204	7	.342	6	-3.28	7	2.848	6	7.374	6	-8.442	7
1389		5	...	.507	7	-.136	6	.545	7	-2.8...	6	3.355	7	8.642	7	-7.499	6
1390			...	.359	6	-.204	7	.342	6	-3.3...	7	2.898	6	7.499	6	-8.642	7
1391	M150	1	...	.585	7	.02	2	.002	2	-.923	6	1.11	7	9.206	7	-7.989	6
1392			...	.403	6	.006	1	-.042	1	-1.11	7	.923	6	7.989	6	-9.206	7
1393		2	...	.585	7	.019	2	.002	2	-.92	6	1.103	7	9.205	7	-7.975	6
1394			...	.403	6	.006	1	-.042	1	-1.1...	7	.92	6	7.975	6	-9.205	7
1395		3	...	.585	7	.019	2	.002	2	-.917	6	1.097	7	9.205	7	-7.96	6
1396			...	.403	6	.006	1	-.042	1	-1.0...	7	.917	6	7.96	6	-9.205	7
1397		4	...	.585	7	.018	2	.002	2	-.914	6	1.092	7	9.205	7	-7.946	6
1398			...	.403	6	.005	1	-.042	1	-1.0...	7	.914	6	7.946	6	-9.205	7
1399		5	...	.585	7	.018	2	.002	2	-.911	6	1.086	7	9.205	7	-7.931	6
1400			...	.403	6	.005	1	-.042	1	-1.0...	7	.911	6	7.931	6	-9.205	7
1401	M151	1	...	.011	3	.015	4	.014	2	-.013	3	.041	4	.023	1	.023	2
1402			...	.008	4	-.006	3	-.014	1	-.041	4	.013	3	-.023	2	-.023	1
1403		2	...	.01	3	.015	4	.013	2	-.014	3	.037	4	.02	1	.02	2
1404			...	.008	4	-.006	3	-.013	1	-.037	4	.014	3	-.02	2	-.02	1
1405		3	...	.01	3	.014	4	.013	2	-.015	3	.034	4	.017	1	.017	2
1406			...	.007	4	-.005	3	-.013	1	-.034	4	.015	3	-.017	2	-.017	1
1407		4	...	.009	3	.013	4	.012	2	-.017	3	.031	4	.014	1	.014	2
1408			...	.007	4	-.005	3	-.012	1	-.031	4	.017	3	-.014	2	-.014	1
1409		5	...	.009	3	.012	4	.011	2	-.018	3	.028	4	.012	1	.012	2
1410			...	.007	4	-.004	3	-.011	1	-.028	4	.018	3	-.012	2	-.012	1

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	lc	y Shear[...	lc	z Shear[k...	lc	y-T...	lc	y-Bot[ksi]	lc	z-Top[ksi]	lc	z-Bot[ksi]	lc
1411	M152	1	...	.009	3	.017	4	.011	2	-.018	3	.028	4	.017	1	.017	2
1412			...	.003	4	.004	3	-.011	1	-.028	4	.018	3	-.017	2	-.017	1
1413		2	...	.008	3	.015	4	.011	2	-.017	3	.025	4	.014	1	.014	2
1414			...	.003	4	.004	3	-.011	1	-.025	4	.017	3	-.014	2	-.014	1
1415		3	...	.008	3	.014	4	.01	2	-.016	3	.021	4	.012	1	.012	2
1416			...	.003	4	.004	3	-.01	1	-.021	4	.016	3	-.012	2	-.012	1
1417		4	...	.007	3	.013	4	.009	2	-.015	5	.018	8	.01	1	.01	2
1418			...	.003	4	.004	3	-.009	1	-.018	8	.015	5	-.01	2	-.01	1
1419		5	...	.006	3	.012	4	.008	2	-.014	5	.016	8	.008	1	.008	2
1420			...	.003	4	.003	3	-.008	1	-.016	8	.014	5	-.008	2	-.008	1
1421	M153	1	...	.005	3	.013	4	.008	2	-.014	5	.016	8	.01	1	.01	2
1422			...	0	4	.009	3	-.008	1	-.016	8	.014	5	-.01	2	-.01	1
1423		2	...	.004	3	.012	4	.008	2	-.012	5	.013	8	.009	1	.009	2
1424			...	0	4	.008	3	-.008	1	-.013	8	.012	5	-.009	2	-.009	1
1425		3	...	.004	3	.011	4	.007	2	-.01	4	.011	3	.007	1	.007	2
1426			...	0	4	.007	3	-.007	1	-.011	3	.01	4	-.007	2	-.007	1
1427		4	...	.003	5	.01	6	.006	2	-.008	4	.009	3	.005	1	.005	2
1428			...	0	6	.007	7	-.006	1	-.009	3	.008	4	-.005	2	-.005	1
1429		5	...	.003	5	.008	6	.006	2	-.006	4	.008	3	.004	1	.004	2
1430			...	0	6	.006	7	-.006	1	-.008	3	.006	4	-.004	2	-.004	1
1431	M154	1	...	.001	5	.008	7	.006	2	-.006	4	.008	3	.005	1	.005	2
1432			...	-.002	8	.008	6	-.006	1	-.008	3	.006	4	-.005	2	-.005	1
1433		2	...	.001	3	.007	3	.005	2	-.004	4	.006	3	.004	1	.004	2
1434			...	-.002	4	.007	4	-.005	1	-.006	3	.004	4	-.004	2	-.004	1
1435		3	...	.001	3	.006	3	.004	2	-.003	4	.004	3	.003	1	.003	2
1436			...	-.002	4	.006	4	-.004	1	-.004	3	.003	4	-.003	2	-.003	1
1437		4	...	.001	3	.005	3	.004	2	-.002	4	.003	3	.002	1	.002	2
1438			...	-.002	4	.005	4	-.004	1	-.003	3	.002	4	-.002	2	-.002	1
1439		5	...	.001	3	.004	3	.003	2	0	4	.002	3	.001	1	.001	2
1440			...	-.002	4	.004	4	-.003	1	-.002	3	0	4	-.001	2	-.001	1
1441	M155	1	...	0	3	.005	3	.003	2	0	4	.002	3	.001	1	.001	2
1442			...	-.002	4	.002	4	-.003	1	-.002	3	0	4	-.001	2	-.001	1
1443		2	...	0	3	.004	3	.002	2	0	4	.001	3	0	1	0	2
1444			...	-.002	4	.001	4	-.002	1	-.001	3	0	4	0	2	0	1
1445		3	...	0	3	.002	3	.001	2	0	4	0	3	0	1	0	2
1446			...	-.001	4	0	4	-.001	1	0	3	0	4	0	2	0	1
1447		4	...	0	3	.001	3	0	2	0	4	0	3	0	1	0	2
1448			...	0	4	0	4	0	1	0	3	0	4	0	2	0	1
1449		5	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
1450			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
1451	M156	1	...	.009	8	-.085	7	.038	6	.402	3	.074	4	.043	7	.043	6
1452			...	-.028	5	-.1	6	-.038	7	-.074	4	-.402	3	-.043	6	-.043	7
1453		2	...	.009	8	-.086	7	.038	6	.386	3	.092	4	.036	7	.036	6
1454			...	-.028	5	-.101	6	-.038	7	-.092	4	-.386	3	-.036	6	-.036	7
1455		3	...	.009	8	-.087	7	.038	6	.369	3	.111	4	.029	7	.029	6
1456			...	-.028	5	-.101	6	-.038	7	-.111	4	-.369	3	-.029	6	-.029	7
1457		4	...	.01	8	-.087	7	.039	6	.352	3	.129	4	.022	7	.022	6
1458			...	-.028	5	-.102	6	-.039	7	-.129	4	-.352	3	-.022	6	-.022	7
1459		5	...	.01	8	-.088	7	.039	6	.335	3	.148	4	.021	1	.021	2
1460			...	-.029	5	-.103	6	-.039	7	-.148	4	-.335	3	-.021	2	-.021	1
1461	M157	1	...	-.011	8	-.059	7	.039	6	.335	3	.148	4	.118	1	.118	2
1462			...	-.043	5	-.103	6	-.039	7	-.148	4	-.335	3	-.118	2	-.118	1
1463		2	...	-.011	8	-.06	7	.039	6	.323	3	.167	4	.125	1	.125	2
1464			...	-.044	5	-.104	6	-.039	7	-.167	4	-.323	3	-.125	2	-.125	1
1465		3	...	-.011	8	-.06	7	.04	1	.311	3	.185	4	.133	1	.133	2
1466			...	-.044	5	-.104	6	-.04	2	-.185	4	-.311	3	-.133	2	-.133	1
1467		4	...	-.011	8	-.061	7	.04	1	.298	3	.204	4	.14	1	.14	2

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	lc	y Shear[..	lc	z Shear[k...	lc	y-T...	lc	y-Bot[ksi]	lc	z-Top[ksi]	lc	z-Bot[ksi]	lc
1468			...	-.044	5	-.105	6	-.04	2	-.204	4	-.298	3	-.14	2	-.14	1
1469		5	...	-.011	8	-.061	7	.041	1	.286	3	.222	4	.148	1	.148	2
1470			...	-.045	5	-.106	6	-.041	2	-.222	4	-.286	3	-.148	2	-.148	1
1471	M158	1	...	-.031	8	-.022	7	.041	1	.286	3	.222	4	.225	1	.225	2
1472			...	-.053	5	-.089	6	-.041	2	-.222	4	-.286	3	-.225	2	-.225	1
1473		2	...	-.031	8	-.023	7	.041	1	.28	3	.238	4	.233	1	.233	2
1474			...	-.054	5	-.09	6	-.041	2	-.238	4	-.28	3	-.233	2	-.233	1
1475		3	...	-.031	8	-.023	7	.042	1	.274	3	.253	4	.241	1	.241	2
1476			...	-.054	5	-.091	6	-.042	2	-.253	4	-.274	3	-.241	2	-.241	1
1477		4	...	-.031	8	-.023	7	.043	1	.268	3	.269	4	.249	1	.249	2
1478			...	-.054	5	-.092	6	-.043	2	-.269	4	-.268	3	-.249	2	-.249	1
1479		5	...	-.032	8	-.023	7	.043	1	.263	3	.285	4	.257	1	.257	2
1480			...	-.055	5	-.092	6	-.043	2	-.285	4	-.263	3	-.257	2	-.257	1
1481	M159	1	...	-.047	8	.02	7	.043	1	.263	3	.285	4	.297	1	.297	2
1482			...	-.055	5	-.061	6	-.043	2	-.285	4	-.263	3	-.297	2	-.297	1
1483		2	...	-.047	8	.021	7	.044	1	.265	3	.295	4	.305	1	.305	2
1484			...	-.056	5	-.062	6	-.044	2	-.295	4	-.265	3	-.305	2	-.305	1
1485		3	...	-.048	8	.021	7	.044	1	.267	3	.305	4	.313	1	.313	2
1486			...	-.056	5	-.062	6	-.044	2	-.305	4	-.267	3	-.313	2	-.313	1
1487		4	...	-.048	8	.021	7	.045	1	.269	3	.315	4	.322	1	.322	2
1488			...	-.056	5	-.063	6	-.045	2	-.315	4	-.269	3	-.322	2	-.322	1
1489		5	...	-.048	8	.021	7	.046	1	.272	3	.325	4	.33	1	.33	2
1490			...	-.057	5	-.063	6	-.046	2	-.325	4	-.272	3	-.33	2	-.33	1
1491	M160	1	...	.028	5	.008	2	.03	6	.512	1	-.298	2	.186	7	.187	6
1492			...	-.028	8	-.008	1	-.03	7	.298	2	-.512	1	-.187	6	-.186	7
1493		2	...	.028	6	.003	2	.033	6	.508	3	-.297	4	.154	7	.154	6
1494			...	-.028	7	-.013	1	-.033	7	.297	4	-.508	3	-.154	6	-.154	7
1495		3	...	.029	6	-.001	2	.035	6	.5	3	-.29	4	.118	7	.118	6
1496			...	-.029	7	-.017	1	-.035	7	.29	4	-.5	3	-.118	6	-.118	7
1497		4	...	.029	6	-.006	2	.038	6	.489	3	-.278	4	.082	8	.082	5
1498			...	-.029	7	-.022	1	-.038	7	.278	4	-.489	3	-.082	5	-.082	8
1499		5	...	.03	6	-.01	2	.04	6	.472	3	-.261	4	.049	8	.049	5
1500			...	-.03	7	-.026	1	-.04	7	.261	4	-.472	3	-.049	5	-.049	8
1501	M161	1	...	.035	6	-.01	2	.008	6	.537	3	-.3	4	.049	8	.049	5
1502			...	-.035	7	-.026	1	-.008	7	.3	4	-.537	3	-.049	5	-.049	8
1503		2	...	.036	6	-.011	2	.008	6	.534	3	-.297	4	.048	8	.048	5
1504			...	-.036	7	-.027	1	-.008	7	.297	4	-.534	3	-.048	5	-.048	8
1505		3	...	.036	6	-.012	2	.009	6	.531	3	-.294	4	.047	8	.047	5
1506			...	-.036	7	-.028	1	-.009	7	.294	4	-.531	3	-.047	5	-.047	8
1507		4	...	.036	6	-.012	2	.009	6	.528	3	-.29	4	.046	8	.046	5
1508			...	-.036	7	-.028	1	-.009	7	.29	4	-.528	3	-.046	5	-.046	8
1509		5	...	.036	6	-.013	2	.009	6	.525	3	-.287	4	.045	8	.045	5
1510			...	-.036	7	-.029	1	-.009	7	.287	4	-.525	3	-.045	5	-.045	8
1511	M162	1	...	.028	7	.008	1	.033	1	.512	2	-.298	1	.186	8	.187	5
1512			...	-.028	6	-.008	2	-.033	2	.298	1	-.512	2	-.187	5	-.186	8
1513		2	...	.028	8	.003	1	.033	1	.508	3	-.297	4	.154	8	.154	5
1514			...	-.028	5	-.013	2	-.033	2	.297	4	-.508	3	-.154	5	-.154	8
1515		3	...	.029	8	-.001	1	.035	5	.5	3	-.29	4	.118	8	.118	5
1516			...	-.029	5	-.017	2	-.035	8	.29	4	-.5	3	-.118	5	-.118	8
1517		4	...	.029	8	-.006	1	.038	5	.489	3	-.278	4	.082	7	.082	6
1518			...	-.029	5	-.022	2	-.038	8	.278	4	-.489	3	-.082	6	-.082	7
1519		5	...	.03	8	-.01	1	.04	5	.472	3	-.261	4	.049	7	.049	6
1520			...	-.03	5	-.026	2	-.04	8	.261	4	-.472	3	-.049	6	-.049	7
1521	M163	1	...	.035	8	-.01	1	.008	5	.537	3	-.3	4	.049	7	.049	6
1522			...	-.035	5	-.026	2	-.008	8	.3	4	-.537	3	-.049	6	-.049	7
1523		2	...	.036	8	-.011	1	.008	5	.534	3	-.297	4	.048	7	.048	6
1524			...	-.036	5	-.027	2	-.008	8	.297	4	-.534	3	-.048	6	-.048	7

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[..	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
1525		3	...	.036	8	-.012	1	.009	5	.531	3	-.294	4	.047	7	.047	6
1526			...	-.036	5	-.028	2	-.009	8	.294	4	-.531	3	-.047	6	-.047	7
1527		4	...	.036	8	-.012	1	.009	5	.528	3	-.29	4	.046	7	.046	6
1528			...	-.036	5	-.028	2	-.009	8	.29	4	-.528	3	-.046	6	-.046	7
1529		5	...	.036	8	-.013	1	.009	5	.525	3	-.287	4	.045	7	.045	6
1530			...	-.036	5	-.029	2	-.009	8	.287	4	-.525	3	-.045	6	-.045	7
1531	M164	1	...	.036	6	-.013	2	.009	6	.428	3	-.19	4	.01	8	.01	5
1532			...	-.036	7	-.029	1	-.009	7	.19	4	-.428	3	-.01	5	-.01	8
1533		2	...	.036	6	-.014	2	.01	6	.425	3	-.187	4	.01	6	.01	7
1534			...	-.036	7	-.03	1	-.01	7	.187	4	-.425	3	-.01	7	-.01	6
1535		3	...	.036	6	-.014	2	.01	6	.421	3	-.183	4	.011	6	.011	7
1536			...	-.036	7	-.03	1	-.01	7	.183	4	-.421	3	-.011	7	-.011	6
1537		4	...	.036	6	-.015	2	.01	6	.417	3	-.18	4	.013	6	.013	7
1538			...	-.036	7	-.031	1	-.01	7	.18	4	-.417	3	-.013	7	-.013	6
1539		5	...	.037	6	-.016	2	.01	6	.414	3	-.176	4	.015	6	.015	7
1540			...	-.037	7	-.032	1	-.01	7	.176	4	-.414	3	-.015	7	-.015	6
1541	M165	1	...	.036	8	-.013	1	.009	5	.428	3	-.19	4	.01	7	.01	6
1542			...	-.036	5	-.029	2	-.009	8	.19	4	-.428	3	-.01	6	-.01	7
1543		2	...	.036	8	-.014	1	.01	5	.425	3	-.187	4	.01	5	.01	8
1544			...	-.036	5	-.03	2	-.01	8	.187	4	-.425	3	-.01	8	-.01	5
1545		3	...	.036	8	-.014	1	.01	5	.421	3	-.183	4	.011	5	.011	8
1546			...	-.036	5	-.03	2	-.01	8	.183	4	-.421	3	-.011	8	-.011	5
1547		4	...	.036	8	-.015	1	.01	5	.417	3	-.18	4	.013	5	.013	8
1548			...	-.036	5	-.031	2	-.01	8	.18	4	-.417	3	-.013	8	-.013	5
1549		5	...	.037	8	-.016	1	.01	5	.414	3	-.176	4	.015	5	.015	8
1550			...	-.037	5	-.032	2	-.01	8	.176	4	-.414	3	-.015	8	-.015	5
1551	M166	1	...	0	6	0	1	0	1	0	1	0	1	0	1	0	1
1552			...	0	7	0	1	0	1	0	1	0	1	0	1	0	1
1553		2	...	0	6	0	1	0	1	0	1	0	1	0	1	0	1
1554			...	0	7	0	1	0	1	0	1	0	1	0	1	0	1
1555		3	...	0	6	0	1	0	1	0	1	0	1	0	1	0	1
1556			...	0	7	0	1	0	1	0	1	0	1	0	1	0	1
1557		4	...	0	6	0	1	0	1	0	1	0	1	0	1	0	1
1558			...	0	7	0	1	0	1	0	1	0	1	0	1	0	1
1559		5	...	0	6	0	1	0	1	0	1	0	1	0	1	0	1
1560			...	0	7	0	1	0	1	0	1	0	1	0	1	0	1
1561	M167	1	...	0	8	0	1	0	1	0	1	0	1	0	1	0	1
1562			...	0	5	0	1	0	1	0	1	0	1	0	1	0	1
1563		2	...	0	8	0	1	0	1	0	1	0	1	0	1	0	1
1564			...	0	5	0	1	0	1	0	1	0	1	0	1	0	1
1565		3	...	0	8	0	1	0	1	0	1	0	1	0	1	0	1
1566			...	0	5	0	1	0	1	0	1	0	1	0	1	0	1
1567		4	...	0	8	0	1	0	1	0	1	0	1	0	1	0	1
1568			...	0	5	0	1	0	1	0	1	0	1	0	1	0	1
1569		5	...	0	8	0	1	0	1	0	1	0	1	0	1	0	1
1570			...	0	5	0	1	0	1	0	1	0	1	0	1	0	1
1571	M168	1	...	.045	5	.108	2	.047	8	.298	3	-.06	4	.058	5	.058	8
1572			...	-.045	8	.075	1	-.047	5	.06	4	-.298	3	-.058	8	-.058	5
1573		2	...	.045	5	.105	2	.046	8	.374	3	-.137	4	.025	7	.025	6
1574			...	-.045	8	.071	1	-.046	5	.137	4	-.374	3	-.025	6	-.025	7
1575		3	...	.044	5	.101	2	.044	8	.448	3	-.21	4	.054	7	.054	6
1576			...	-.044	8	.067	1	-.044	5	.21	4	-.448	3	-.054	6	-.054	7
1577		4	...	.03	5	.046	2	.017	8	.474	3	-.236	4	.06	7	.06	6
1578			...	-.03	8	.012	1	-.017	5	.236	4	-.474	3	-.06	6	-.06	7
1579		5	...	.03	5	.042	2	.016	8	.497	3	-.259	4	.064	7	.064	6
1580			...	-.03	8	.008	1	-.016	5	.259	4	-.497	3	-.064	6	-.064	7
1581	M169	1	...	.045	7	.108	1	.047	7	.298	3	-.06	4	.058	6	.058	7

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	lc	y Shear[...	lc	z Shear[k...	lc	y-T...	lc	y-Bot[ksi]	lc	z-Top[ksi]	lc	z-Bot[ksi]	lc
1582			...	-.045	6	.075	2	-.047	6	.06	4	-.298	3	-.058	7	-.058	6
1583		2	...	.045	7	.105	1	.046	7	.374	3	-.137	4	.025	8	.025	5
1584			...	-.045	6	.071	2	-.046	6	.137	4	-.374	3	-.025	5	-.025	8
1585		3	...	.044	7	.101	1	.044	7	.448	3	-.21	4	.054	8	.054	5
1586			...	-.044	6	.067	2	-.044	6	.21	4	-.448	3	-.054	5	-.054	8
1587		4	...	.03	7	.046	1	.017	7	.474	3	-.236	4	.06	8	.06	5
1588			...	-.03	6	.012	2	-.017	6	.236	4	-.474	3	-.06	5	-.06	8
1589		5	...	.03	7	.042	1	.016	7	.497	3	-.259	4	.064	8	.064	5
1590			...	-.03	6	.008	2	-.016	6	.259	4	-.497	3	-.064	5	-.064	8
1591	M170	1	...	.027	7	-.201	6	.1	8	-.518	3	.993	4	.347	8	.347	5
1592			...	-.071	8	-.24	7	-.1	6	-.993	4	.518	3	-.347	5	-.347	8
1593		2	...	.027	7	-.202	6	.101	8	-.56	3	1.034	4	.365	8	.365	5
1594			...	-.071	8	-.241	7	-.101	6	-1.0...	4	.56	3	-.365	5	-.365	8
1595		3	...	.027	7	-.202	6	.101	8	-.603	3	1.075	4	.384	8	.384	5
1596			...	-.072	8	-.242	7	-.101	6	-1.0...	4	.603	3	-.384	5	-.384	8
1597		4	...	.027	7	-.203	6	.101	8	-.645	3	1.116	4	.403	8	.403	5
1598			...	-.072	8	-.243	7	-.101	6	-1.1...	4	.645	3	-.403	5	-.403	8
1599		5	...	.028	7	-.204	6	.102	8	-.688	3	1.157	4	.422	8	.422	5
1600			...	-.072	8	-.244	7	-.102	6	-1.1...	4	.688	3	-.422	5	-.422	8
1601	M171	1	...	-.021	7	-.133	6	.102	8	-.688	3	1.157	4	.322	8	.322	5
1602			...	-.106	6	-.246	7	-.102	6	-1.1...	4	.688	3	-.322	5	-.322	8
1603		2	...	-.021	7	-.134	6	.102	8	-.726	3	1.19	4	.341	8	.341	5
1604			...	-.106	6	-.247	7	-.102	6	-1.19	4	.726	3	-.341	5	-.341	8
1605		3	...	-.021	7	-.134	6	.102	8	-.764	3	1.224	4	.36	8	.36	5
1606			...	-.106	6	-.248	7	-.102	6	-1.2...	4	.764	3	-.36	5	-.36	8
1607		4	...	-.021	7	-.135	6	.102	8	-.803	3	1.257	4	.379	8	.379	5
1608			...	-.107	6	-.249	7	-.102	6	-1.2...	4	.803	3	-.379	5	-.379	8
1609		5	...	-.022	7	-.135	6	.103	8	-.842	3	1.291	4	.399	8	.399	5
1610			...	-.107	6	-.25	7	-.103	6	-1.2...	4	.842	3	-.399	5	-.399	8
1611	M172	1	...	-.068	5	-.043	6	.103	8	-.842	3	1.291	4	.243	8	.243	5
1612			...	-.125	6	-.214	7	-.103	6	-1.2...	4	.842	3	-.243	5	-.243	8
1613		2	...	-.068	5	-.043	6	.103	8	-.87	3	1.311	4	.262	8	.262	5
1614			...	-.125	6	-.215	7	-.103	6	-1.3...	4	.87	3	-.262	5	-.262	8
1615		3	...	-.068	5	-.043	6	.103	8	-.898	3	1.331	4	.282	8	.282	5
1616			...	-.126	6	-.216	7	-.103	6	-1.3...	4	.898	3	-.282	5	-.282	8
1617		4	...	-.068	5	-.044	6	.104	8	-.927	3	1.352	4	.301	8	.301	5
1618			...	-.126	6	-.216	7	-.104	6	-1.3...	4	.927	3	-.301	5	-.301	8
1619		5	...	-.069	5	-.044	6	.104	8	-.955	3	1.372	4	.321	8	.321	5
1620			...	-.127	6	-.217	7	-.104	6	-1.3...	4	.955	3	-.321	5	-.321	8
1621	M173	1	...	-.105	7	.056	6	.104	8	-.955	3	1.372	4	.138	1	.138	2
1622			...	-.125	6	-.148	7	-.104	6	-1.3...	4	.955	3	-.138	2	-.138	1
1623		2	...	-.105	7	.056	6	.104	8	-.969	3	1.376	4	.142	7	.142	6
1624			...	-.126	6	-.148	7	-.104	6	-1.3...	4	.969	3	-.142	6	-.142	7
1625		3	...	-.106	7	.057	6	.105	8	-.983	3	1.379	4	.162	7	.162	6
1626			...	-.126	6	-.149	7	-.105	6	-1.3...	4	.983	3	-.162	6	-.162	7
1627		4	...	-.106	7	.057	6	.105	8	-.997	3	1.382	4	.182	7	.182	6
1628			...	-.127	6	-.149	7	-.105	6	-1.3...	4	.997	3	-.182	6	-.182	7
1629		5	...	-.106	7	.057	6	.105	8	-1.0...	3	1.386	4	.201	7	.201	6
1630			...	-.127	6	-.15	7	-.105	6	-1.3...	4	1.011	3	-.201	6	-.201	7
1631	M174	1	...	.504	7	.224	6	-.025	3	.407	6	.439	7	.795	5	-.444	8
1632			...	.425	6	.141	7	-.114	4	-.439	7	-.407	6	.444	8	-.795	5
1633		2	...	.504	7	.224	6	-.025	3	.449	6	.413	7	.787	5	-.424	8
1634			...	.425	6	.141	7	-.115	4	-.413	7	-.449	6	.424	8	-.787	5
1635		3	...	.503	7	.223	6	-.024	3	.491	6	.386	7	.78	5	-.405	8
1636			...	.424	6	.141	7	-.116	4	-.386	7	-.491	6	.405	8	-.78	5
1637		4	...	.503	7	.223	6	-.023	3	.533	6	.36	7	.773	5	-.386	8
1638			...	.424	6	.142	7	-.116	4	-.36	7	-.533	6	.386	8	-.773	5

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[..	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
1639		5	...	.503	7	.222	6	-.023	3	.574	6	.333	7	.766	5	-.367	8
1640			...	.423	6	.142	7	-.117	4	-.333	7	-.574	6	.367	8	-.766	5
1641	M175	1	...	.437	7	.549	2	-.023	3	.574	6	.333	7	.741	7	-.212	6
1642			...	.349	6	.496	1	-.117	4	-.333	7	-.574	6	.212	6	-.741	7
1643		2	...	.437	7	.549	2	-.022	3	.674	6	.236	7	.726	7	-.2	6
1644			...	.348	6	.495	1	-.117	4	-.236	7	-.674	6	.2	6	-.726	7
1645		3	...	.436	7	.549	2	-.022	3	.773	6	.139	7	.711	7	-.189	6
1646			...	.348	6	.494	1	-.118	4	-.139	7	-.773	6	.189	6	-.711	7
1647		4	...	.436	7	.549	2	-.021	3	.872	6	.043	7	.696	7	-.178	6
1648			...	.348	6	.493	1	-.119	4	-.043	7	-.872	6	.178	6	-.696	7
1649		5	...	.435	7	.549	2	-.021	3	.971	6	-.054	7	.682	7	-.166	6
1650			...	.348	6	.492	1	-.119	4	.054	7	-.971	6	.166	6	-.682	7
1651	M176	1	...	.304	7	.825	2	-.021	3	.971	6	-.054	7	.698	7	.168	6
1652			...	.22	6	.737	1	-.119	4	.054	7	-.971	6	-.168	6	-.698	7
1653		2	...	.303	7	.825	2	-.02	3	1.1...	6	-.206	7	.683	7	.179	6
1654			...	.22	6	.736	1	-.12	4	.206	7	-1.113	6	-.179	6	-.683	7
1655		3	...	.303	7	.824	2	-.019	3	1.2...	6	-.358	7	.669	7	.191	6
1656			...	.22	6	.735	1	-.12	4	.358	7	-1.254	6	-.191	6	-.669	7
1657		4	...	.303	7	.824	2	-.019	3	1.3...	6	-.51	7	.654	7	.203	6
1658			...	.22	6	.734	1	-.121	4	.51	7	-1.395	6	-.203	6	-.654	7
1659		5	...	.302	7	.823	2	-.018	3	1.5...	6	-.662	7	.64	7	.215	6
1660			...	.22	6	.733	1	-.122	4	.662	7	-1.536	6	-.215	6	-.64	7
1661	M177	1	...	.125	7	.977	7	-.018	3	1.5...	6	-.662	7	.554	7	.519	6
1662			...	.06	6	.86	6	-.122	4	.662	7	-1.536	6	-.519	6	-.554	7
1663		2	...	.125	7	.976	7	-.018	3	1.6...	6	-.845	7	.54	7	.531	6
1664			...	.06	6	.86	6	-.122	4	.845	7	-1.698	6	-.531	6	-.54	7
1665		3	...	.124	7	.976	7	-.017	3	1.8...	6	-1.029	7	.525	7	.543	6
1666			...	.06	6	.859	6	-.123	4	1.0...	7	-1.859	6	-.543	6	-.525	7
1667		4	...	.124	7	.975	7	-.016	3	2.02	6	-1.212	7	.511	7	.555	6
1668			...	.06	6	.858	6	-.123	4	1.2...	7	-2.02	6	-.555	6	-.511	7
1669		5	...	.124	7	.974	7	-.016	3	2.1...	6	-1.395	7	.497	7	.567	6
1670			...	.06	6	.857	6	-.124	4	1.3...	7	-2.182	6	-.567	6	-.497	7
1671	M178	1	...	.027	5	-.02	6	.055	8	-.168	5	.868	8	.555	6	-.296	7
1672			...	-.037	8	-.058	7	.027	5	-.868	8	.168	5	.296	7	-.555	6
1673		2	...	.027	5	-.021	6	.055	8	-.186	5	.881	8	.566	6	-.316	7
1674			...	-.038	8	-.059	7	.027	5	-.881	8	.186	5	.316	7	-.566	6
1675		3	...	.027	5	-.021	6	.056	8	-.203	5	.893	8	.577	6	-.336	7
1676			...	-.038	8	-.059	7	.027	5	-.893	8	.203	5	.336	7	-.577	6
1677		4	...	.027	5	-.022	6	.056	8	-.221	5	.906	8	.588	6	-.356	7
1678			...	-.038	8	-.06	7	.027	5	-.906	8	.221	5	.356	7	-.588	6
1679		5	...	.027	5	-.022	6	.056	8	-.239	5	.919	8	.599	6	-.376	7
1680			...	-.038	8	-.061	7	.026	5	-.919	8	.239	5	.376	7	-.599	6
1681	M179	1	...	.011	5	.017	6	.056	8	-.239	5	.919	8	.833	6	-.498	7
1682			...	-.042	8	-.078	7	.026	5	-.919	8	.239	5	.498	7	-.833	6
1683		2	...	.011	5	.017	6	.057	8	-.265	5	.915	8	.844	6	-.518	7
1684			...	-.042	8	-.079	7	.026	5	-.915	8	.265	5	.518	7	-.844	6
1685		3	...	.011	5	.017	6	.057	8	-.292	5	.912	8	.854	6	-.539	7
1686			...	-.042	8	-.079	7	.026	5	-.912	8	.292	5	.539	7	-.854	6
1687		4	...	.011	5	.017	6	.057	8	-.318	5	.909	8	.865	6	-.559	7
1688			...	-.043	8	-.08	7	.025	5	-.909	8	.318	5	.559	7	-.865	6
1689		5	...	.011	5	.017	6	.057	8	-.345	5	.906	8	.875	6	-.58	7
1690			...	-.043	8	-.08	7	.025	5	-.906	8	.345	5	.58	7	-.875	6
1691	M180	1	...	-.008	5	.053	6	.057	8	-.345	5	.906	8	.898	5	-.539	8
1692			...	-.035	8	-.076	7	.025	5	-.906	8	.345	5	.539	8	-.898	5
1693		2	...	-.009	5	.053	6	.058	8	-.373	5	.888	8	.908	5	-.561	8
1694			...	-.035	8	-.077	7	.025	5	-.888	8	.373	5	.561	8	-.908	5
1695		3	...	-.009	5	.053	6	.058	8	-.4	5	.869	8	.917	5	-.583	8

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
1696			...	-.036	8	-.077	7	.025	5	-.869	8	.4	5	.583	8	-.917	5
1697		4	...	-.009	5	.053	6	.058	8	-.382	6	.896	7	.926	5	-.604	8
1698			...	-.036	8	-.077	7	.024	5	-.896	7	.382	6	.604	8	-.926	5
1699		5	...	-.009	5	.053	6	.058	8	-.362	6	.925	7	.935	5	-.626	8
1700			...	-.036	8	-.078	7	.024	5	-.925	7	.362	6	.626	8	-.935	5
1701	M181	1	...	.529	5	.181	5	-.025	8	-2.8...	7	5.276	6	-1.023	6	3.089	7
1702			...	.062	8	0	8	-.061	5	-5.2...	6	2.897	7	-3.089	7	1.023	6
1703		2	...	.529	5	.18	5	-.026	8	-2.8...	7	5.223	6	-1.038	6	3.106	7
1704			...	.061	8	0	8	-.061	5	-5.2...	6	2.883	7	-3.106	7	1.038	6
1705		3	...	.528	5	.18	5	-.026	8	-2.8...	7	5.169	6	-1.053	6	3.124	7
1706			...	.061	8	0	8	-.061	5	-5.1...	6	2.869	7	-3.124	7	1.053	6
1707		4	...	.528	5	.179	5	-.026	8	-2.8...	7	5.116	6	-1.068	6	3.141	7
1708			...	.061	8	0	8	-.06	5	-5.1...	6	2.854	7	-3.141	7	1.068	6
1709		5	...	.528	5	.179	5	-.026	8	-2.84	7	5.063	6	-1.083	6	3.158	7
1710			...	.06	8	0	8	-.06	5	-5.0...	6	2.84	7	-3.158	7	1.083	6
1711	M182	1	...	.413	5	.683	5	-.026	8	-2.84	7	5.063	6	-.503	8	2.2	5
1712			...	.052	8	.061	8	-.06	5	-5.0...	6	2.84	7	-2.2	5	.503	8
1713		2	...	.412	5	.682	5	-.026	8	-2.7...	7	4.844	6	-.513	8	2.223	5
1714			...	.052	8	.061	8	-.06	5	-4.8...	6	2.779	7	-2.223	5	.513	8
1715		3	...	.412	5	.681	5	-.026	8	-2.7...	7	4.626	6	-.523	8	2.245	5
1716			...	.051	8	.061	8	-.06	5	-4.6...	6	2.718	7	-2.245	5	.523	8
1717		4	...	.412	5	.681	5	-.026	8	-2.6...	7	4.407	6	-.533	8	2.268	5
1718			...	.051	8	.061	8	-.06	5	-4.4...	6	2.657	7	-2.268	5	.533	8
1719		5	...	.412	5	.68	5	-.026	8	-2.5...	7	4.189	6	-.542	8	2.29	5
1720			...	.051	8	.06	8	-.06	5	-4.1...	6	2.597	7	-2.29	5	.542	8
1721	M183	1	...	.187	5	1.001	5	-.026	8	-2.5...	7	4.189	6	.18	8	.733	5
1722			...	.029	8	.103	8	-.06	5	-4.1...	6	2.597	7	-.733	5	-.18	8
1723		2	...	.187	5	1.001	5	-.027	8	-2.5...	7	3.864	6	.17	8	.755	5
1724			...	.029	8	.103	8	-.06	5	-3.8...	6	2.506	7	-.755	5	-.17	8
1725		3	...	.187	5	1	5	-.027	8	-2.4...	7	3.539	6	.16	8	.777	5
1726			...	.028	8	.102	8	-.059	5	-3.5...	6	2.416	7	-.777	5	-.16	8
1727		4	...	.187	5	.999	5	-.027	8	-2.3...	7	3.215	6	.15	8	.8	5
1728			...	.028	8	.102	8	-.059	5	-3.2...	6	2.325	7	-.8	5	-.15	8
1729		5	...	.188	5	.999	5	-.027	8	-2.2...	7	2.891	6	.14	8	.822	5
1730			...	.028	8	.101	8	-.059	5	-2.8...	6	2.235	7	-.822	5	-.14	8
1731	M184	1	...	-.02	5	.013	8	.022	7	-.132	6	.73	7	-2.09	7	2.956	6
1732			...	-.024	7	-.03	5	-.022	8	-.73	7	.132	6	-2.956	6	2.09	7
1733		2	...	-.02	5	.013	8	.022	7	-.14	6	.727	7	-2.084	7	2.962	6
1734			...	-.024	7	-.031	5	-.022	8	-.727	7	.14	6	-2.962	6	2.084	7
1735		3	...	-.02	5	.013	8	.023	7	-.149	6	.723	7	-2.077	7	2.969	6
1736			...	-.024	7	-.031	5	-.023	8	-.723	7	.149	6	-2.969	6	2.077	7
1737		4	...	-.02	5	.014	8	.023	7	-.158	6	.719	7	-2.071	7	2.975	6
1738			...	-.025	7	-.031	5	-.023	8	-.719	7	.158	6	-2.975	6	2.071	7
1739		5	...	-.02	5	.014	8	.023	7	-.167	6	.715	7	-2.064	7	2.982	6
1740			...	-.025	7	-.032	5	-.023	8	-.715	7	.167	6	-2.982	6	2.064	7
1741	M185	1	...	-.013	6	-.006	7	.023	5	-.167	6	.715	7	-1.9	7	2.809	6
1742			...	-.026	8	-.045	6	-.023	8	-.715	7	.167	6	-2.809	6	1.9	7
1743		2	...	-.013	6	-.007	7	.023	5	-.18	6	.717	7	-1.893	7	2.815	6
1744			...	-.026	8	-.045	6	-.023	8	-.717	7	.18	6	-2.815	6	1.893	7
1745		3	...	-.013	6	-.007	7	.024	5	-.192	6	.719	7	-1.887	7	2.822	6
1746			...	-.026	8	-.046	6	-.024	8	-.719	7	.192	6	-2.822	6	1.887	7
1747		4	...	-.013	6	-.007	7	.024	5	-.205	6	.721	7	-1.88	7	2.829	6
1748			...	-.027	8	-.046	6	-.024	8	-.721	7	.205	6	-2.829	6	1.88	7
1749		5	...	-.013	6	-.007	7	.024	5	-.219	6	.723	7	-1.873	7	2.835	6
1750			...	-.027	8	-.047	6	-.024	8	-.723	7	.219	6	-2.835	6	1.873	7
1751	M186	1	...	.109	5	-.02	5	-.021	8	3.6...	8	-1.007	5	1.858	5	-.139	8
1752			...	.103	8	-.134	8	-.097	5	1.0...	5	-3.694	8	.139	8	-1.858	5

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Checked By:_____

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
1753		2	...	.11	5	-.02	5	-.021	8	3.62	8	-.996	5	1.805	5	-.128	8
1754			...	.103	8	-.134	8	-.097	5	.996	5	-3.62	8	.128	8	-1.805	5
1755		3	...	.11	5	-.021	5	-.021	8	3.5...	8	-.984	5	1.752	5	-.116	8
1756			...	.104	8	-.134	8	-.096	5	.984	5	-3.547	8	.116	8	-1.752	5
1757		4	...	.11	5	-.022	5	-.022	8	3.4...	8	-.973	5	1.699	5	-.104	8
1758			...	.105	8	-.133	8	-.096	5	.973	5	-3.474	8	.104	8	-1.699	5
1759		5	...	.111	5	-.023	5	-.022	8	3.4	8	-.96	5	1.646	5	-.092	8
1760			...	.105	8	-.133	8	-.096	5	.96	5	-3.4	8	.092	8	-1.646	5
1761	M187	1	...	.062	7	-.255	5	-.05	8	-5.2...	5	5.435	8	-1.017	7	1.412	6
1762			...	.057	6	-.294	8	-.069	5	-5.4...	8	5.266	5	-1.412	6	1.017	7
1763		2	...	.062	7	-.256	5	-.05	8	-5.4...	5	5.596	8	-1.053	7	1.441	6
1764			...	.057	6	-.294	8	-.069	5	-5.5...	8	5.406	5	-1.441	6	1.053	7
1765		3	...	.062	7	-.258	5	-.051	8	-5.5...	5	5.757	8	-1.09	7	1.47	6
1766			...	.058	6	-.295	8	-.069	5	-5.7...	8	5.547	5	-1.47	6	1.09	7
1767		4	...	.062	7	-.259	5	-.051	8	-5.6...	5	5.919	8	-1.126	7	1.499	6
1768			...	.058	6	-.296	8	-.068	5	-5.9...	8	5.688	5	-1.499	6	1.126	7
1769		5	...	.062	7	-.26	5	-.052	6	-5.83	5	6.081	8	-1.163	7	1.527	6
1770			...	.058	6	-.296	8	-.068	7	-6.0...	8	5.83	5	-1.527	6	1.163	7
1771	M188	1	...	.002	5	.009	2	.005	7	-7.3...	5	7.727	8	-1.403	7	1.894	6
1772			...	-.002	6	.009	1	-.005	5	-7.7...	8	7.311	5	-1.894	6	1.403	7
1773		2	...	.002	5	.007	2	.003	7	-7.3...	5	7.717	8	-1.398	7	1.899	6
1774			...	-.002	6	.007	1	-.003	5	-7.7...	8	7.301	5	-1.899	6	1.398	7
1775		3	...	.001	5	.005	2	.002	7	-7.2...	5	7.71	8	-1.394	7	1.903	6
1776			...	-.001	6	.005	1	-.002	5	-7.71	8	7.294	5	-1.903	6	1.394	7
1777		4	...	0	5	.002	2	.001	7	-7.2...	5	7.706	8	-1.392	7	1.905	6
1778			...	0	6	.002	1	-.001	5	-7.7...	8	7.289	5	-1.905	6	1.392	7
1779		5	...	0	1	0	1	0	1	-7.2...	5	7.704	8	-1.391	7	1.906	6
1780			...	0	1	0	1	0	1	-7.7...	8	7.288	5	-1.906	6	1.391	7
1781	M189	1	...	0	1	0	1	0	1	-7.2...	5	7.704	8	-1.391	7	1.906	6
1782			...	0	1	0	1	0	1	-7.7...	8	7.288	5	-1.906	6	1.391	7
1783		2	...	0	6	-.002	1	.001	5	-7.2...	5	7.706	8	-1.392	7	1.905	6
1784			...	0	5	-.002	1	-.001	7	-7.7...	8	7.289	5	-1.905	6	1.392	7
1785		3	...	.001	6	-.005	1	.002	5	-7.2...	5	7.71	8	-1.394	7	1.903	6
1786			...	-.001	5	-.005	1	-.002	7	-7.71	8	7.294	5	-1.903	6	1.394	7
1787		4	...	.002	6	-.007	1	.003	5	-7.3...	5	7.717	8	-1.398	7	1.899	6
1788			...	-.002	5	-.007	1	-.003	7	-7.7...	8	7.301	5	-1.899	6	1.398	7
1789		5	...	.002	6	-.009	1	.005	5	-7.3...	5	7.727	8	-1.403	7	1.894	6
1790			...	-.002	5	-.009	1	-.005	7	-7.7...	8	7.311	5	-1.894	6	1.403	7
1791	M190	1	...	.002	6	-.009	1	.005	5	-7.3...	5	7.727	8	-1.403	7	1.894	6
1792			...	-.002	5	-.009	7	-.005	7	-7.7...	8	7.311	5	-1.894	6	1.403	7
1793		2	...	.003	6	-.013	1	.006	5	-7.3...	5	7.748	8	-1.413	7	1.884	6
1794			...	-.003	5	-.013	7	-.006	7	-7.7...	8	7.332	5	-1.884	6	1.413	7
1795		3	...	.004	6	-.016	1	.008	5	-7.3...	5	7.775	8	-1.427	7	1.87	6
1796			...	-.004	5	-.016	7	-.008	7	-7.7...	8	7.359	5	-1.87	6	1.427	7
1797		4	...	.005	6	-.019	1	.01	5	-7.3...	5	7.809	8	-1.444	7	1.853	6
1798			...	-.005	5	-.019	7	-.01	7	-7.8...	8	7.393	5	-1.853	6	1.444	7
1799		5	...	.006	6	-.023	1	.011	5	-7.4...	5	7.85	8	-1.464	7	1.833	6
1800			...	-.006	5	-.023	7	-.011	7	-7.85	8	7.434	5	-1.833	6	1.464	7
1801	M191	1	...	.078	2	-.456	2	.051	4	.421	1	-.05	2	-.179	7	.794	6
1802			...	.014	1	-.467	1	-.056	3	.05	2	-.421	1	-.794	6	.179	7
1803		2	...	.077	2	-.459	2	.049	4	.175	1	.19	2	-.2	7	.776	6
1804			...	.015	1	-.469	1	-.054	3	-.19	2	-.175	1	-.776	6	.2	7
1805		3	...	.076	2	-.462	2	.047	4	-.072	1	.432	2	-.22	7	.759	6
1806			...	.017	1	-.472	1	-.052	3	-.432	2	.072	1	-.759	6	.22	7
1807		4	...	.076	2	-.466	2	.045	4	-.32	1	.676	2	-.239	7	.743	6
1808			...	.018	1	-.474	1	-.05	3	-.676	2	.32	1	-.743	6	.239	7
1809		5	...	.075	2	-.469	2	.043	4	-.569	1	.921	2	-.258	7	.727	6

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
2:24 PM
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
1810			...	.019	1	-.477	1	-.048	3	-.921	2	.569	1	-.727	6	.258	7
1811	M192	1	...	.159	2	-.376	2	.043	4	-.569	1	.921	2	-.368	7	1	6
1812			...	.109	1	-.426	1	-.048	3	-.921	2	.569	1	-1	6	.368	7
1813		2	...	.159	2	-.379	2	.041	4	-.793	1	1.119	2	-.386	7	.985	6
1814			...	.11	1	-.427	1	-.046	3	-1.1...	2	.793	1	-.985	6	.386	7
1815		3	...	.159	2	-.383	2	.039	4	-1.0...	1	1.318	2	-.404	7	.97	6
1816			...	.112	1	-.428	1	-.044	3	-1.3...	2	1.017	1	-.97	6	.404	7
1817		4	...	.159	2	-.386	2	.037	4	-1.2...	1	1.52	2	-.421	7	.956	6
1818			...	.114	1	-.43	1	-.042	3	-1.52	2	1.242	1	-.956	6	.421	7
1819		5	...	.159	2	-.39	2	.035	4	-1.4...	1	1.724	2	-.438	7	.942	6
1820			...	.115	1	-.431	1	-.041	3	-1.7...	2	1.468	1	-.942	6	.438	7
1821	M193	1	...	.221	2	-.238	2	.035	4	-1.4...	1	1.724	2	-.486	7	1.068	6
1822			...	.189	1	-.31	1	-.041	3	-1.7...	2	1.468	1	-1.068	6	.486	7
1823		2	...	.222	2	-.242	2	.033	4	-1.6...	1	1.85	2	-.502	7	1.055	6
1824			...	.191	1	-.31	1	-.039	3	-1.85	2	1.631	1	-1.055	6	.502	7
1825		3	...	.223	2	-.245	2	.031	4	-1.7...	1	1.977	2	-.517	7	1.043	6
1826			...	.193	1	-.31	1	-.037	3	-1.9...	2	1.793	1	-1.043	6	.517	7
1827		4	...	.223	2	-.248	2	.029	4	-1.9...	1	2.107	2	-.532	7	1.031	6
1828			...	.194	1	-.31	1	-.035	3	-2.1...	2	1.956	1	-1.031	6	.532	7
1829		5	...	.224	2	-.251	2	.027	4	-2.1...	1	2.238	2	-.546	7	1.02	6
1830			...	.196	1	-.31	1	-.033	3	-2.2...	2	2.118	1	-1.02	6	.546	7
1831	M194	1	...	.254	2	-.06	2	.027	4	-2.1...	1	2.238	2	-.516	7	.987	6
1832			...	.239	1	-.136	1	-.033	3	-2.2...	2	2.118	1	-.987	6	.516	7
1833		2	...	.255	2	-.063	2	.025	4	-2.1...	1	2.27	2	-.529	7	.976	6
1834			...	.241	1	-.134	1	-.031	3	-2.27	2	2.189	1	-.976	6	.529	7
1835		3	...	.256	2	-.065	2	.023	4	-2.2...	1	2.303	2	-.542	7	.966	6
1836			...	.242	1	-.133	1	-.029	3	-2.3...	2	2.259	1	-.966	6	.542	7
1837		4	...	.257	2	-.068	2	.021	4	-2.3...	4	2.35	3	-.554	7	.957	6
1838			...	.244	1	-.132	1	-.027	3	-2.35	3	2.316	4	-.957	6	.554	7
1839		5	...	.259	2	-.07	2	.019	4	-2.3...	4	2.403	3	-.566	7	.948	6
1840			...	.245	1	-.13	1	-.025	3	-2.4...	3	2.368	4	-.948	6	.566	7
1841	M195	1	...	.26	2	-.071	2	.019	4	-2.3...	4	2.403	3	-.566	7	.948	6
1842			...	.247	1	-.131	1	-.025	3	-2.4...	3	2.368	4	-.948	6	.566	7
1843		2	...	.261	2	-.073	2	.017	4	-2.41	2	2.461	1	-.576	7	.941	6
1844			...	.248	1	-.13	1	-.023	3	-2.4...	1	2.41	2	-.941	6	.576	7
1845		3	...	.262	2	-.075	2	.015	4	-2.4...	2	2.524	1	-.586	7	.934	6
1846			...	.25	1	-.128	1	-.021	3	-2.5...	1	2.446	2	-.934	6	.586	7
1847		4	...	.263	2	-.078	2	.014	4	-2.4...	2	2.586	1	-.595	7	.927	6
1848			...	.251	1	-.127	1	-.019	3	-2.5...	1	2.483	2	-.927	6	.595	7
1849		5	...	.265	2	-.08	2	.012	4	-2.5...	2	2.647	1	-.604	7	.921	6
1850			...	.253	1	-.126	1	-.017	3	-2.6...	1	2.522	2	-.921	6	.604	7
1851	M196	1	...	.226	7	-.277	5	.025	2	.848	6	-.557	7	-2.191	4	2.526	3
1852			...	.214	6	-.304	8	-.025	1	.557	7	-.848	6	-2.526	3	2.191	4
1853		2	...	.227	7	-.279	5	.023	2	.702	6	-.419	7	-2.191	4	2.526	3
1854			...	.215	6	-.305	8	-.023	1	.419	7	-.702	6	-2.526	3	2.191	4
1855		3	...	.228	7	-.282	5	.021	2	.555	6	-.28	7	-2.191	4	2.526	3
1856			...	.217	6	-.306	8	-.021	1	.28	7	-.555	6	-2.526	3	2.191	4
1857		4	...	.229	7	-.284	5	.019	2	.409	6	-.139	7	-2.191	4	2.526	3
1858			...	.218	6	-.306	8	-.019	1	.139	7	-.409	6	-2.526	3	2.191	4
1859		5	...	.23	7	-.286	5	.017	2	.261	6	.002	7	-2.191	4	2.526	3
1860			...	.219	6	-.307	8	-.017	1	-.002	7	-.261	6	-2.526	3	2.191	4
1861	M197	1	...	.156	7	-.438	5	.017	2	.261	6	.002	7	-1.511	4	1.988	3
1862			...	.145	6	-.454	8	-.017	1	-.002	7	-.261	6	-1.988	3	1.511	4
1863		2	...	.157	7	-.441	5	.016	2	.043	6	.22	7	-1.511	4	1.988	3
1864			...	.146	6	-.456	8	-.016	1	-.22	7	-.043	6	-1.988	3	1.511	4
1865		3	...	.157	7	-.443	5	.014	2	-.176	6	.439	7	-1.511	4	1.988	3
1866			...	.147	6	-.457	8	-.014	1	-.439	7	.176	6	-1.988	3	1.511	4

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[..	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
1867		4	...	.157	7	-.446	5	.012	2	-.396	6	.66	7	-1.511	4	1.988	3
1868			...	.148	6	-.459	8	-.012	1	-.66	7	.396	6	-1.988	3	1.511	4
1869		5	...	.158	7	-.449	1	.01	2	-.617	6	.882	7	-1.511	4	1.988	3
1870			...	.15	6	-.461	2	-.01	1	-.882	7	.617	6	-1.988	3	1.511	4
1871	M198	1	...	.058	7	-.531	1	.01	2	-.617	6	.882	7	-.601	4	1.146	3
1872			...	.051	6	-.545	2	-.01	1	-.882	7	.617	6	-1.146	3	.601	4
1873		2	...	.058	7	-.534	1	.008	2	-.878	6	1.147	7	-.601	4	1.146	3
1874			...	.052	6	-.547	2	-.008	1	-1.1...	7	.878	6	-1.146	3	.601	4
1875		3	...	.058	7	-.536	1	.006	2	-1.14	6	1.414	7	-.601	4	1.146	3
1876			...	.053	6	-.55	2	-.006	1	-1.4...	7	1.14	6	-1.146	3	.601	4
1877		4	...	.058	7	-.539	1	.005	2	-1.4...	6	1.682	7	-.601	4	1.146	3
1878			...	.054	6	-.553	2	-.005	1	-1.6...	7	1.403	6	-1.146	3	.601	4
1879		5	...	.057	7	-.541	1	.003	2	-1.6...	6	1.951	7	-.601	4	1.146	3
1880			...	.055	6	-.555	2	-.003	1	-1.9...	7	1.668	6	-1.146	3	.601	4
1881	M199	1	...	0	5	.004	2	.003	2	-1.6...	6	1.951	7	-.103	4	.651	3
1882			...	0	8	.004	5	-.003	1	-1.9...	7	1.668	6	-.651	3	.103	4
1883		2	...	0	5	.003	2	.002	2	-1.6...	6	1.95	7	-.103	4	.651	3
1884			...	0	8	.003	5	-.002	1	-1.95	7	1.667	6	-.651	3	.103	4
1885		3	...	0	5	.002	2	.001	2	-1.6...	6	1.95	7	-.103	4	.651	3
1886			...	0	8	.002	5	-.001	1	-1.95	7	1.667	6	-.651	3	.103	4
1887		4	...	0	5	0	2	0	2	-1.6...	6	1.95	7	-.103	4	.651	3
1888			...	0	8	0	5	0	1	-1.95	7	1.666	6	-.651	3	.103	4
1889		5	...	0	1	0	1	0	1	-1.6...	6	1.95	7	-.103	4	.651	3
1890			...	0	1	0	1	0	1	-1.95	7	1.666	6	-.651	3	.103	4
1891	M200	1	...	.595	5	-.047	6	.069	6	2.6...	7	-1.305	6	3.358	7	2.07	6
1892			...	.121	8	-.109	7	-.09	7	1.3...	6	-2.655	7	-2.07	6	-3.358	7
1893		2	...	.58	5	-.062	6	.054	6	.664	8	.02	5	1.599	7	.76	6
1894			...	.105	8	-.094	7	-.075	7	-.02	5	-.664	8	-.76	6	-1.599	7
1895		3	...	.565	5	-.07	8	.039	6	-.998	8	1.674	5	.425	5	.034	8
1896			...	.09	8	-.085	5	-.06	7	-1.6...	5	.998	8	-.034	8	-.425	5
1897		4	...	.549	5	-.055	8	.023	6	-2.3...	8	3.655	5	.882	6	.939	7
1898			...	.075	8	-.101	5	-.044	7	-3.6...	5	2.333	8	-.939	7	-.882	6
1899		5	...	.534	5	-.04	8	.008	6	-3.3...	8	5.961	5	1.213	6	1.719	7
1900			...	.059	8	-.116	5	-.029	7	-5.9...	5	3.343	8	-1.719	7	-1.213	6
1901	M201	1	...	0	1	0	1	0	1	-.229	8	1.355	5	.971	8	1.291	5
1902			...	0	1	0	1	0	1	-1.3...	5	.229	8	-1.291	5	-.971	8
1903		2	...	.001	1	.001	7	.001	6	-.228	8	1.355	5	.972	8	1.291	5
1904			...	.001	1	-.001	5	-.001	5	-1.3...	5	.228	8	-1.291	5	-.972	8
1905		3	...	.002	1	.002	7	.002	6	-.227	8	1.356	5	.973	8	1.292	5
1906			...	.002	1	-.002	5	-.002	5	-1.3...	5	.227	8	-1.292	5	-.973	8
1907		4	...	.003	1	.003	7	.003	6	-.225	8	1.358	5	.975	8	1.294	5
1908			...	.003	1	-.003	5	-.003	5	-1.3...	5	.225	8	-1.294	5	-.975	8
1909		5	...	.004	1	.004	7	.004	6	-.223	8	1.361	5	.977	8	1.297	5
1910			...	.004	1	-.004	5	-.004	5	-1.3...	5	.223	8	-1.297	5	-.977	8
1911	M202	1	...	.004	1	.004	8	.004	6	-.223	8	1.361	5	.977	8	1.297	5
1912			...	.004	1	-.004	6	-.004	5	-1.3...	5	.223	8	-1.297	5	-.977	8
1913		2	...	.005	1	.005	8	.005	6	-.219	8	1.364	5	.981	8	1.3	5
1914			...	.005	1	-.005	6	-.005	5	-1.3...	5	.219	8	-1.3	5	-.981	8
1915		3	...	.006	1	.006	8	.006	6	-.215	8	1.368	5	.985	8	1.304	5
1916			...	.006	1	-.006	6	-.006	5	-1.3...	5	.215	8	-1.304	5	-.985	8
1917		4	...	.007	1	.007	8	.007	6	-.21	8	1.373	5	.99	8	1.309	5
1918			...	.007	1	-.007	6	-.007	5	-1.3...	5	.21	8	-1.309	5	-.99	8
1919		5	...	.008	1	.008	8	.008	6	-.205	8	1.379	5	.995	8	1.315	5
1920			...	.008	1	-.008	6	-.008	5	-1.3...	5	.205	8	-1.315	5	-.995	8
1921	M204	1	...	.236	1	-.196	1	.067	5	-2.0...	2	2.239	1	4.678	5	-3.984	8
1922			...	.128	2	-.217	2	-.067	6	-2.2...	1	2.002	2	3.984	8	-4.678	5
1923		2	...	.245	1	-.202	1	.073	5	-3.06	2	3.172	1	5.006	5	-3.656	8

Company : **DMJM H&N**
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
1924			...	.126	2	-.235	2	-.073	6	-3.1...	1	3.06	2	3.656	8	-5.006	5
1925		3	...	.254	1	-.208	1	.08	3	-4.1...	1	4.202	2	5.36	5	-3.302	8
1926			...	.125	2	-.253	2	-.08	4	-4.2...	2	4.132	1	3.302	8	-5.36	5
1927		4	...	.262	1	-.214	1	.092	3	-5.1...	1	5.428	2	5.74	5	-2.922	8
1928			...	.123	2	-.271	2	-.092	4	-5.4...	2	5.119	1	2.922	8	-5.74	5
1929		5	...	.271	1	-.22	1	.098	3	-6.1...	1	6.738	2	6.145	5	-2.516	8
1930			...	.121	2	-.288	2	-.098	4	-6.7...	2	6.135	1	2.516	8	-6.145	5
1931	M205	1	...	.142	5	.052	6	.016	3	.322	7	.805	6	-.005	1	1.335	2
1932			...	.09	8	.031	7	.005	4	-.805	6	-.322	7	-1.335	2	.005	1
1933		2	...	.145	5	.036	6	.02	2	.774	7	-.075	6	.152	1	1.074	2
1934			...	.087	8	.014	7	0	1	.075	6	-.774	7	-1.074	2	-.152	1
1935		3	...	.149	5	.019	6	.035	2	.996	5	-.522	8	.017	1	.522	2
1936			...	.083	8	-.002	7	-.014	1	.522	8	-.996	5	-.522	2	-.017	1
1937		4	...	.152	5	.003	6	.049	2	.987	1	-.538	2	.321	2	.408	1
1938			...	.08	8	-.019	7	-.028	1	.538	2	-.987	1	-.408	1	-.321	2
1939		5	...	.155	5	-.014	6	.064	2	.843	1	-.025	2	1.455	2	1.124	1
1940			...	.077	8	-.035	7	-.043	1	.025	2	-.843	1	-1.124	1	-1.455	2
1941	M206	1	...	.155	5	-.078	8	-.112	6	.843	1	-.025	2	1.455	2	1.124	1
1942			...	.077	8	-.244	5	-.274	7	.025	2	-.843	1	-1.124	1	-1.455	2
1943		2	...	.156	5	-.08	8	-.112	6	.495	6	.341	7	.924	2	1.442	1
1944			...	.076	8	-.246	5	-.273	7	-.341	7	-.495	6	-1.442	1	-.924	2
1945		3	...	.156	5	-.082	8	-.113	6	.259	6	.827	7	.398	2	1.763	1
1946			...	.076	8	-.248	5	-.272	7	-.827	7	-.259	6	-1.763	1	-.398	2
1947		4	...	.156	5	-.084	8	-.114	6	.02	6	1.317	7	-.126	2	2.088	1
1948			...	.076	8	-.249	5	-.271	7	-1.3...	7	-.02	6	-2.088	1	.126	2
1949		5	...	.157	5	-.086	8	-.114	6	-.224	6	1.811	7	-.592	8	2.469	5
1950			...	.075	8	-.251	5	-.271	7	-1.8...	7	.224	6	-2.469	5	.592	8
1951	M207	1	...	.155	7	.051	6	.041	1	-.655	7	1.333	6	-.665	7	2.039	6
1952			...	.122	6	.04	7	-.015	2	-1.3...	6	.655	7	-2.039	6	.665	7
1953		2	...	.159	7	.029	6	.031	6	-.116	7	.585	6	-.859	7	1.365	6
1954			...	.117	6	.018	7	-.006	7	-.585	6	.116	7	-1.365	6	.859	7
1955		3	...	.164	7	.007	6	.023	6	.009	7	.252	6	-.847	1	.898	2
1956			...	.113	6	-.004	7	.003	7	-.252	6	-.009	7	-.898	2	.847	1
1957		4	...	.168	7	-.015	6	.03	8	-.28	7	.332	6	-.399	8	.866	5
1958			...	.109	6	-.026	7	-.005	5	-.332	6	.28	7	-.866	5	.399	8
1959		5	...	.172	7	-.037	6	.04	2	-.826	6	.983	7	.253	8	1.038	5
1960			...	.104	6	-.048	7	-.014	1	-.983	7	.826	6	-1.038	5	-.253	8
1961	M208	1	...	.172	7	.062	7	.073	5	-.826	6	.983	7	.253	8	1.038	5
1962			...	.104	6	.06	6	-.003	8	-.983	7	.826	6	-1.038	5	-.253	8
1963		2	...	.176	7	.043	7	.066	5	-.014	6	.14	7	.264	8	-.077	5
1964			...	.1	6	.041	6	.004	8	-.14	7	.014	6	.077	5	-.264	8
1965		3	...	.18	7	.025	7	.058	5	.498	6	-.405	7	1.072	5	-.395	8
1966			...	.097	6	.023	6	.012	8	.405	7	-.498	6	.395	8	-1.072	5
1967		4	...	.184	7	.006	7	.052	7	.712	6	-.65	7	1.948	5	-.645	8
1968			...	.093	6	.004	6	.018	6	.65	7	-.712	6	.645	8	-1.948	5
1969		5	...	.187	7	-.013	7	.059	7	.626	6	-.596	7	2.704	5	-1.014	8
1970			...	.089	6	-.015	6	.011	6	.596	7	-.626	6	1.014	8	-2.704	5
1971	M209	1	...	.153	7	-.013	7	-.119	6	.651	6	-.608	7	2.704	5	-1.014	8
1972			...	.067	6	-.015	6	-.223	7	.608	7	-.651	6	1.014	8	-2.704	5
1973		2	...	.155	7	-.019	7	-.119	6	.556	6	-.523	7	1.538	5	-.354	8
1974			...	.065	6	-.021	6	-.223	7	.523	7	-.556	6	.354	8	-1.538	5
1975		3	...	.157	7	-.025	7	-.118	8	.428	6	-.406	7	.352	5	.288	8
1976			...	.063	6	-.027	6	-.223	5	.406	7	-.428	6	-.288	8	-.352	5
1977		4	...	.159	7	-.031	7	-.115	8	.266	6	-.254	7	-.588	6	1.174	7
1978			...	.062	6	-.033	6	-.227	5	.254	7	-.266	6	-1.174	7	.588	6
1979		5	...	.16	7	-.038	7	-.111	8	.072	1	-.069	2	-1.223	6	2.367	7
1980			...	.06	6	-.04	6	-.23	5	.069	2	-.072	1	-2.367	7	1.223	6

Company : **DMJM H&N**
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Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
1981	M210	1	...	.192	7	-.038	7	.069	7	.218	8	-.214	5	-1.223	6	2.367	7
1982			...	.084	6	-.04	6	0	6	.214	5	-.218	8	-2.367	7	1.223	6
1983		2	...	.194	7	-.044	7	.072	7	-.016	7	.026	6	-1.225	6	1.967	7
1984			...	.083	6	-.046	6	-.002	6	-.026	6	.016	7	-1.967	7	1.225	6
1985		3	...	.195	7	-.051	7	.075	7	-.284	7	.306	6	-1.07	8	1.725	5
1986			...	.082	6	-.053	6	-.004	6	-.306	6	.284	7	-1.725	5	1.07	8
1987		4	...	.196	7	-.057	7	.077	7	-.59	7	.623	6	-.789	2	1.609	1
1988			...	.08	6	-.059	6	-.007	6	-.623	6	.59	7	-1.609	1	.789	2
1989		5	...	.197	7	-.064	7	.08	7	-.933	7	.977	6	-.354	2	1.646	1
1990			...	.079	6	-.066	6	-.01	6	-.977	6	.933	7	-1.646	1	.354	2
1991	M211	1	...	.197	7	.055	6	.072	1	-.933	7	.977	6	-.354	2	1.646	1
1992			...	.079	6	.054	7	.002	2	-.977	6	.933	7	-1.646	1	.354	2
1993		2	...	.203	7	.026	6	.054	1	.049	7	-.018	6	.003	8	.171	5
1994			...	.073	6	.026	7	.02	2	.018	6	-.049	7	-.171	5	-.003	8
1995		3	...	.209	7	-.002	6	.04	8	.33	7	-.313	6	1.024	1	-.641	2
1996			...	.068	6	-.003	7	.034	5	.313	6	-.33	7	.641	2	-1.024	1
1997		4	...	.215	7	-.031	6	.056	2	-.088	7	.092	6	1.979	8	-1.518	5
1998			...	.062	6	-.031	7	.019	1	-.092	6	.088	7	1.518	5	-1.979	8
1999		5	...	.22	7	-.059	6	.074	2	-1.1...	6	1.206	7	3.386	8	-1.943	5
2000			...	.056	6	-.06	7	.001	1	-1.2...	7	1.197	6	1.943	5	-3.386	8
2001	M212	1	...	.22	7	.07	8	-.019	1	-1.1...	6	1.206	7	3.386	8	-1.943	5
2002			...	.056	6	.07	5	-.103	2	-1.2...	7	1.197	6	1.943	5	-3.386	8
2003		2	...	.226	7	.042	8	-.037	1	.191	6	-.183	7	1.304	6	-1	7
2004			...	.051	6	.042	5	-.085	2	.183	7	-.191	6	1	7	-1.304	6
2005		3	...	.232	7	.013	8	-.055	6	.865	6	-.858	7	.096	1	.816	2
2006			...	.045	6	.013	5	-.067	7	.858	7	-.865	6	-.816	2	-.096	1
2007		4	...	.238	7	-.016	8	-.049	2	.825	6	-.819	7	-1.406	6	2.338	7
2008			...	.039	6	-.016	5	-.073	1	.819	7	-.825	6	-2.338	7	1.406	6
2009		5	...	.243	7	-.045	8	-.031	2	.073	8	-.067	5	-3.189	6	3.579	7
2010			...	.033	6	-.045	5	-.091	1	.067	5	-.073	8	-3.579	7	3.189	6
2011	M213	1	...	.233	7	-.045	8	.145	7	.113	8	-.105	5	-3.189	6	3.579	7
2012			...	.046	6	-.045	5	-.046	6	.105	5	-.113	8	-3.579	7	3.189	6
2013		2	...	.233	7	-.045	8	.146	7	.089	8	-.08	5	-3.189	2	3.525	1
2014			...	.046	6	-.045	5	-.047	6	.08	5	-.089	8	-3.525	1	3.189	2
2015		3	...	.233	7	-.046	8	.146	7	.064	8	-.056	5	-3.145	2	3.517	1
2016			...	.045	6	-.046	5	-.047	6	.056	5	-.064	8	-3.517	1	3.145	2
2017		4	...	.233	7	-.047	8	.146	7	.039	8	-.03	5	-3.1	2	3.508	1
2018			...	.045	6	-.047	5	-.047	6	.03	5	-.039	8	-3.508	1	3.1	2
2019		5	...	.233	7	-.047	8	.147	7	.013	8	-.005	5	-3.055	2	3.499	1
2020			...	.045	6	-.047	5	-.048	6	.005	5	-.013	8	-3.499	1	3.055	2
2021	M214	1	...	.125	5	-.047	8	.434	7	.068	8	-.059	5	-3.055	2	3.499	1
2022			...	.037	8	-.047	5	.03	6	.059	5	-.068	8	-3.499	1	3.055	2
2023		2	...	.125	5	-.048	8	.434	7	.042	8	-.033	5	-2.916	2	3.386	1
2024			...	.037	8	-.048	5	.03	6	.033	5	-.042	8	-3.386	1	2.916	2
2025		3	...	.125	5	-.048	8	.434	7	.016	8	-.007	5	-2.778	2	3.273	1
2026			...	.037	8	-.049	5	.03	6	.007	5	-.016	8	-3.273	1	2.778	2
2027		4	...	.125	5	-.049	8	.435	7	-.01	8	.02	5	-2.557	7	3.242	6
2028			...	.037	8	-.049	5	.029	6	-.02	5	.01	8	-3.242	6	2.557	7
2029		5	...	.126	5	-.05	8	.435	7	-.037	8	.046	5	-2.321	7	3.226	6
2030			...	.037	8	-.05	5	.029	6	-.046	5	.037	8	-3.226	6	2.321	7
2031	M215	1	...	.046	1	-.05	8	.489	7	-.015	8	.023	5	-2.321	7	3.226	6
2032			...	.015	2	-.05	5	.065	6	-.023	5	.015	8	-3.226	6	2.321	7
2033		2	...	.046	1	-.051	8	.489	7	-.075	8	.083	5	-1.744	7	3.15	6
2034			...	.015	2	-.051	5	.064	6	-.083	5	.075	8	-3.15	6	1.744	7
2035		3	...	.046	1	-.052	8	.49	7	-.136	8	.144	5	-1.167	7	3.075	6
2036			...	.015	2	-.053	5	.063	6	-.144	5	.136	8	-3.075	6	1.167	7
2037		4	...	.046	1	-.054	8	.49	7	-.199	8	.207	5	-.588	7	3.001	6

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
2038			...	.015	2	-.054	5	.063	6	-.207	5	.199	8	-3.001	6	.588	7
2039		5	...	.046	1	-.055	8	.491	7	-.263	8	.271	5	-.01	7	2.927	6
2040			...	.015	2	-.055	5	.062	6	-.271	5	.263	8	-2.927	6	.01	7
2041	M216	1	...	.046	1	.037	5	.09	6	-.263	8	.271	5	-.01	7	2.927	6
2042			...	.015	2	.037	8	0	7	-.271	5	.263	8	-2.927	6	.01	7
2043		2	...	.046	1	.014	5	.081	6	.244	2	-.238	1	.068	7	1.232	6
2044			...	.015	2	.014	8	.009	7	.238	1	-.244	2	-1.232	6	-.068	7
2045		3	...	.05	5	-.009	5	.072	6	.294	2	-.291	1	.474	4	-.135	3
2046			...	.011	8	-.009	8	.018	7	.291	1	-.294	2	.135	3	-.474	4
2047		4	...	.055	5	-.032	5	.062	6	-.112	7	.114	6	1.715	8	-.667	5
2048			...	.006	8	-.032	8	.027	7	-.114	6	.112	7	.667	5	-1.715	8
2049		5	...	.06	5	-.055	5	.075	3	-.972	5	.977	8	2.821	8	-1.333	5
2050			...	.001	8	-.055	8	.014	4	-.977	8	.972	5	1.333	5	-2.821	8
2051	M217	1	...	.06	5	.061	8	-.045	4	-.972	5	.977	8	2.821	8	-1.333	5
2052			...	.001	8	.061	5	-.111	3	-.977	8	.972	5	1.333	5	-2.821	8
2053		2	...	.066	5	.03	8	-.05	5	.236	1	-.235	2	.222	6	.2	7
2054			...	-.005	8	.03	5	-.106	8	.235	2	-.236	1	-.2	7	-.222	6
2055		3	...	.072	5	0	8	-.038	5	.635	6	-.632	7	-1.308	5	2.802	8
2056			...	-.011	8	0	5	-.119	8	.632	7	-.635	6	-2.802	8	1.308	5
2057		4	...	.078	5	-.031	8	-.025	5	.223	8	-.217	5	-2.142	5	6.1	8
2058			...	-.017	8	-.031	5	-.131	8	.217	5	-.223	8	-6.1	8	2.142	5
2059		5	...	.084	5	-.062	8	-.013	5	-1	8	1.011	5	-2.652	5	9.723	8
2060			...	-.023	8	-.062	5	-.143	8	-1.0...	5	1	8	-9.723	8	2.652	5
2061	M218	1	...	.084	5	.056	5	.471	6	-1	8	1.011	5	-2.652	5	9.723	8
2062			...	-.023	8	.051	8	.122	7	-1.0...	5	1	8	-9.723	8	2.652	5
2063		2	...	.086	5	.045	5	.466	6	-.524	5	.559	8	-1.06	5	5.582	8
2064			...	-.025	8	.04	8	.126	7	-.559	8	.524	5	-5.582	8	1.06	5
2065		3	...	.089	5	.033	5	.462	6	-.146	5	.227	8	.577	5	1.485	8
2066			...	-.028	8	.029	8	.131	7	-.227	8	.146	5	-1.485	8	-.577	5
2067		4	...	.091	5	.022	5	.457	6	.123	5	.004	8	4.143	6	-.682	7
2068			...	-.03	8	.017	8	.135	7	-.004	8	-.123	5	.682	7	-4.143	6
2069		5	...	.093	5	.011	5	.453	6	.284	5	-.11	8	8.548	6	-2.011	7
2070			...	-.032	8	.006	8	.14	7	.11	8	-.284	5	2.011	7	-8.548	6
2071	M219	1	...	.172	6	.011	5	.405	8	.237	5	-.079	8	8.548	6	-2.011	7
2072			...	-.003	7	.006	8	.095	5	.079	8	-.237	5	2.011	7	-8.548	6
2073		2	...	.173	6	.01	5	.405	8	.243	5	-.082	8	8.737	6	-2.094	7
2074			...	-.003	7	.006	8	.095	5	.082	8	-.243	5	2.094	7	-8.737	6
2075		3	...	.173	6	.01	5	.405	8	.248	5	-.085	8	8.925	6	-2.177	7
2076			...	-.003	7	.005	8	.096	5	.085	8	-.248	5	2.177	7	-8.925	6
2077		4	...	.173	6	.009	5	.405	8	.253	5	-.088	8	9.112	6	-2.261	7
2078			...	-.003	7	.004	8	.096	5	.088	8	-.253	5	2.261	7	-9.112	6
2079		5	...	.173	6	.008	5	.405	8	.258	5	-.09	8	9.3	6	-2.344	7
2080			...	-.003	7	.004	8	.096	5	.09	8	-.258	5	2.344	7	-9.3	6
2081	M220	1	...	.244	6	.008	5	.217	8	.063	5	.005	8	9.3	6	-2.344	7
2082			...	.053	7	.004	8	-.103	5	-.005	8	-.063	5	2.344	7	-9.3	6
2083		2	...	.244	6	.008	5	.218	8	.067	5	.003	8	9.3	6	-2.406	7
2084			...	.053	7	.003	8	-.104	5	-.003	8	-.067	5	2.406	7	-9.3	6
2085		3	...	.244	6	.007	5	.218	8	.071	5	.002	8	9.3	6	-2.468	7
2086			...	.053	7	.002	8	-.104	5	-.002	8	-.071	5	2.468	7	-9.3	6
2087		4	...	.244	6	.007	5	.218	8	.075	5	0	8	9.3	6	-2.53	7
2088			...	.053	7	.002	8	-.104	5	0	8	-.075	5	2.53	7	-9.3	6
2089		5	...	.244	6	.006	5	.218	8	.078	5	0	8	9.299	6	-2.592	7
2090			...	.053	7	.001	8	-.104	5	0	8	-.078	5	2.592	7	-9.299	6
2091	M221	1	...	.225	6	.006	5	.066	8	-.043	5	.051	8	9.299	6	-2.592	7
2092			...	.071	7	.001	8	-.188	5	-.051	8	.043	5	2.592	7	-9.299	6
2093		2	...	.225	6	.001	5	.068	8	-.029	5	.055	8	8.542	6	-2.859	7
2094			...	.072	7	-.003	8	-.19	5	-.055	8	.029	5	2.859	7	-8.542	6

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[..	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
2095		3	...	.224	6	-.003	5	.07	8	-.033	5	.079	8	8.475	8	-2.437	5
2096			...	.073	7	-.008	8	-.192	5	-.079	8	.033	5	2.437	5	-8.475	8
2097		4	...	.223	6	-.008	5	.072	8	-.056	5	.121	8	8.759	8	-1.663	5
2098			...	.074	7	-.013	8	-.194	5	-.121	8	.056	5	1.663	5	-8.759	8
2099		5	...	.222	6	-.013	5	.074	8	-.098	5	.181	8	9.05	8	-.882	5
2100			...	.074	7	-.017	8	-.196	5	-.181	8	.098	5	.882	5	-9.05	8
2101	M222	1	...	.222	6	.008	8	-.016	5	-.098	5	.181	8	9.05	8	-.882	5
2102			...	.074	7	.006	5	-.186	8	-.181	8	.098	5	.882	5	-9.05	8
2103		2	...	.218	6	-.008	8	-.023	5	-.128	5	.185	8	6.468	8	-.604	5
2104			...	.078	7	-.01	5	-.179	8	-.185	8	.128	5	.604	5	-6.468	8
2105		3	...	.215	6	-.025	8	-.03	5	-.391	5	.422	8	3.979	8	-.232	5
2106			...	.081	7	-.027	5	-.172	8	-.422	8	.391	5	.232	5	-3.979	8
2107		4	...	.212	6	-.041	8	-.036	5	-.885	7	.893	6	1.582	8	.233	5
2108			...	.084	7	-.043	5	-.166	8	-.893	6	.885	7	-.233	5	-1.582	8
2109		5	...	.209	6	-.058	8	-.043	5	-1.5...	8	1.615	5	.077	7	1.588	6
2110			...	.088	7	-.06	5	-.159	8	-1.6...	5	1.594	8	-1.588	6	-.077	7
2111	M223	1	...	.174	6	.094	8	.053	1	-2.4...	5	2.523	8	1.411	2	.956	1
2112			...	.123	7	.093	5	-.058	2	-2.5...	8	2.496	5	-.956	1	-1.411	2
2113		2	...	.165	6	.05	8	.026	1	.201	2	-.199	1	.523	1	.26	2
2114			...	.131	7	.049	5	-.031	2	.199	1	-.201	2	-.26	2	-.523	1
2115		3	...	.161	5	.006	8	.001	5	1.2...	8	-1.238	5	.97	1	.897	2
2116			...	.136	8	.006	5	-.006	8	1.2...	5	-1.268	8	-.897	2	-.97	1
2117		4	...	.169	5	-.038	8	.024	2	.679	8	-.62	5	.383	1	.502	2
2118			...	.127	8	-.038	5	-.029	1	.62	5	-.679	8	-.502	2	-.383	1
2119		5	...	.178	5	-.081	8	.052	2	-1.5...	8	1.655	5	.927	2	1.237	1
2120			...	.118	8	-.082	5	-.057	1	-1.6...	5	1.568	8	-1.237	1	-.927	2
2121	M224	1	...	.178	5	.066	5	.043	1	-1.5...	8	1.655	5	.927	2	1.237	1
2122			...	.118	8	.054	8	-.018	2	-1.6...	5	1.568	8	-1.237	1	-.927	2
2123		2	...	.181	5	.049	5	.033	1	-.843	5	.92	8	.738	2	.703	1
2124			...	.115	8	.038	8	-.008	2	-.92	8	.843	5	-.703	1	-.738	2
2125		3	...	.185	5	.033	5	.022	1	-.264	5	.505	8	.694	2	.315	1
2126			...	.112	8	.021	8	.002	2	-.505	8	.264	5	-.315	1	-.694	2
2127		4	...	.188	5	.016	5	.017	7	.082	5	.323	8	.795	2	.071	1
2128			...	.108	8	.005	8	.008	6	-.323	8	-.082	5	-.071	1	-.795	2
2129		5	...	.191	5	0	5	.023	7	.196	5	.375	8	1.042	2	-.027	1
2130			...	.105	8	-.012	8	.001	6	-.375	8	-.196	5	.027	1	-1.042	2
2131	M225	1	...	.191	5	.037	8	-.004	6	.196	5	.375	8	1.042	2	-.027	1
2132			...	.105	8	-.013	5	-.079	7	-.375	8	-.196	5	.027	1	-1.042	2
2133		2	...	.193	5	.027	8	-.008	6	.069	1	.127	2	.427	2	.05	1
2134			...	.103	8	-.022	5	-.076	7	-.127	2	-.069	1	-.05	1	-.427	2
2135		3	...	.195	5	.018	8	-.012	6	.109	6	.206	7	-.042	8	.273	5
2136			...	.101	8	-.032	5	-.072	7	-.206	7	-.109	6	-.273	5	.042	8
2137		4	...	.197	5	.008	8	-.016	6	.18	8	.474	5	-.193	6	.814	7
2138			...	.099	8	-.041	5	-.068	7	-.474	5	-.18	8	-.814	7	.193	6
2139		5	...	.199	5	-.002	8	-.02	6	.207	8	.856	5	-.34	6	1.359	7
2140			...	.097	8	-.051	5	-.064	7	-.856	5	-.207	8	-1.359	7	.34	6
2141	M226	1	...	.097	8	.063	6	.093	6	-.794	7	1.932	6	-1.978	7	3.908	6
2142			...	.029	5	.023	7	-.007	7	-1.9...	6	.794	7	-3.908	6	1.978	7
2143		2	...	.093	8	.043	6	.085	6	-.669	7	1.418	6	-2	7	3.044	6
2144			...	.033	5	.002	7	.002	7	-1.4...	6	.669	7	-3.044	6	2	7
2145		3	...	.089	8	.022	6	.076	6	-.747	7	1.107	6	-1.942	7	2.261	6
2146			...	.037	5	-.019	7	.01	7	-1.1...	6	.747	7	-2.261	6	1.942	7
2147		4	...	.084	8	0	6	.068	6	-.978	2	1.049	1	-1.56	6	1.802	7
2148			...	.042	5	-.039	7	.019	7	-1.0...	1	.978	2	-1.802	7	1.56	6
2149		5	...	.08	8	-.02	6	.068	8	-1.0...	6	1.513	7	-.94	6	1.581	7
2150			...	.046	5	-.06	7	.018	5	-1.5...	7	1.094	6	-1.581	7	.94	6
2151	M227	1	...	.08	8	.097	7	.154	5	-1.0...	6	1.513	7	-.94	6	1.581	7

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	lc	y Shear[..	lc	z Shear[k...	lc	y-T...	lc	y-Bot[ksi]	lc	z-Top[ksi]	lc	z-Bot[ksi]	lc
2152			...	.046	5	.078	6	.096	8	-1.5...	7	1.094	6	-1.581	7	.94	6
2153		2	...	.077	8	.08	7	.152	7	-.571	6	.847	7	-.183	6	.461	7
2154			...	.049	5	.061	6	.097	6	-.847	7	.571	6	-.461	7	.183	6
2155		3	...	.074	8	.064	7	.159	7	-.169	6	.303	7	.726	5	-.508	8
2156			...	.052	5	.045	6	.091	6	-.303	7	.169	6	.508	8	-.726	5
2157		4	...	.071	8	.048	7	.165	7	.141	8	-.088	5	1.926	7	-1.185	6
2158			...	.055	5	.029	6	.084	6	.088	5	-.141	8	1.185	6	-1.926	7
2159		5	...	.072	7	.032	7	.172	7	.42	7	-.267	6	3.193	7	-1.796	6
2160			...	.054	6	.013	6	.078	6	.267	6	-.42	7	1.796	6	-3.193	7
2161	M228	1	...	.088	7	.032	7	.14	7	.518	7	-.378	6	3.193	7	-1.796	6
2162			...	.06	6	.013	6	.055	6	.378	6	-.518	7	1.796	6	-3.193	7
2163		2	...	.088	7	.031	7	.141	7	.533	7	-.383	6	3.259	7	-1.822	6
2164			...	.06	6	.012	6	.055	6	.383	6	-.533	7	1.822	6	-3.259	7
2165		3	...	.088	7	.03	7	.141	7	.547	7	-.389	6	3.326	7	-1.848	6
2166			...	.06	6	.011	6	.055	6	.389	6	-.547	7	1.848	6	-3.326	7
2167		4	...	.088	7	.029	7	.141	7	.561	7	-.393	6	3.393	7	-1.874	6
2168			...	.06	6	.01	6	.054	6	.393	6	-.561	7	1.874	6	-3.393	7
2169		5	...	.089	7	.028	7	.142	7	.574	7	-.398	6	3.46	7	-1.899	6
2170			...	.059	6	.009	6	.054	6	.398	6	-.574	7	1.899	6	-3.46	7
2171	M229	1	...	.153	5	-.041	8	.045	1	.871	6	.021	7	.072	8	2.203	5
2172			...	.057	8	-.208	5	-.006	2	-.021	7	-.871	6	-2.203	5	-.072	8
2173		2	...	.157	5	-.052	8	.04	5	-.041	8	2.682	5	.054	8	1.652	5
2174			...	.054	8	-.219	5	-.001	8	-2.6...	5	.041	8	-1.652	5	-.054	8
2175		3	...	.16	5	-.064	8	.04	5	-.839	8	5.769	5	.036	8	1.101	5
2176			...	.051	8	-.231	5	-.001	8	-5.7...	5	.839	8	-1.101	5	-.036	8
2177		4	...	.163	5	-.075	8	.04	5	-1.7...	8	9.012	5	.018	8	.551	5
2178			...	.047	8	-.242	5	-.001	8	-9.0...	5	1.792	8	-.551	5	-.018	8
2179		5	...	.166	5	-.086	8	.04	5	-2.9	8	12.411	5	0	1	0	1
2180			...	.044	8	-.253	5	-.001	8	-12...	5	2.9	8	0	1	0	1
2181	M230	1	...	.192	5	-.116	8	.15	5	-1.29	8	6.716	5	-.708	8	3.635	5
2182			...	.07	8	-.319	5	.029	8	-6.7...	5	1.29	8	-3.635	5	.708	8
2183		2	...	.193	5	-.121	8	.15	5	-2.0...	8	8.666	5	-.531	8	2.727	5
2184			...	.068	8	-.324	5	.029	8	-8.6...	5	2.009	8	-2.727	5	.531	8
2185		3	...	.195	5	-.126	8	.15	5	-2.7...	8	10.645	5	-.354	8	1.818	5
2186			...	.067	8	-.329	5	.029	8	-10...	5	2.758	8	-1.818	5	.354	8
2187		4	...	.196	5	-.131	8	.15	5	-3.5...	8	12.655	5	-.177	8	.909	5
2188			...	.065	8	-.334	5	.029	8	-12...	5	3.537	8	-.909	5	.177	8
2189		5	...	.198	5	-.136	8	.15	5	-4.3...	8	14.696	5	0	1	0	1
2190			...	.064	8	-.339	5	.029	8	-14...	5	4.347	8	0	1	0	1
2191	M231	1	...	.199	5	-.086	8	.058	1	-.041	6	.809	7	-.592	8	2.469	5
2192			...	.101	8	-.251	5	-.002	2	-.809	7	.041	6	-2.469	5	.592	8
2193		2	...	.202	5	-.097	8	.051	1	-1.4...	8	4.212	5	-.444	8	1.852	5
2194			...	.098	8	-.262	5	.005	2	-4.2...	5	1.419	8	-1.852	5	.444	8
2195		3	...	.205	5	-.108	8	.045	5	-2.83	8	7.894	5	-.296	8	1.235	5
2196			...	.095	8	-.274	5	.011	8	-7.8...	5	2.83	8	-1.235	5	.296	8
2197		4	...	.209	5	-.12	8	.045	5	-4.3...	8	11.732	5	-.148	8	.617	5
2198			...	.092	8	-.285	5	.011	8	-11...	5	4.395	8	-.617	5	.148	8
2199		5	...	.212	5	-.131	8	.045	5	-6.1...	8	15.725	5	0	1	0	1
2200			...	.088	8	-.296	5	.011	8	-15...	5	6.117	8	0	1	0	1
2201	M232	1	...	.142	5	.045	5	.028	7	.064	8	.588	5	-.045	1	.988	2
2202			...	.079	8	.017	8	.013	6	-.588	5	-.064	8	-.988	2	.045	1
2203		2	...	.143	5	.043	5	.029	7	.089	8	.522	5	-.018	1	.953	2
2204			...	.079	8	.016	8	.012	6	-.522	5	-.089	8	-.953	2	.018	1
2205		3	...	.143	5	.041	5	.029	7	.111	8	.458	5	.006	1	.915	2
2206			...	.078	8	.014	8	.011	6	-.458	5	-.111	8	-.915	2	-.006	1
2207		4	...	.143	5	.039	5	.03	7	.13	8	.397	5	.029	1	.877	2
2208			...	.078	8	.012	8	.011	6	-.397	5	-.13	8	-.877	2	-.029	1

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	lc	y Shear[...	lc	z Shear[k...	lc	y-T...	lc	y-Bot[ksi]	lc	z-Top[ksi]	lc	z-Bot[ksi]	lc
2209		5	...	.144	5	.038	5	.031	7	.147	8	.339	5	.05	1	.836	2
2210			...	.078	8	.01	8	.01	6	-.339	5	-.147	8	-.836	2	-.05	1
2211	M233	1	...	.312	5	.082	5	.067	7	.471	8	1.082	5	.16	1	2.672	2
2212			...	.168	8	.022	8	.021	6	-1.0...	5	-.471	8	-2.672	2	-.16	1
2213		2	...	.315	5	.067	5	.073	7	.736	8	-.231	5	.561	1	1.518	2
2214			...	.165	8	.008	8	.016	6	.231	5	-.736	8	-1.518	2	-.561	1
2215		3	...	.318	5	.053	5	.085	2	1.2...	7	-.745	6	.738	1	.14	2
2216			...	.162	8	-.007	8	.004	1	.745	6	-1.288	7	-.14	2	-.738	1
2217		4	...	.321	5	.038	5	.097	2	2.09	5	-.5	8	1.593	7	-.561	6
2218			...	.16	8	-.021	8	-.009	1	.5	8	-2.09	5	.561	6	-1.593	7
2219		5	...	.324	5	.024	5	.11	2	2.6...	5	.001	8	3.288	2	-.42	1
2220			...	.157	8	-.036	8	-.022	1	-.001	8	-2.636	5	.42	1	-3.288	2
2221	M234	1	...	.324	5	-.036	8	-.046	6	2.6...	5	.001	8	3.288	2	-.42	1
2222			...	.157	8	-.246	5	-.177	7	-.001	8	-2.636	5	.42	1	-3.288	2
2223		2	...	.325	5	-.045	8	-.049	6	-.005	5	.432	8	1.554	2	.194	1
2224			...	.155	8	-.255	5	-.173	7	-.432	8	.005	5	-.194	1	-1.554	2
2225		3	...	.327	5	-.054	8	-.053	6	-.954	8	2.737	5	.015	8	1.002	5
2226			...	.153	8	-.263	5	-.17	7	-2.7...	5	.954	8	-1.002	5	-.015	8
2227		4	...	.329	5	-.063	8	-.056	6	-1.5...	8	5.562	5	-.805	8	2.53	5
2228			...	.151	8	-.272	5	-.166	7	-5.5...	5	1.569	8	-2.53	5	.805	8
2229		5	...	.331	5	-.071	8	-.06	6	-2.2...	8	8.478	5	-1.588	8	4.095	5
2230			...	.15	8	-.281	5	-.163	7	-8.4...	5	2.274	8	-4.095	5	1.588	8
2231	M235	1	...	.09	5	.21	5	.018	7	4.4...	5	-1.579	8	.031	5	1.03	8
2232			...	.005	8	.145	8	-.045	6	1.5...	8	-4.421	5	-1.03	8	-.031	5
2233		2	...	.09	5	.209	5	.018	7	4.52	5	-1.647	8	.037	5	1.049	8
2234			...	.005	8	.144	8	-.045	6	1.6...	8	-4.52	5	-1.049	8	-.037	5
2235		3	...	.089	5	.208	5	.017	7	4.6...	5	-1.715	8	.044	5	1.068	8
2236			...	.005	8	.143	8	-.044	6	1.7...	8	-4.619	5	-1.068	8	-.044	5
2237		4	...	.089	5	.207	5	.017	7	4.7...	5	-1.783	8	.05	5	1.087	8
2238			...	.006	8	.142	8	-.044	6	1.7...	8	-4.717	5	-1.087	8	-.05	5
2239		5	...	.089	5	.207	5	.016	7	4.8...	5	-1.85	8	.055	5	1.105	8
2240			...	.006	8	.141	8	-.043	6	1.85	8	-4.815	5	-1.105	8	-.055	5
2241	M236	1	...	.121	5	.168	7	.016	7	4.8...	5	-1.85	8	.211	5	.775	8
2242			...	.032	8	.081	6	-.043	6	1.85	8	-4.815	5	-.775	8	-.211	5
2243		2	...	.121	5	.167	7	.016	7	4.8...	5	-1.909	8	.216	5	.794	8
2244			...	.032	8	.081	6	-.043	6	1.9...	8	-4.874	5	-.794	8	-.216	5
2245		3	...	.12	5	.165	7	.015	7	4.9...	5	-1.968	8	.222	5	.812	8
2246			...	.032	8	.08	6	-.042	6	1.9...	8	-4.931	5	-.812	8	-.222	5
2247		4	...	.12	5	.164	7	.015	7	4.9...	5	-2.026	8	.227	5	.83	8
2248			...	.032	8	.08	6	-.042	6	2.0...	8	-4.989	5	-.83	8	-.227	5
2249		5	...	.119	5	.163	7	.014	7	5.0...	5	-2.084	8	.231	5	.847	8
2250			...	.032	8	.079	6	-.041	6	2.0...	8	-5.046	5	-.847	8	-.231	5
2251	M237	1	...	.133	5	.105	7	.014	7	5.0...	5	-2.084	8	.353	5	.394	8
2252			...	.053	8	.002	6	-.041	6	2.0...	8	-5.046	5	-.394	8	-.353	5
2253		2	...	.133	5	.104	7	.014	7	5.0...	5	-2.125	8	.358	5	.411	8
2254			...	.052	8	.002	6	-.041	6	2.1...	8	-5.056	5	-.411	8	-.358	5
2255		3	...	.132	5	.103	7	.013	7	5.0...	5	-2.166	8	.362	5	.428	8
2256			...	.052	8	.002	6	-.04	6	2.1...	8	-5.065	5	-.428	8	-.362	5
2257		4	...	.132	5	.102	7	.013	7	5.0...	5	-2.206	8	.366	5	.445	8
2258			...	.052	8	.002	6	-.04	6	2.2...	8	-5.075	5	-.445	8	-.366	5
2259		5	...	.131	5	.101	7	.012	7	5.0...	5	-2.246	8	.37	5	.462	8
2260			...	.052	8	.002	6	-.039	6	2.2...	8	-5.084	5	-.462	8	-.37	5
2261	M238	1	...	.125	5	.038	8	.012	7	5.0...	5	-2.246	8	.452	7	-.042	6
2262			...	.064	8	-.082	5	-.039	6	2.2...	8	-5.084	5	.042	6	-.452	7
2263		2	...	.124	5	.037	8	.012	7	5.0...	5	-2.264	8	.458	7	-.023	6
2264			...	.063	8	-.082	5	-.039	6	2.2...	8	-5.045	5	.023	6	-.458	7
2265		3	...	.124	5	.036	8	.011	7	5.0...	5	-2.281	8	.463	7	-.005	6

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	lc	y Shear[..	lc	z Shear[k...	lc	y-T...	lc	y-Bot[ksi]	lc	z-Top[ksi]	lc	z-Bot[ksi]	lc
2266			...	.063	8	-.082	5	-.038	6	2.2...	8	-5.007	5	.005	6	-.463	7
2267		4	...	.123	5	.036	8	.011	7	4.9...	5	-2.298	8	.468	7	.013	6
2268			...	.062	8	-.081	5	-.038	6	2.2...	8	-4.968	5	-.013	6	-.468	7
2269		5	...	.123	5	.035	8	.01	7	4.93	5	-2.315	8	.473	7	.031	6
2270			...	.062	8	-.081	5	-.037	6	2.3...	8	-4.93	5	-.031	6	-.473	7
2271	M239	1	...	.112	5	.127	5	.037	6	-2.3...	8	4.93	5	-.104	6	.609	7
2272			...	.064	8	-.01	8	-.01	7	-4.93	5	2.315	8	-.609	7	.104	6
2273		2	...	.097	5	.112	5	.022	6	-2.3...	8	3.189	5	.325	6	.643	7
2274			...	.048	8	.006	8	.005	7	-3.1...	5	2.347	8	-.643	7	-.325	6
2275		3	...	.081	5	.096	5	.026	5	-1.2...	6	2.554	7	.525	6	.449	7
2276			...	.033	8	.021	8	.001	8	-2.5...	7	1.275	6	-.449	7	-.525	6
2277		4	...	.065	5	.08	5	.041	5	-.315	6	1.805	7	.497	6	.026	7
2278			...	.017	8	.037	8	-.014	8	-1.8...	7	.315	6	-.026	7	-.497	6
2279		5	...	.05	5	.075	7	.057	5	.66	5	1.073	8	1.039	5	.174	8
2280			...	.001	8	.042	6	-.03	8	-1.0...	8	-.66	5	-.174	8	-1.039	5
2281	M240	1	...	.056	5	.02	6	.059	7	.446	8	1.174	5	.362	5	1.229	8
2282			...	0	8	-.056	7	.047	6	-1.1...	5	-.446	8	-1.229	8	-.362	5
2283		2	...	.055	5	.02	6	.059	8	.453	8	1.199	5	.384	5	1.202	8
2284			...	0	8	-.056	7	.047	5	-1.1...	5	-.453	8	-1.202	8	-.384	5
2285		3	...	.055	5	.021	6	.06	8	.461	8	1.223	5	.406	5	1.173	8
2286			...	-.001	8	-.057	7	.046	5	-1.2...	5	-.461	8	-1.173	8	-.406	5
2287		4	...	.054	5	.021	6	.061	8	.468	8	1.248	5	.428	5	1.145	8
2288			...	-.002	8	-.058	7	.046	5	-1.2...	5	-.468	8	-1.145	8	-.428	5
2289		5	...	.054	5	.022	6	.061	8	.476	8	1.273	5	.45	5	1.116	8
2290			...	-.002	8	-.059	7	.045	5	-1.2...	5	-.476	8	-1.116	8	-.45	5
2291	M241	1	...	.06	5	.03	6	.061	8	.476	8	1.273	5	.388	5	1.452	8
2292			...	-.005	8	-.025	7	.045	5	-1.2...	5	-.476	8	-1.452	8	-.388	5
2293		2	...	.06	5	.03	6	.062	8	.482	8	1.277	5	.41	5	1.423	8
2294			...	-.006	8	-.026	7	.044	5	-1.2...	5	-.482	8	-1.423	8	-.41	5
2295		3	...	.059	5	.03	6	.062	8	.488	8	1.282	5	.431	5	1.394	8
2296			...	-.006	8	-.027	7	.044	5	-1.2...	5	-.488	8	-1.394	8	-.431	5
2297		4	...	.059	5	.03	6	.063	8	.494	8	1.286	5	.451	5	1.364	8
2298			...	-.007	8	-.028	7	.043	5	-1.2...	5	-.494	8	-1.364	8	-.451	5
2299		5	...	.059	5	.03	6	.064	8	.5	8	1.292	5	.471	5	1.334	8
2300			...	-.007	8	-.029	7	.043	5	-1.2...	5	-.5	8	-1.334	8	-.471	5
2301	M242	1	...	.056	5	.034	5	.064	8	.5	8	1.292	5	.345	5	1.458	8
2302			...	-.009	8	.006	8	.043	5	-1.2...	5	-.5	8	-1.458	8	-.345	5
2303		2	...	.056	5	.033	5	.064	8	.502	8	1.276	5	.365	5	1.428	8
2304			...	-.01	8	.005	8	.042	5	-1.2...	5	-.502	8	-1.428	8	-.365	5
2305		3	...	.056	5	.032	5	.065	8	.504	8	1.26	5	.385	5	1.397	8
2306			...	-.01	8	.004	8	.041	5	-1.26	5	-.504	8	-1.397	8	-.385	5
2307		4	...	.056	5	.031	5	.066	8	.506	8	1.245	5	.404	5	1.366	8
2308			...	-.01	8	.004	8	.041	5	-1.2...	5	-.506	8	-1.366	8	-.404	5
2309		5	...	.056	5	.03	5	.066	8	.508	8	1.231	5	.423	5	1.335	8
2310			...	-.011	8	.003	8	.04	5	-1.2...	5	-.508	8	-1.335	8	-.423	5
2311	M243	1	...	.046	5	.071	5	.066	8	.508	8	1.231	5	.238	5	1.246	8
2312			...	-.011	8	-.006	8	.04	5	-1.2...	5	-.508	8	-1.246	8	-.238	5
2313		2	...	.046	5	.069	5	.067	8	.505	8	1.197	5	.257	5	1.215	8
2314			...	-.011	8	-.006	8	.039	5	-1.1...	5	-.505	8	-1.215	8	-.257	5
2315		3	...	.046	5	.068	5	.067	8	.502	8	1.165	5	.275	5	1.183	8
2316			...	-.011	8	-.007	8	.039	5	-1.1...	5	-.502	8	-1.183	8	-.275	5
2317		4	...	.046	5	.067	5	.068	8	.498	8	1.133	5	.294	5	1.151	8
2318			...	-.011	8	-.008	8	.038	5	-1.1...	5	-.498	8	-1.151	8	-.294	5
2319		5	...	.046	5	.066	5	.069	8	.494	8	1.101	5	.312	5	1.119	8
2320			...	-.012	8	-.009	8	.038	5	-1.1...	5	-.494	8	-1.119	8	-.312	5
2321	M244	1	...	.04	7	.083	5	.069	8	.494	8	1.101	5	.202	5	1.004	8
2322			...	-.012	6	-.014	8	.038	5	-1.1...	5	-.494	8	-1.004	8	-.202	5

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Jc	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
2323		2	...	.046	7	.065	5	.08	8	.298	8	.469	5	.476	5	.367	8
2324			...	-.017	6	-.032	8	.026	5	-.469	5	-.298	8	-.367	8	-.476	5
2325		3	...	.051	7	.046	5	.091	8	.098	7	.149	6	.886	7	-.133	6
2326			...	-.023	6	-.051	8	.015	5	-.149	6	-.098	7	.133	6	-.886	7
2327		4	...	.057	7	.028	5	.103	8	.321	5	.569	8	1.578	7	-.351	6
2328			...	-.029	6	-.069	8	.004	5	-.569	8	-.321	5	.351	6	-1.578	7
2329		5	...	.063	7	.009	5	.114	8	.479	5	1.239	8	2.327	7	-.512	6
2330			...	-.034	6	-.087	8	-.008	5	-1.2...	8	-.479	5	.512	6	-2.327	7
2331	M245	1	...	.059	7	-.011	5	.114	8	.479	5	1.239	8	2.152	7	-.612	6
2332			...	-.039	6	-.077	8	-.008	5	-1.2...	8	-.479	5	.612	6	-2.152	7
2333		2	...	.06	7	-.012	5	.115	8	.473	5	1.276	8	2.195	7	-.619	6
2334			...	-.04	6	-.078	8	-.008	5	-1.2...	8	-.473	5	.619	6	-2.195	7
2335		3	...	.06	7	-.013	5	.115	8	.467	5	1.313	8	2.239	7	-.626	6
2336			...	-.04	6	-.078	8	-.009	5	-1.3...	8	-.467	5	.626	6	-2.239	7
2337		4	...	.06	7	-.014	5	.116	8	.46	5	1.35	8	2.282	7	-.633	6
2338			...	-.04	6	-.079	8	-.01	5	-1.35	8	-.46	5	.633	6	-2.282	7
2339		5	...	.06	7	-.016	5	.116	8	.453	5	1.388	8	2.326	7	-.64	6
2340			...	-.041	6	-.08	8	-.01	5	-1.3...	8	-.453	5	.64	6	-2.326	7
2341	M246	1	...	.046	7	-.01	6	.116	8	.453	5	1.388	8	1.725	7	-.763	6
2342			...	-.046	6	-.093	7	-.01	5	-1.3...	8	-.453	5	.763	6	-1.725	7
2343		2	...	.046	7	-.011	6	.117	8	.427	5	1.411	8	1.769	7	-.769	6
2344			...	-.047	6	-.094	7	-.011	5	-1.4...	8	-.427	5	.769	6	-1.769	7
2345		3	...	.046	7	-.011	6	.118	8	.401	5	1.435	8	1.812	7	-.776	6
2346			...	-.047	6	-.095	7	-.011	5	-1.4...	8	-.401	5	.776	6	-1.812	7
2347		4	...	.046	7	-.012	6	.118	8	.374	5	1.459	8	1.856	7	-.782	6
2348			...	-.048	6	-.097	7	-.012	5	-1.4...	8	-.374	5	.782	6	-1.856	7
2349		5	...	.046	7	-.012	6	.119	8	.347	5	1.483	8	1.901	7	-.788	6
2350			...	-.049	6	-.098	7	-.013	5	-1.4...	8	-.347	5	.788	6	-1.901	7
2351	M247	1	...	.03	5	.026	6	.119	8	.347	5	1.483	8	1.024	7	-.793	6
2352			...	-.054	8	-.125	7	-.013	5	-1.4...	8	-.347	5	.793	6	-1.024	7
2353		2	...	.03	5	.026	6	.12	8	.305	5	1.489	8	1.068	7	-.799	6
2354			...	-.054	8	-.126	7	-.013	5	-1.4...	8	-.305	5	.799	6	-1.068	7
2355		3	...	.029	5	.026	6	.12	8	.262	5	1.494	8	1.113	7	-.805	6
2356			...	-.055	8	-.128	7	-.014	5	-1.4...	8	-.262	5	.805	6	-1.113	7
2357		4	...	.029	5	.026	6	.121	8	.22	5	1.5	8	1.158	7	-.81	6
2358			...	-.055	8	-.129	7	-.015	5	-1.5	8	-.22	5	.81	6	-1.158	7
2359		5	...	.029	5	.026	6	.121	8	.176	5	1.506	8	1.202	7	-.816	6
2360			...	-.056	8	-.13	7	-.015	5	-1.5...	8	-.176	5	.816	6	-1.202	7
2361	M248	1	...	.009	5	.062	6	.121	8	.176	5	1.506	8	.698	6	-.156	7
2362			...	-.054	8	-.137	7	-.015	5	-1.5...	8	-.176	5	.156	7	-.698	6
2363		2	...	.009	5	.062	6	.122	8	.126	5	1.491	8	.704	6	-.201	7
2364			...	-.054	8	-.138	7	-.016	5	-1.4...	8	-.126	5	.201	7	-.704	6
2365		3	...	.008	5	.062	6	.123	8	.075	5	1.476	8	.709	6	-.247	7
2366			...	-.055	8	-.139	7	-.016	5	-1.4...	8	-.075	5	.247	7	-.709	6
2367		4	...	.008	5	.063	6	.123	8	.024	5	1.461	8	.714	6	-.292	7
2368			...	-.056	8	-.14	7	-.017	5	-1.4...	8	-.024	5	.292	7	-.714	6
2369		5	...	.007	5	.063	6	.124	8	-.028	5	1.446	8	.718	6	-.338	7
2370			...	-.056	8	-.14	7	-.018	5	-1.4...	8	.028	5	.338	7	-.718	6
2371	M249	1	...	-.004	5	.128	7	.11	5	.785	6	.008	7	1.424	8	.106	5
2372			...	-.052	8	-.011	6	-.083	8	-.008	7	-.785	6	-.106	5	-1.424	8
2373		2	...	-.008	5	.132	7	.114	5	.736	6	-.488	7	1.185	7	-.236	6
2374			...	-.056	8	-.015	6	-.087	8	.488	7	-.736	6	.236	6	-1.185	7
2375		3	...	-.012	5	.136	7	.119	5	1.1...	8	-.558	5	1.612	7	.088	6
2376			...	-.06	8	-.019	6	-.091	8	.558	5	-1.113	8	-.088	6	-1.612	7
2377		4	...	-.016	5	.141	7	.123	5	1.5...	8	-.562	5	2.055	7	.427	6
2378			...	-.064	8	-.023	6	-.096	8	.562	5	-1.556	8	-.427	6	-2.055	7
2379		5	...	-.02	5	.145	7	.127	5	2.0...	7	-.493	6	2.513	7	.782	6

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	lc	y Shear[..	lc	z Shear[k...	lc	y-T...	lc	y-Bot[ksi]	lc	z-Top[ksi]	lc	z-Bot[ksi]	lc
2380			...	-.068	8	-.027	6	-.1	8	.493	6	-2.072	7	-.782	6	-2.513	7
2381	M250	1	...	-.007	5	.073	6	.145	7	.782	6	2.513	7	2.574	7	-.596	6
2382			...	-.077	8	-.134	7	-.027	6	-2.5...	7	-.782	6	.596	6	-2.574	7
2383		2	...	-.008	5	.073	6	.145	7	.817	6	2.577	7	2.643	7	-.583	6
2384			...	-.077	8	-.135	7	-.028	6	-2.5...	7	-.817	6	.583	6	-2.643	7
2385		3	...	-.008	5	.073	6	.146	7	.852	6	2.641	7	2.712	7	-.57	6
2386			...	-.078	8	-.135	7	-.028	6	-2.6...	7	-.852	6	.57	6	-2.712	7
2387		4	...	-.009	5	.074	6	.146	7	.886	6	2.705	7	2.781	7	-.556	6
2388			...	-.078	8	-.136	7	-.029	6	-2.7...	7	-.886	6	.556	6	-2.781	7
2389		5	...	-.009	5	.074	6	.147	7	.921	6	2.77	7	2.85	7	-.542	6
2390			...	-.079	8	-.137	7	-.029	6	-2.77	7	-.921	6	.542	6	-2.85	7
2391	M251	1	...	.017	5	.02	6	.147	7	.921	6	2.77	7	3.521	7	-.681	6
2392			...	-.087	8	-.145	7	-.029	6	-2.77	7	-.921	6	.681	6	-3.521	7
2393		2	...	.017	5	.02	6	.147	7	.931	6	2.839	7	3.591	7	-.667	6
2394			...	-.087	8	-.146	7	-.03	6	-2.8...	7	-.931	6	.667	6	-3.591	7
2395		3	...	.017	5	.02	6	.148	7	.94	6	2.908	7	3.66	7	-.653	6
2396			...	-.088	8	-.147	7	-.03	6	-2.9...	7	-.94	6	.653	6	-3.66	7
2397		4	...	.017	5	.02	6	.148	7	.95	6	2.978	7	3.731	7	-.638	6
2398			...	-.088	8	-.148	7	-.031	6	-2.9...	7	-.95	6	.638	6	-3.731	7
2399		5	...	.016	5	.02	6	.149	7	.959	6	3.049	7	3.801	7	-.624	6
2400			...	-.089	8	-.149	7	-.031	6	-3.0...	7	-.959	6	.624	6	-3.801	7
2401	M252	1	...	.041	5	-.039	6	.149	7	.959	6	3.049	7	3.914	7	-.663	6
2402			...	-.083	8	-.136	7	-.031	6	-3.0...	7	-.959	6	.663	6	-3.914	7
2403		2	...	.041	5	-.04	6	.149	7	.94	6	3.114	7	3.985	7	-.648	6
2404			...	-.084	8	-.138	7	-.032	6	-3.1...	7	-.94	6	.648	6	-3.985	7
2405		3	...	.041	5	-.04	6	.15	7	.921	6	3.179	7	4.056	7	-.633	6
2406			...	-.084	8	-.139	7	-.032	6	-3.1...	7	-.921	6	.633	6	-4.056	7
2407		4	...	.041	5	-.041	6	.15	7	.902	6	3.245	7	4.127	7	-.617	6
2408			...	-.085	8	-.14	7	-.033	6	-3.2...	7	-.902	6	.617	6	-4.127	7
2409		5	...	.041	5	-.041	6	.151	7	.883	6	3.311	7	4.198	7	-.601	6
2410			...	-.085	8	-.141	7	-.033	6	-3.3...	7	-.883	6	.601	6	-4.198	7
2411	M253	1	...	.06	5	-.077	5	.151	7	.883	6	3.311	7	3.694	7	-.545	6
2412			...	-.066	8	-.125	8	-.033	6	-3.3...	7	-.883	6	.545	6	-3.694	7
2413		2	...	.06	5	-.078	5	.151	7	.837	6	3.362	7	3.766	7	-.529	6
2414			...	-.067	8	-.126	8	-.034	6	-3.3...	7	-.837	6	.529	6	-3.766	7
2415		3	...	.06	5	-.079	5	.152	7	.791	6	3.414	7	3.837	7	-.512	6
2416			...	-.067	8	-.127	8	-.035	6	-3.4...	7	-.791	6	.512	6	-3.837	7
2417		4	...	.061	5	-.081	5	.152	7	.745	6	3.466	7	3.909	7	-.496	6
2418			...	-.067	8	-.128	8	-.035	6	-3.4...	7	-.745	6	.496	6	-3.909	7
2419		5	...	.061	5	-.082	5	.153	7	.698	6	3.519	7	3.982	7	-.479	6
2420			...	-.068	8	-.129	8	-.036	6	-3.5...	7	-.698	6	.479	6	-3.982	7
2421	M254	1	...	.067	5	-.056	5	.153	7	.698	6	3.519	7	3.505	7	-.42	6
2422			...	-.054	8	-.153	8	-.036	6	-3.5...	7	-.698	6	.42	6	-3.505	7
2423		2	...	.068	5	-.058	5	.154	7	.609	6	3.583	7	3.616	7	-.394	6
2424			...	-.054	8	-.155	8	-.036	6	-3.5...	7	-.609	6	.394	6	-3.616	7
2425		3	...	.068	5	-.06	5	.154	7	.519	6	3.649	7	3.728	7	-.367	6
2426			...	-.055	8	-.156	8	-.037	6	-3.6...	7	-.519	6	.367	6	-3.728	7
2427		4	...	.069	5	-.061	5	.155	7	.428	6	3.716	7	3.841	7	-.34	6
2428			...	-.055	8	-.158	8	-.038	6	-3.7...	7	-.428	6	.34	6	-3.841	7
2429		5	...	.069	5	-.063	5	.156	7	.335	6	3.784	7	3.954	7	-.312	6
2430			...	-.055	8	-.159	8	-.039	6	-3.7...	7	-.335	6	.312	6	-3.954	7
2431	M255	1	...	.109	7	.028	7	.063	7	.704	7	-.57	6	3.46	7	-1.899	6
2432			...	.065	6	.009	6	.004	6	.57	6	-.704	7	1.899	6	-3.46	7
2433		2	...	.109	7	.027	7	.063	7	.717	7	-.574	6	3.49	7	-1.901	6
2434			...	.065	6	.008	6	.004	6	.574	6	-.717	7	1.901	6	-3.49	7
2435		3	...	.11	7	.026	7	.063	7	.73	7	-.577	6	3.52	7	-1.903	6
2436			...	.064	6	.007	6	.004	6	.577	6	-.73	7	1.903	6	-3.52	7

Company : **DMJM H&N**
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
2437		4	...	.11	7	.025	7	.063	7	.742	7	-.58	6	3.55	7	-1.905	6
2438			...	.064	6	.006	6	.004	6	.58	6	-.742	7	1.905	6	-3.55	7
2439		5	...	.111	7	.024	7	.064	7	.753	7	-.582	6	3.58	7	-1.907	6
2440			...	.064	6	.005	6	.004	6	.582	6	-.753	7	1.907	6	-3.58	7
2441	M256	1	...	.114	7	.024	7	-.026	7	.772	7	-.666	6	3.58	7	-1.907	6
2442			...	.059	6	.005	6	-.045	6	.666	6	-.772	7	1.907	6	-3.58	7
2443		2	...	.115	7	.023	7	-.026	7	.783	7	-.668	6	3.567	7	-1.886	6
2444			...	.059	6	.004	6	-.045	6	.668	6	-.783	7	1.886	6	-3.567	7
2445		3	...	.115	7	.022	7	-.026	7	.793	7	-.67	6	3.555	7	-1.865	6
2446			...	.059	6	.003	6	-.045	6	.67	6	-.793	7	1.865	6	-3.555	7
2447		4	...	.115	7	.021	7	-.026	7	.803	7	-.671	6	3.543	7	-1.843	6
2448			...	.058	6	.002	6	-.045	6	.671	6	-.803	7	1.843	6	-3.543	7
2449		5	...	.116	7	.02	7	-.026	7	.813	7	-.671	6	3.53	7	-1.822	6
2450			...	.058	6	0	6	-.045	6	.671	6	-.813	7	1.822	6	-3.53	7
2451	M257	1	...	.102	7	.02	7	-.086	6	.711	7	-.654	6	3.53	7	-1.822	6
2452			...	.045	6	0	6	-.113	7	.654	6	-.711	7	1.822	6	-3.53	7
2453		2	...	.102	7	.019	7	-.085	6	.72	7	-.654	6	3.477	7	-1.782	6
2454			...	.045	6	0	6	-.113	7	.654	6	-.72	7	1.782	6	-3.477	7
2455		3	...	.102	7	.017	7	-.085	6	.729	7	-.653	6	3.423	7	-1.742	6
2456			...	.045	6	-.001	6	-.114	7	.653	6	-.729	7	1.742	6	-3.423	7
2457		4	...	.103	7	.016	7	-.084	6	.737	7	-.652	6	3.369	7	-1.701	6
2458			...	.044	6	-.003	6	-.114	7	.652	6	-.737	7	1.701	6	-3.369	7
2459		5	...	.103	7	.015	7	-.084	6	.744	7	-.651	6	3.315	7	-1.662	6
2460			...	.044	6	-.004	6	-.115	7	.651	6	-.744	7	1.662	6	-3.315	7
2461	M258	1	...	.09	7	.015	7	-.1	6	.651	7	-.604	6	3.315	7	-1.662	6
2462			...	.035	6	-.004	6	-.153	7	.604	6	-.651	7	1.662	6	-3.315	7
2463		2	...	.094	7	0	7	-.091	6	.706	7	-.516	6	2.136	7	-.943	6
2464			...	.031	6	-.02	6	-.161	7	.516	6	-.706	7	.943	6	-2.136	7
2465		3	...	.098	7	-.017	7	-.083	6	.639	7	-.307	6	.897	7	-.286	6
2466			...	.027	6	-.036	6	-.169	7	.307	6	-.639	7	.286	6	-.897	7
2467		4	...	.102	7	-.033	7	-.075	6	.45	7	.025	6	-.272	1	.442	2
2468			...	.023	6	-.052	6	-.177	7	-.025	6	-.45	7	-.442	2	.272	1
2469		5	...	.106	7	-.049	7	-.067	6	.139	7	.479	6	-.846	6	1.765	7
2470			...	.019	6	-.068	6	-.185	7	-.479	6	-.139	7	-1.765	7	.846	6
2471	M259	1	...	.112	5	-.028	6	.033	6	.139	7	.479	6	-.846	6	1.765	7
2472			...	-.054	8	-.092	7	.019	7	-.479	6	-.139	7	-1.765	7	.846	6
2473		2	...	.106	5	-.053	6	.045	6	-.955	6	1.083	7	-.391	6	1.62	7
2474			...	-.047	8	-.117	7	.006	7	-1.0...	7	.955	6	-1.62	7	.391	6
2475		3	...	.1	5	-.078	6	.058	6	-1.7...	6	2.598	7	.21	6	1.622	7
2476			...	-.041	8	-.143	7	-.006	7	-2.5...	7	1.723	6	-1.622	7	-.21	6
2477		4	...	.093	5	-.104	6	.07	6	-2.7...	6	4.406	7	.958	6	1.771	7
2478			...	-.035	8	-.168	7	-.019	7	-4.4...	7	2.784	6	-1.771	7	-.958	6
2479		5	...	.087	5	-.129	6	.083	6	-4.1...	6	6.506	7	1.852	6	2.065	7
2480			...	-.028	8	-.193	7	-.032	7	-6.5...	7	4.137	6	-2.065	7	-1.852	6
2481	M260	1	...	.087	5	.319	5	.057	7	-4.1...	6	6.506	7	1.852	6	2.065	7
2482			...	-.028	8	.222	8	-.084	6	-6.5...	7	4.137	6	-2.065	7	-1.852	6
2483		2	...	.082	5	.299	5	.047	7	-1.9...	6	4.014	7	1.139	6	1.596	7
2484			...	-.024	8	.203	8	-.074	6	-4.0...	7	1.947	6	-1.596	7	-1.139	6
2485		3	...	.077	5	.28	5	.038	7	.069	6	1.695	7	.514	6	1.213	7
2486			...	-.019	8	.183	8	-.065	6	-1.6...	7	-.069	6	-1.213	7	-.514	6
2487		4	...	.073	5	.261	5	.028	7	2.1...	5	-.193	8	-.025	6	.918	7
2488			...	-.014	8	.164	8	-.055	6	.193	8	-2.167	5	-.918	7	.025	6
2489		5	...	.068	5	.241	5	.018	7	4.4...	5	-1.579	8	-.051	5	1.135	8
2490			...	-.009	8	.145	8	-.045	6	1.5...	8	-4.421	5	-1.135	8	.051	5
2491	M261	1	...	0	1	0	1	0	1	1.0...	8	.189	5	-1.545	8	2.698	5
2492			...	0	1	0	1	0	1	-.189	5	-1.051	8	-2.698	5	1.545	8
2493		2	...	0	6	-.002	1	.002	1	1.0...	8	.19	5	-1.546	8	2.698	5

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[..	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
2494			...	0	5	-.002	1	-.002	2	-.19	5	-1.051	8	-2.698	5	1.546	8
2495		3	...	0	6	-.004	1	.003	1	1.0...	8	.192	5	-1.546	8	2.697	5
2496			...	0	5	-.004	1	-.003	2	-.192	5	-1.049	8	-2.697	5	1.546	8
2497		4	...	.001	6	-.006	1	.005	1	1.0...	8	.195	5	-1.548	8	2.696	5
2498			...	-.001	5	-.006	1	-.005	2	-.195	5	-1.046	8	-2.696	5	1.548	8
2499		5	...	.002	6	-.008	1	.007	1	1.0...	8	.199	5	-1.549	8	2.694	5
2500			...	-.002	5	-.008	1	-.007	2	-.199	5	-1.041	8	-2.694	5	1.549	8
2501	M262	1	...	.002	6	-.008	3	.007	1	1.0...	8	.199	5	-1.549	8	2.694	5
2502			...	-.002	5	-.008	1	-.007	2	-.199	5	-1.041	8	-2.694	5	1.549	8
2503		2	...	.002	6	-.01	3	.008	1	1.0...	8	.205	5	-1.552	8	2.692	5
2504			...	-.002	5	-.01	1	-.008	2	-.205	5	-1.036	8	-2.692	5	1.552	8
2505		3	...	.002	6	-.011	3	.01	1	1.0...	8	.211	5	-1.554	8	2.689	5
2506			...	-.002	5	-.011	1	-.01	2	-.211	5	-1.029	8	-2.689	5	1.554	8
2507		4	...	.003	6	-.013	3	.012	1	1.0...	8	.219	5	-1.557	8	2.686	5
2508			...	-.003	5	-.013	1	-.012	2	-.219	5	-1.022	8	-2.686	5	1.557	8
2509		5	...	.003	6	-.015	3	.013	1	1.0...	8	.228	5	-1.561	8	2.683	5
2510			...	-.003	5	-.015	1	-.013	2	-.228	5	-1.013	8	-2.683	5	1.561	8
2511	M263	1	...	.127	5	-.063	8	-.061	8	7.7...	5	-2.084	8	9.807	5	-2.017	8
2512			...	.043	8	-.207	5	-.264	5	2.0...	8	-7.744	5	2.017	8	-9.807	5
2513		2	...	.13	5	-.06	8	-.058	8	5.8...	5	-1.522	8	7.396	5	-1.472	8
2514			...	.047	8	-.21	5	-.267	5	1.5...	8	-5.849	5	1.472	8	-7.396	5
2515		3	...	.134	5	-.057	8	-.055	8	3.9...	5	-.987	8	4.958	5	-.954	8
2516			...	.051	8	-.213	5	-.27	5	.987	8	-3.927	5	.954	8	-4.958	5
2517		4	...	.138	5	-.054	8	-.052	8	1.9...	5	-.48	8	2.493	5	-.463	8
2518			...	.054	8	-.216	5	-.273	5	.48	8	-1.977	5	.463	8	-2.493	5
2519		5	...	.142	5	-.051	8	-.049	8	0	1	0	1	0	1	0	1
2520			...	.058	8	-.219	5	-.276	5	0	1	0	1	0	1	0	1
2521	M264	1	...	.17	5	-.07	8	-.111	8	6.5...	5	-2.323	8	14.248	5	-3.825	8
2522			...	.068	8	-.174	5	-.386	5	2.3...	8	-6.535	5	3.825	8	-14.248	5
2523		2	...	.173	5	-.067	8	-.108	8	4.9...	5	-1.701	8	10.727	5	-2.828	8
2524			...	.072	8	-.177	5	-.389	5	1.7...	8	-4.942	5	2.828	8	-10.727	5
2525		3	...	.177	5	-.064	8	-.105	8	3.3...	5	-1.107	8	7.179	5	-1.858	8
2526			...	.076	8	-.18	5	-.392	5	1.1...	8	-3.322	5	1.858	8	-7.179	5
2527		4	...	.181	5	-.061	8	-.102	8	1.6...	5	-.54	8	3.603	5	-.915	8
2528			...	.079	8	-.183	5	-.395	5	.54	8	-1.675	5	.915	8	-3.603	5
2529		5	...	.185	5	-.058	8	-.099	8	0	1	0	1	0	1	0	1
2530			...	.083	8	-.186	5	-.398	5	0	1	0	1	0	1	0	1
2531	M265	1	...	.148	5	-.117	8	-.133	8	9.9...	5	-4.048	8	12.276	5	-4.602	8
2532			...	.066	8	-.268	5	-.331	5	4.0...	8	-9.963	5	4.602	8	-12.276	5
2533		2	...	.152	5	-.114	8	-.13	8	7.5...	5	-2.995	8	9.248	5	-3.411	8
2534			...	.069	8	-.271	5	-.334	5	2.9...	8	-7.513	5	3.411	8	-9.248	5
2535		3	...	.156	5	-.111	8	-.127	8	5.0...	5	-1.969	8	6.193	5	-2.247	8
2536			...	.073	8	-.274	5	-.337	5	1.9...	8	-5.036	5	2.247	8	-6.193	5
2537		4	...	.159	5	-.108	8	-.124	8	2.5...	5	-.971	8	3.11	5	-1.11	8
2538			...	.077	8	-.277	5	-.34	5	.971	8	-2.532	5	1.11	8	-3.11	5
2539		5	...	.163	5	-.105	8	-.121	8	0	1	0	1	0	1	0	1
2540			...	.081	8	-.28	5	-.343	5	0	1	0	1	0	1	0	1
2541	M266	1	...	.209	6	.082	5	.048	1	-1.5...	8	1.615	5	.077	7	1.588	6
2542			...	.088	7	.082	8	-.034	2	-1.6...	5	1.594	8	-1.588	6	-.077	7
2543		2	...	.2	6	.038	5	.023	6	.659	8	-.65	5	.165	5	1.185	8
2544			...	.096	7	.038	8	-.01	7	.65	5	-.659	8	-1.185	8	-.165	5
2545		3	...	.191	6	-.006	5	.02	2	1.2...	1	-1.255	2	.458	5	.986	8
2546			...	.105	7	-.006	8	-.007	1	1.2...	2	-1.259	1	-.986	8	-.458	5
2547		4	...	.182	6	-.05	5	.032	8	.21	5	-.195	8	.335	2	.372	1
2548			...	.114	7	-.05	8	-.019	5	.195	8	-.21	5	-.372	1	-.335	2
2549		5	...	.174	6	-.094	5	.049	8	-2.4...	5	2.523	8	1.411	2	.956	1
2550			...	.123	7	-.094	8	-.036	5	-2.5...	8	2.496	5	-.956	1	-1.411	2

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	lc	y Shear[...	lc	z Shear[k...	lc	y-T...	lc	y-Bot[ksi]	lc	z-Top[ksi]	lc	z-Bot[ksi]	lc
2551	M267	1	...	0	1	0	1	0	1	-1.6...	6	1.95	7	-.103	4	.651	3
2552			...	0	1	0	1	0	1	-1.95	7	1.666	6	-.651	3	.103	4
2553		2	...	0	6	-.003	1	.002	1	-1.6...	6	1.95	7	-.103	4	.651	3
2554			...	0	5	-.003	1	-.002	2	-1.95	7	1.667	6	-.651	3	.103	4
2555		3	...	.001	6	-.006	1	.004	1	-1.6...	6	1.952	7	-.103	4	.651	3
2556			...	-.001	5	-.006	1	-.004	2	-1.9...	7	1.669	6	-.651	3	.103	4
2557		4	...	.002	6	-.008	1	.006	1	-1.6...	6	1.956	7	-.103	4	.651	3
2558			...	-.002	5	-.008	1	-.006	2	-1.9...	7	1.673	6	-.651	3	.103	4
2559		5	...	.002	6	-.011	1	.008	1	-1.6...	6	1.961	7	-.103	4	.651	3
2560			...	-.002	5	-.011	1	-.008	2	-1.9...	7	1.678	6	-.651	3	.103	4

Envelope Member Section Torsion

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
1	M1	1	max	0	1	0	1	NC		NC		NC		NC	
2			min	0	1	0	1	NC		NC		NC		NC	
3		2	max	0	1	0	1	NC		NC		NC		NC	
4			min	0	1	0	1	NC		NC		NC		NC	
5		3	max	0	1	0	1	NC		NC		NC		NC	
6			min	0	1	0	1	NC		NC		NC		NC	
7		4	max	0	1	0	1	NC		NC		NC		NC	
8			min	0	1	0	1	NC		NC		NC		NC	
9		5	max	0	1	0	1	NC		NC		NC		NC	
10			min	0	1	0	1	NC		NC		NC		NC	
11	M2	1	max	0	1	0	1	NC		NC		NC		NC	
12			min	0	1	0	1	NC		NC		NC		NC	
13		2	max	0	1	0	1	NC		NC		NC		NC	
14			min	0	1	0	1	NC		NC		NC		NC	
15		3	max	0	1	0	1	NC		NC		NC		NC	
16			min	0	1	0	1	NC		NC		NC		NC	
17		4	max	0	1	0	1	NC		NC		NC		NC	
18			min	0	1	0	1	NC		NC		NC		NC	
19		5	max	0	1	0	1	NC		NC		NC		NC	
20			min	0	1	0	1	NC		NC		NC		NC	
21	M3	1	max	0	1	0	1	NC		NC		NC		NC	
22			min	0	1	0	1	NC		NC		NC		NC	
23		2	max	0	1	0	1	NC		NC		NC		NC	
24			min	0	1	0	1	NC		NC		NC		NC	
25		3	max	0	1	0	1	NC		NC		NC		NC	
26			min	0	1	0	1	NC		NC		NC		NC	
27		4	max	0	1	0	1	NC		NC		NC		NC	
28			min	0	1	0	1	NC		NC		NC		NC	
29		5	max	0	1	0	1	NC		NC		NC		NC	
30			min	0	1	0	1	NC		NC		NC		NC	
31	M4	1	max	0	1	0	1	NC		NC		NC		NC	
32			min	0	1	0	1	NC		NC		NC		NC	
33		2	max	0	1	0	1	NC		NC		NC		NC	
34			min	0	1	0	1	NC		NC		NC		NC	
35		3	max	0	1	0	1	NC		NC		NC		NC	
36			min	0	1	0	1	NC		NC		NC		NC	
37		4	max	0	1	0	1	NC		NC		NC		NC	
38			min	0	1	0	1	NC		NC		NC		NC	
39		5	max	0	1	0	1	NC		NC		NC		NC	
40			min	0	1	0	1	NC		NC		NC		NC	
41	M5	1	max	0	1	0	1	NC		NC		NC		NC	
42			min	0	1	0	1	NC		NC		NC		NC	
43		2	max	0	1	0	1	NC		NC		NC		NC	

Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
44			min	0	1	0	1	NC		NC		NC		NC	
45		3	max	0	1	0	1	NC		NC		NC		NC	
46			min	0	1	0	1	NC		NC		NC		NC	
47		4	max	0	1	0	1	NC		NC		NC		NC	
48			min	0	1	0	1	NC		NC		NC		NC	
49		5	max	0	1	0	1	NC		NC		NC		NC	
50			min	0	1	0	1	NC		NC		NC		NC	
51	M6	1	max	0	1	0	1	NC		NC		NC		NC	
52			min	0	1	0	1	NC		NC		NC		NC	
53		2	max	0	1	0	1	NC		NC		NC		NC	
54			min	0	1	0	1	NC		NC		NC		NC	
55		3	max	0	1	0	1	NC		NC		NC		NC	
56			min	0	1	0	1	NC		NC		NC		NC	
57		4	max	0	1	0	1	NC		NC		NC		NC	
58			min	0	1	0	1	NC		NC		NC		NC	
59		5	max	0	1	0	1	NC		NC		NC		NC	
60			min	0	1	0	1	NC		NC		NC		NC	
61	M7	1	max	353.378	6	.296	6	NC		NC		NC		NC	
62			min	326.161	7	.273	7	NC		NC		NC		NC	
63		2	max	353.378	6	.296	6	NC		NC		NC		NC	
64			min	326.161	7	.273	7	NC		NC		NC		NC	
65		3	max	353.378	6	.296	6	NC		NC		NC		NC	
66			min	326.161	7	.273	7	NC		NC		NC		NC	
67		4	max	353.378	6	.296	6	NC		NC		NC		NC	
68			min	326.161	7	.273	7	NC		NC		NC		NC	
69		5	max	353.378	6	.296	6	NC		NC		NC		NC	
70			min	326.161	7	.273	7	NC		NC		NC		NC	
71	M8	1	max	139.532	6	.117	6	NC		NC		NC		NC	
72			min	83.143	7	.07	7	NC		NC		NC		NC	
73		2	max	139.532	6	.117	6	NC		NC		NC		NC	
74			min	83.143	7	.07	7	NC		NC		NC		NC	
75		3	max	139.532	6	.117	6	NC		NC		NC		NC	
76			min	83.143	7	.07	7	NC		NC		NC		NC	
77		4	max	139.532	6	.117	6	NC		NC		NC		NC	
78			min	83.143	7	.07	7	NC		NC		NC		NC	
79		5	max	139.532	6	.117	6	NC		NC		NC		NC	
80			min	83.143	7	.07	7	NC		NC		NC		NC	
81	M9	1	max	34.434	6	.147	6	NC		NC		NC		NC	
82			min	30.864	7	.132	7	NC		NC		NC		NC	
83		2	max	34.434	6	.147	6	NC		NC		NC		NC	
84			min	30.864	7	.132	7	NC		NC		NC		NC	
85		3	max	34.434	6	.147	6	NC		NC		NC		NC	
86			min	30.864	7	.132	7	NC		NC		NC		NC	
87		4	max	34.434	6	.147	6	NC		NC		NC		NC	
88			min	30.864	7	.132	7	NC		NC		NC		NC	
89		5	max	34.434	6	.147	6	NC		NC		NC		NC	
90			min	30.864	7	.132	7	NC		NC		NC		NC	
91	M10	1	max	10.088	4	.043	4	NC		NC		NC		NC	
92			min	5.736	3	.024	3	NC		NC		NC		NC	
93		2	max	10.088	4	.043	4	NC		NC		NC		NC	
94			min	5.736	3	.024	3	NC		NC		NC		NC	
95		3	max	10.088	4	.043	4	NC		NC		NC		NC	
96			min	5.736	3	.024	3	NC		NC		NC		NC	
97		4	max	10.088	4	.043	4	NC		NC		NC		NC	
98			min	5.736	3	.024	3	NC		NC		NC		NC	
99		5	max	10.088	4	.043	4	NC		NC		NC		NC	
100			min	5.736	3	.024	3	NC		NC		NC		NC	

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
101	M11	1	max	160.961	6	.21	6	NC		NC		NC		NC	
102			min	-36.753	7	-.048	7	NC		NC		NC		NC	
103		2	max	160.961	6	.21	6	NC		NC		NC		NC	
104			min	-36.753	7	-.048	7	NC		NC		NC		NC	
105		3	max	160.961	6	.21	6	NC		NC		NC		NC	
106			min	-36.753	7	-.048	7	NC		NC		NC		NC	
107		4	max	160.961	6	.21	6	NC		NC		NC		NC	
108			min	-36.753	7	-.048	7	NC		NC		NC		NC	
109		5	max	160.961	6	.21	6	NC		NC		NC		NC	
110			min	-36.753	7	-.048	7	NC		NC		NC		NC	
111	M12	1	max	236.032	6	.307	6	NC		NC		NC		NC	
112			min	-63.537	7	-.083	7	NC		NC		NC		NC	
113		2	max	236.032	6	.307	6	NC		NC		NC		NC	
114			min	-63.537	7	-.083	7	NC		NC		NC		NC	
115		3	max	236.032	6	.307	6	NC		NC		NC		NC	
116			min	-63.537	7	-.083	7	NC		NC		NC		NC	
117		4	max	236.032	6	.307	6	NC		NC		NC		NC	
118			min	-63.537	7	-.083	7	NC		NC		NC		NC	
119		5	max	236.032	6	.307	6	NC		NC		NC		NC	
120			min	-63.537	7	-.083	7	NC		NC		NC		NC	
121	M13	1	max	-6	8	-.008	8	NC		NC		NC		NC	
122			min	-418.045	5	-.544	5	NC		NC		NC		NC	
123		2	max	-6	8	-.008	8	NC		NC		NC		NC	
124			min	-418.045	5	-.544	5	NC		NC		NC		NC	
125		3	max	-6	8	-.008	8	NC		NC		NC		NC	
126			min	-418.045	5	-.544	5	NC		NC		NC		NC	
127		4	max	-6	8	-.008	8	NC		NC		NC		NC	
128			min	-418.045	5	-.544	5	NC		NC		NC		NC	
129		5	max	-6	8	-.008	8	NC		NC		NC		NC	
130			min	-418.045	5	-.544	5	NC		NC		NC		NC	
131	M14	1	max	-6	8	-.005	8	NC		NC		NC		NC	
132			min	-418.045	5	-.35	5	NC		NC		NC		NC	
133		2	max	-6	8	-.005	8	NC		NC		NC		NC	
134			min	-418.045	5	-.35	5	NC		NC		NC		NC	
135		3	max	-6	8	-.005	8	NC		NC		NC		NC	
136			min	-418.045	5	-.35	5	NC		NC		NC		NC	
137		4	max	-6	8	-.005	8	NC		NC		NC		NC	
138			min	-418.045	5	-.35	5	NC		NC		NC		NC	
139		5	max	-6	8	-.005	8	NC		NC		NC		NC	
140			min	-418.045	5	-.35	5	NC		NC		NC		NC	
141	M15	1	max	-6	8	-.008	8	NC		NC		NC		NC	
142			min	-418.045	5	-.544	5	NC		NC		NC		NC	
143		2	max	-6	8	-.008	8	NC		NC		NC		NC	
144			min	-418.045	5	-.544	5	NC		NC		NC		NC	
145		3	max	-6	8	-.008	8	NC		NC		NC		NC	
146			min	-418.045	5	-.544	5	NC		NC		NC		NC	
147		4	max	-6	8	-.008	8	NC		NC		NC		NC	
148			min	-418.045	5	-.544	5	NC		NC		NC		NC	
149		5	max	-6	8	-.008	8	NC		NC		NC		NC	
150			min	-418.045	5	-.544	5	NC		NC		NC		NC	
151	M16	1	max	-6	8	-.008	8	NC		NC		NC		NC	
152			min	-418.045	5	-.544	5	NC		NC		NC		NC	
153		2	max	-6	8	-.008	8	NC		NC		NC		NC	
154			min	-418.045	5	-.544	5	NC		NC		NC		NC	
155		3	max	-6	8	-.008	8	NC		NC		NC		NC	
156			min	-418.045	5	-.544	5	NC		NC		NC		NC	
157		4	max	-6	8	-.008	8	NC		NC		NC		NC	

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
158			min	-418.045	5	-.544	5	NC		NC		NC		NC	
159		5	max	-6	8	-.008	8	NC		NC		NC		NC	
160			min	-418.045	5	-.544	5	NC		NC		NC		NC	
161	M17	1	max	-6	8	-.008	8	NC		NC		NC		NC	
162			min	-418.045	5	-.544	5	NC		NC		NC		NC	
163		2	max	-6	8	-.008	8	NC		NC		NC		NC	
164			min	-418.045	5	-.544	5	NC		NC		NC		NC	
165		3	max	-6	8	-.008	8	NC		NC		NC		NC	
166			min	-418.045	5	-.544	5	NC		NC		NC		NC	
167		4	max	-6	8	-.008	8	NC		NC		NC		NC	
168			min	-418.045	5	-.544	5	NC		NC		NC		NC	
169		5	max	-6	8	-.008	8	NC		NC		NC		NC	
170			min	-418.045	5	-.544	5	NC		NC		NC		NC	
171	M18	1	max	780.461	8	1.016	8	NC		NC		NC		NC	
172			min	258.01	5	.336	5	NC		NC		NC		NC	
173		2	max	780.461	8	1.016	8	NC		NC		NC		NC	
174			min	258.01	5	.336	5	NC		NC		NC		NC	
175		3	max	780.461	8	1.016	8	NC		NC		NC		NC	
176			min	258.01	5	.336	5	NC		NC		NC		NC	
177		4	max	780.461	8	1.016	8	NC		NC		NC		NC	
178			min	258.01	5	.336	5	NC		NC		NC		NC	
179		5	max	780.461	8	1.016	8	NC		NC		NC		NC	
180			min	258.01	5	.336	5	NC		NC		NC		NC	
181	M19	1	max	1003.349	5	1.306	5	NC		NC		NC		NC	
182			min	869.702	8	1.132	8	NC		NC		NC		NC	
183		2	max	1003.349	5	1.306	5	NC		NC		NC		NC	
184			min	869.702	8	1.132	8	NC		NC		NC		NC	
185		3	max	1003.349	5	1.306	5	NC		NC		NC		NC	
186			min	869.702	8	1.132	8	NC		NC		NC		NC	
187		4	max	1003.349	5	1.306	5	NC		NC		NC		NC	
188			min	869.702	8	1.132	8	NC		NC		NC		NC	
189		5	max	1003.349	5	1.306	5	NC		NC		NC		NC	
190			min	869.702	8	1.132	8	NC		NC		NC		NC	
191	M20	1	max	892.545	5	1.162	5	NC		NC		NC		NC	
192			min	31.655	8	.041	8	NC		NC		NC		NC	
193		2	max	892.545	5	1.162	5	NC		NC		NC		NC	
194			min	31.655	8	.041	8	NC		NC		NC		NC	
195		3	max	892.545	5	1.162	5	NC		NC		NC		NC	
196			min	31.655	8	.041	8	NC		NC		NC		NC	
197		4	max	892.545	5	1.162	5	NC		NC		NC		NC	
198			min	31.655	8	.041	8	NC		NC		NC		NC	
199		5	max	892.545	5	1.162	5	NC		NC		NC		NC	
200			min	31.655	8	.041	8	NC		NC		NC		NC	
201	M21	1	max	-74.673	8	-.164	8	NC		NC		NC		NC	
202			min	-188.824	5	-.415	5	NC		NC		NC		NC	
203		2	max	-74.673	8	-.164	8	NC		NC		NC		NC	
204			min	-188.824	5	-.415	5	NC		NC		NC		NC	
205		3	max	-74.673	8	-.164	8	NC		NC		NC		NC	
206			min	-188.824	5	-.415	5	NC		NC		NC		NC	
207		4	max	-74.673	8	-.164	8	NC		NC		NC		NC	
208			min	-188.824	5	-.415	5	NC		NC		NC		NC	
209		5	max	-74.673	8	-.164	8	NC		NC		NC		NC	
210			min	-188.824	5	-.415	5	NC		NC		NC		NC	
211	M22	1	max	-74.673	8	-.164	8	NC		NC		NC		NC	
212			min	-188.824	5	-.415	5	NC		NC		NC		NC	
213		2	max	-74.673	8	-.164	8	NC		NC		NC		NC	
214			min	-188.824	5	-.415	5	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
215		3	max	-74.673	8	-.164	8	NC		NC		NC		NC	
216			min	-188.824	5	-.415	5	NC		NC		NC		NC	
217		4	max	-74.673	8	-.164	8	NC		NC		NC		NC	
218			min	-188.824	5	-.415	5	NC		NC		NC		NC	
219		5	max	-74.673	8	-.164	8	NC		NC		NC		NC	
220			min	-188.824	5	-.415	5	NC		NC		NC		NC	
221	M23	1	max	-74.673	8	-.164	8	NC		NC		NC		NC	
222			min	-188.824	5	-.415	5	NC		NC		NC		NC	
223		2	max	-74.673	8	-.164	8	NC		NC		NC		NC	
224			min	-188.824	5	-.415	5	NC		NC		NC		NC	
225		3	max	-74.673	8	-.164	8	NC		NC		NC		NC	
226			min	-188.824	5	-.415	5	NC		NC		NC		NC	
227		4	max	-74.673	8	-.164	8	NC		NC		NC		NC	
228			min	-188.824	5	-.415	5	NC		NC		NC		NC	
229		5	max	-74.673	8	-.164	8	NC		NC		NC		NC	
230			min	-188.824	5	-.415	5	NC		NC		NC		NC	
231	M24	1	max	-74.673	8	-.164	8	NC		NC		NC		NC	
232			min	-188.824	5	-.415	5	NC		NC		NC		NC	
233		2	max	-74.673	8	-.164	8	NC		NC		NC		NC	
234			min	-188.824	5	-.415	5	NC		NC		NC		NC	
235		3	max	-74.673	8	-.164	8	NC		NC		NC		NC	
236			min	-188.824	5	-.415	5	NC		NC		NC		NC	
237		4	max	-74.673	8	-.164	8	NC		NC		NC		NC	
238			min	-188.824	5	-.415	5	NC		NC		NC		NC	
239		5	max	-74.673	8	-.164	8	NC		NC		NC		NC	
240			min	-188.824	5	-.415	5	NC		NC		NC		NC	
241	M25	1	max	130.227	8	.287	8	NC		NC		NC		NC	
242			min	53.888	5	.119	5	NC		NC		NC		NC	
243		2	max	130.227	8	.287	8	NC		NC		NC		NC	
244			min	53.888	5	.119	5	NC		NC		NC		NC	
245		3	max	130.227	8	.287	8	NC		NC		NC		NC	
246			min	53.888	5	.119	5	NC		NC		NC		NC	
247		4	max	130.227	8	.287	8	NC		NC		NC		NC	
248			min	53.888	5	.119	5	NC		NC		NC		NC	
249		5	max	130.227	8	.287	8	NC		NC		NC		NC	
250			min	53.888	5	.119	5	NC		NC		NC		NC	
251	M26	1	max	778.135	7	1.712	7	NC		NC		NC		NC	
252			min	295.53	6	.65	6	NC		NC		NC		NC	
253		2	max	778.135	7	1.712	7	NC		NC		NC		NC	
254			min	295.53	6	.65	6	NC		NC		NC		NC	
255		3	max	778.135	7	1.712	7	NC		NC		NC		NC	
256			min	295.53	6	.65	6	NC		NC		NC		NC	
257		4	max	778.135	7	1.712	7	NC		NC		NC		NC	
258			min	295.53	6	.65	6	NC		NC		NC		NC	
259		5	max	778.135	7	1.712	7	NC		NC		NC		NC	
260			min	295.53	6	.65	6	NC		NC		NC		NC	
261	M29	1	max	0	4	0	1	NC		NC		NC		NC	
262			min	0	1	0	1	NC		NC		NC		NC	
263		2	max	0	4	0	1	NC		NC		NC		NC	
264			min	0	1	0	1	NC		NC		NC		NC	
265		3	max	0	4	0	1	NC		NC		NC		NC	
266			min	0	1	0	1	NC		NC		NC		NC	
267		4	max	0	4	0	1	NC		NC		NC		NC	
268			min	0	1	0	1	NC		NC		NC		NC	
269		5	max	0	4	0	1	NC		NC		NC		NC	
270			min	0	1	0	1	NC		NC		NC		NC	
271	M30	1	max	0	1	0	1	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
272			min	0	1	0	1	NC		NC		NC		NC	
273		2	max	0	1	0	1	NC		NC		NC		NC	
274			min	0	1	0	1	NC		NC		NC		NC	
275		3	max	0	1	0	1	NC		NC		NC		NC	
276			min	0	1	0	1	NC		NC		NC		NC	
277		4	max	0	1	0	1	NC		NC		NC		NC	
278			min	0	1	0	1	NC		NC		NC		NC	
279		5	max	0	1	0	1	NC		NC		NC		NC	
280			min	0	1	0	1	NC		NC		NC		NC	
281	M31	1	max	0	1	0	1	NC		NC		NC		NC	
282			min	0	1	0	1	NC		NC		NC		NC	
283		2	max	0	1	0	1	NC		NC		NC		NC	
284			min	0	1	0	1	NC		NC		NC		NC	
285		3	max	0	1	0	1	NC		NC		NC		NC	
286			min	0	1	0	1	NC		NC		NC		NC	
287		4	max	0	1	0	1	NC		NC		NC		NC	
288			min	0	1	0	1	NC		NC		NC		NC	
289		5	max	0	1	0	1	NC		NC		NC		NC	
290			min	0	1	0	1	NC		NC		NC		NC	
291	M32	1	max	0	1	0	1	NC		NC		NC		NC	
292			min	0	1	0	1	NC		NC		NC		NC	
293		2	max	0	1	0	1	NC		NC		NC		NC	
294			min	0	1	0	1	NC		NC		NC		NC	
295		3	max	0	1	0	1	NC		NC		NC		NC	
296			min	0	1	0	1	NC		NC		NC		NC	
297		4	max	0	1	0	1	NC		NC		NC		NC	
298			min	0	1	0	1	NC		NC		NC		NC	
299		5	max	0	1	0	1	NC		NC		NC		NC	
300			min	0	1	0	1	NC		NC		NC		NC	
301	M33	1	max	0	1	0	1	NC		NC		NC		NC	
302			min	0	1	0	1	NC		NC		NC		NC	
303		2	max	0	1	0	1	NC		NC		NC		NC	
304			min	0	1	0	1	NC		NC		NC		NC	
305		3	max	0	1	0	1	NC		NC		NC		NC	
306			min	0	1	0	1	NC		NC		NC		NC	
307		4	max	0	1	0	1	NC		NC		NC		NC	
308			min	0	1	0	1	NC		NC		NC		NC	
309		5	max	0	1	0	1	NC		NC		NC		NC	
310			min	0	1	0	1	NC		NC		NC		NC	
311	M34	1	max	113.974	7	.095	7	NC		NC		NC		NC	
312			min	-444.321	6	-.372	6	NC		NC		NC		NC	
313		2	max	113.974	7	.095	7	NC		NC		NC		NC	
314			min	-444.321	6	-.372	6	NC		NC		NC		NC	
315		3	max	113.974	7	.095	7	NC		NC		NC		NC	
316			min	-444.321	6	-.372	6	NC		NC		NC		NC	
317		4	max	113.974	7	.095	7	NC		NC		NC		NC	
318			min	-444.321	6	-.372	6	NC		NC		NC		NC	
319		5	max	113.974	7	.095	7	NC		NC		NC		NC	
320			min	-444.321	6	-.372	6	NC		NC		NC		NC	
321	M35	1	max	1091.086	7	1.42	7	NC		NC		NC		NC	
322			min	443.829	6	.578	6	NC		NC		NC		NC	
323		2	max	1091.086	7	1.42	7	NC		NC		NC		NC	
324			min	443.829	6	.578	6	NC		NC		NC		NC	
325		3	max	1091.086	7	1.42	7	NC		NC		NC		NC	
326			min	443.829	6	.578	6	NC		NC		NC		NC	
327		4	max	1091.086	7	1.42	7	NC		NC		NC		NC	
328			min	443.829	6	.578	6	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
329		5	max	1091.086	7	1.42	7	NC		NC		NC		NC	
330			min	443.829	6	.578	6	NC		NC		NC		NC	
331	M36	1	max	650.492	7	.847	7	NC		NC		NC		NC	
332			min	320.911	6	.418	6	NC		NC		NC		NC	
333		2	max	650.492	7	.847	7	NC		NC		NC		NC	
334			min	320.911	6	.418	6	NC		NC		NC		NC	
335		3	max	650.492	7	.847	7	NC		NC		NC		NC	
336			min	320.911	6	.418	6	NC		NC		NC		NC	
337		4	max	650.492	7	.847	7	NC		NC		NC		NC	
338			min	320.911	6	.418	6	NC		NC		NC		NC	
339		5	max	650.492	7	.847	7	NC		NC		NC		NC	
340			min	320.911	6	.418	6	NC		NC		NC		NC	
341	M37	1	max	1207.213	7	1.571	7	NC		NC		NC		NC	
342			min	686.91	6	.894	6	NC		NC		NC		NC	
343		2	max	1207.213	7	1.571	7	NC		NC		NC		NC	
344			min	686.91	6	.894	6	NC		NC		NC		NC	
345		3	max	1207.213	7	1.571	7	NC		NC		NC		NC	
346			min	686.91	6	.894	6	NC		NC		NC		NC	
347		4	max	1207.213	7	1.571	7	NC		NC		NC		NC	
348			min	686.91	6	.894	6	NC		NC		NC		NC	
349		5	max	1207.213	7	1.571	7	NC		NC		NC		NC	
350			min	686.91	6	.894	6	NC		NC		NC		NC	
351	M38	1	max	401.076	7	.522	7	NC		NC		NC		NC	
352			min	274.123	6	.357	6	NC		NC		NC		NC	
353		2	max	401.076	7	.522	7	NC		NC		NC		NC	
354			min	274.123	6	.357	6	NC		NC		NC		NC	
355		3	max	401.076	7	.522	7	NC		NC		NC		NC	
356			min	274.123	6	.357	6	NC		NC		NC		NC	
357		4	max	401.076	7	.522	7	NC		NC		NC		NC	
358			min	274.123	6	.357	6	NC		NC		NC		NC	
359		5	max	401.076	7	.522	7	NC		NC		NC		NC	
360			min	274.123	6	.357	6	NC		NC		NC		NC	
361	M39	1	max	-119.1	6	-.1	6	NC		NC		NC		NC	
362			min	-678.61	7	-.568	7	NC		NC		NC		NC	
363		2	max	-119.1	6	-.1	6	NC		NC		NC		NC	
364			min	-678.61	7	-.568	7	NC		NC		NC		NC	
365		3	max	-119.1	6	-.1	6	NC		NC		NC		NC	
366			min	-678.61	7	-.568	7	NC		NC		NC		NC	
367		4	max	-119.1	6	-.1	6	NC		NC		NC		NC	
368			min	-678.61	7	-.568	7	NC		NC		NC		NC	
369		5	max	-119.1	6	-.1	6	NC		NC		NC		NC	
370			min	-678.61	7	-.568	7	NC		NC		NC		NC	
371	M40	1	max	997.775	8	.835	8	NC		NC		NC		NC	
372			min	472.962	5	.396	5	NC		NC		NC		NC	
373		2	max	997.775	8	.835	8	NC		NC		NC		NC	
374			min	472.962	5	.396	5	NC		NC		NC		NC	
375		3	max	997.775	8	.835	8	NC		NC		NC		NC	
376			min	472.962	5	.396	5	NC		NC		NC		NC	
377		4	max	997.775	8	.835	8	NC		NC		NC		NC	
378			min	472.962	5	.396	5	NC		NC		NC		NC	
379		5	max	997.775	8	.835	8	NC		NC		NC		NC	
380			min	472.962	5	.396	5	NC		NC		NC		NC	
381	M41	1	max	859.916	6	.72	6	NC		NC		NC		NC	
382			min	202.16	7	.169	7	NC		NC		NC		NC	
383		2	max	859.916	6	.72	6	NC		NC		NC		NC	
384			min	202.16	7	.169	7	NC		NC		NC		NC	
385		3	max	859.916	6	.72	6	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
386			min	202.16	7	.169	7	NC		NC		NC		NC	
387		4	max	859.916	6	.72	6	NC		NC		NC		NC	
388			min	202.16	7	.169	7	NC		NC		NC		NC	
389		5	max	859.916	6	.72	6	NC		NC		NC		NC	
390			min	202.16	7	.169	7	NC		NC		NC		NC	
391	M42	1	max	414.335	5	.347	5	NC		NC		NC		NC	
392			min	85.682	8	.072	8	NC		NC		NC		NC	
393		2	max	414.335	5	.347	5	NC		NC		NC		NC	
394			min	85.682	8	.072	8	NC		NC		NC		NC	
395		3	max	414.335	5	.347	5	NC		NC		NC		NC	
396			min	85.682	8	.072	8	NC		NC		NC		NC	
397		4	max	414.335	5	.347	5	NC		NC		NC		NC	
398			min	85.682	8	.072	8	NC		NC		NC		NC	
399		5	max	414.335	5	.347	5	NC		NC		NC		NC	
400			min	85.682	8	.072	8	NC		NC		NC		NC	
401	M43	1	max	414.335	5	.347	5	NC		NC		NC		NC	
402			min	85.682	8	.072	8	NC		NC		NC		NC	
403		2	max	414.335	5	.347	5	NC		NC		NC		NC	
404			min	85.682	8	.072	8	NC		NC		NC		NC	
405		3	max	414.335	5	.347	5	NC		NC		NC		NC	
406			min	85.682	8	.072	8	NC		NC		NC		NC	
407		4	max	414.335	5	.347	5	NC		NC		NC		NC	
408			min	85.682	8	.072	8	NC		NC		NC		NC	
409		5	max	414.335	5	.347	5	NC		NC		NC		NC	
410			min	85.682	8	.072	8	NC		NC		NC		NC	
411	M44	1	max	625.835	6	.524	6	NC		NC		NC		NC	
412			min	294.362	7	.246	7	NC		NC		NC		NC	
413		2	max	625.835	6	.524	6	NC		NC		NC		NC	
414			min	294.362	7	.246	7	NC		NC		NC		NC	
415		3	max	625.835	6	.524	6	NC		NC		NC		NC	
416			min	294.362	7	.246	7	NC		NC		NC		NC	
417		4	max	625.835	6	.524	6	NC		NC		NC		NC	
418			min	294.362	7	.246	7	NC		NC		NC		NC	
419		5	max	625.835	6	.524	6	NC		NC		NC		NC	
420			min	294.362	7	.246	7	NC		NC		NC		NC	
421	M45	1	max	-1531.361	8	-1.282	8	NC		NC		NC		NC	
422			min	-2100.134	5	-1.758	5	NC		NC		NC		NC	
423		2	max	-1531.361	8	-1.282	8	NC		NC		NC		NC	
424			min	-2100.134	5	-1.758	5	NC		NC		NC		NC	
425		3	max	-1531.361	8	-1.282	8	NC		NC		NC		NC	
426			min	-2100.134	5	-1.758	5	NC		NC		NC		NC	
427		4	max	-1531.361	8	-1.282	8	NC		NC		NC		NC	
428			min	-2100.134	5	-1.758	5	NC		NC		NC		NC	
429		5	max	-1531.361	8	-1.282	8	NC		NC		NC		NC	
430			min	-2100.134	5	-1.758	5	NC		NC		NC		NC	
431	M46	1	max	13.131	5	.012	5	NC		NC		NC		NC	
432			min	-1940.3	8	-1.703	8	NC		NC		NC		NC	
433		2	max	13.131	5	.012	5	NC		NC		NC		NC	
434			min	-1940.3	8	-1.703	8	NC		NC		NC		NC	
435		3	max	13.131	5	.012	5	NC		NC		NC		NC	
436			min	-1940.3	8	-1.703	8	NC		NC		NC		NC	
437		4	max	13.131	5	.012	5	NC		NC		NC		NC	
438			min	-1940.3	8	-1.703	8	NC		NC		NC		NC	
439		5	max	13.131	5	.012	5	NC		NC		NC		NC	
440			min	-1940.3	8	-1.703	8	NC		NC		NC		NC	
441	M47	1	max	240.4	5	.211	5	NC		NC		NC		NC	
442			min	-1180.6	8	-1.036	8	NC		NC		NC		NC	

Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
443		2	max	240.4	5	.211	5	NC		NC		NC		NC	
444			min	-1180.6	8	-1.036	8	NC		NC		NC		NC	
445		3	max	240.4	5	.211	5	NC		NC		NC		NC	
446			min	-1180.6	8	-1.036	8	NC		NC		NC		NC	
447		4	max	240.4	5	.211	5	NC		NC		NC		NC	
448			min	-1180.6	8	-1.036	8	NC		NC		NC		NC	
449		5	max	240.4	5	.211	5	NC		NC		NC		NC	
450			min	-1180.6	8	-1.036	8	NC		NC		NC		NC	
451	M48	1	max	530.031	5	.465	5	NC		NC		NC		NC	
452			min	-409.453	8	-.359	8	NC		NC		NC		NC	
453		2	max	530.031	5	.465	5	NC		NC		NC		NC	
454			min	-409.453	8	-.359	8	NC		NC		NC		NC	
455		3	max	530.031	5	.465	5	NC		NC		NC		NC	
456			min	-409.453	8	-.359	8	NC		NC		NC		NC	
457		4	max	530.031	5	.465	5	NC		NC		NC		NC	
458			min	-409.453	8	-.359	8	NC		NC		NC		NC	
459		5	max	530.031	5	.465	5	NC		NC		NC		NC	
460			min	-409.453	8	-.359	8	NC		NC		NC		NC	
461	M49	1	max	781.78	7	.686	7	NC		NC		NC		NC	
462			min	-30.646	6	-.027	6	NC		NC		NC		NC	
463		2	max	781.78	7	.686	7	NC		NC		NC		NC	
464			min	-30.646	6	-.027	6	NC		NC		NC		NC	
465		3	max	781.78	7	.686	7	NC		NC		NC		NC	
466			min	-30.646	6	-.027	6	NC		NC		NC		NC	
467		4	max	781.78	7	.686	7	NC		NC		NC		NC	
468			min	-30.646	6	-.027	6	NC		NC		NC		NC	
469		5	max	781.78	7	.686	7	NC		NC		NC		NC	
470			min	-30.646	6	-.027	6	NC		NC		NC		NC	
471	M50	1	max	115.607	7	.101	7	NC		NC		NC		NC	
472			min	-140.129	6	-.123	6	NC		NC		NC		NC	
473		2	max	115.607	7	.101	7	NC		NC		NC		NC	
474			min	-140.129	6	-.123	6	NC		NC		NC		NC	
475		3	max	115.607	7	.101	7	NC		NC		NC		NC	
476			min	-140.129	6	-.123	6	NC		NC		NC		NC	
477		4	max	115.607	7	.101	7	NC		NC		NC		NC	
478			min	-140.129	6	-.123	6	NC		NC		NC		NC	
479		5	max	115.607	7	.101	7	NC		NC		NC		NC	
480			min	-140.129	6	-.123	6	NC		NC		NC		NC	
481	M51	1	max	1313.992	4	1.153	4	NC		NC		NC		NC	
482			min	1103.694	3	.969	3	NC		NC		NC		NC	
483		2	max	1313.992	4	1.153	4	NC		NC		NC		NC	
484			min	1103.694	3	.969	3	NC		NC		NC		NC	
485		3	max	1313.992	4	1.153	4	NC		NC		NC		NC	
486			min	1103.694	3	.969	3	NC		NC		NC		NC	
487		4	max	1313.992	4	1.153	4	NC		NC		NC		NC	
488			min	1103.694	3	.969	3	NC		NC		NC		NC	
489		5	max	1313.992	4	1.153	4	NC		NC		NC		NC	
490			min	1103.694	3	.969	3	NC		NC		NC		NC	
491	M52	1	max	1313.992	4	1.153	4	NC		NC		NC		NC	
492			min	1103.694	3	.969	3	NC		NC		NC		NC	
493		2	max	1313.992	4	1.153	4	NC		NC		NC		NC	
494			min	1103.694	3	.969	3	NC		NC		NC		NC	
495		3	max	1313.992	4	1.153	4	NC		NC		NC		NC	
496			min	1103.694	3	.969	3	NC		NC		NC		NC	
497		4	max	1313.992	4	1.153	4	NC		NC		NC		NC	
498			min	1103.694	3	.969	3	NC		NC		NC		NC	
499		5	max	1313.992	4	1.153	4	NC		NC		NC		NC	

Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
500			min	1103.694	3	.969	3	NC		NC		NC		NC	
501	M53	1	max	625.175	5	.549	5	NC		NC		NC		NC	
502			min	-16.984	8	-.015	8	NC		NC		NC		NC	
503		2	max	625.175	5	.549	5	NC		NC		NC		NC	
504			min	-16.984	8	-.015	8	NC		NC		NC		NC	
505		3	max	625.175	5	.549	5	NC		NC		NC		NC	
506			min	-16.984	8	-.015	8	NC		NC		NC		NC	
507		4	max	625.175	5	.549	5	NC		NC		NC		NC	
508			min	-16.984	8	-.015	8	NC		NC		NC		NC	
509		5	max	625.175	5	.549	5	NC		NC		NC		NC	
510			min	-16.984	8	-.015	8	NC		NC		NC		NC	
511	M54	1	max	1028.609	7	.903	7	NC		NC		NC		NC	
512			min	956.93	6	.84	6	NC		NC		NC		NC	
513		2	max	1028.609	7	.903	7	NC		NC		NC		NC	
514			min	956.93	6	.84	6	NC		NC		NC		NC	
515		3	max	1028.609	7	.903	7	NC		NC		NC		NC	
516			min	956.93	6	.84	6	NC		NC		NC		NC	
517		4	max	1028.609	7	.903	7	NC		NC		NC		NC	
518			min	956.93	6	.84	6	NC		NC		NC		NC	
519		5	max	1028.609	7	.903	7	NC		NC		NC		NC	
520			min	956.93	6	.84	6	NC		NC		NC		NC	
521	M55	1	max	1028.609	7	.903	7	NC		NC		NC		NC	
522			min	956.93	6	.84	6	NC		NC		NC		NC	
523		2	max	1028.609	7	.903	7	NC		NC		NC		NC	
524			min	956.93	6	.84	6	NC		NC		NC		NC	
525		3	max	1028.609	7	.903	7	NC		NC		NC		NC	
526			min	956.93	6	.84	6	NC		NC		NC		NC	
527		4	max	1028.609	7	.903	7	NC		NC		NC		NC	
528			min	956.93	6	.84	6	NC		NC		NC		NC	
529		5	max	1028.609	7	.903	7	NC		NC		NC		NC	
530			min	956.93	6	.84	6	NC		NC		NC		NC	
531	M56	1	max	-935.256	8	-.821	8	NC		NC		NC		NC	
532			min	-1045.519	5	-.918	5	NC		NC		NC		NC	
533		2	max	-935.256	8	-.821	8	NC		NC		NC		NC	
534			min	-1045.519	5	-.918	5	NC		NC		NC		NC	
535		3	max	-935.256	8	-.821	8	NC		NC		NC		NC	
536			min	-1045.519	5	-.918	5	NC		NC		NC		NC	
537		4	max	-935.256	8	-.821	8	NC		NC		NC		NC	
538			min	-1045.519	5	-.918	5	NC		NC		NC		NC	
539		5	max	-935.256	8	-.821	8	NC		NC		NC		NC	
540			min	-1045.519	5	-.918	5	NC		NC		NC		NC	
541	M57	1	max	29.034	1	.01	1	NC		NC		NC		NC	
542			min	-29.034	2	-.01	2	NC		NC		NC		NC	
543		2	max	29.034	1	.01	1	NC		NC		NC		NC	
544			min	-29.034	2	-.01	2	NC		NC		NC		NC	
545		3	max	29.034	1	.01	1	NC		NC		NC		NC	
546			min	-29.034	2	-.01	2	NC		NC		NC		NC	
547		4	max	29.034	1	.01	1	NC		NC		NC		NC	
548			min	-29.034	2	-.01	2	NC		NC		NC		NC	
549		5	max	29.034	1	.01	1	NC		NC		NC		NC	
550			min	-29.034	2	-.01	2	NC		NC		NC		NC	
551	M58	1	max	384.329	2	.126	2	NC		NC		NC		NC	
552			min	-384.325	1	-.126	1	NC		NC		NC		NC	
553		2	max	384.329	2	.126	2	NC		NC		NC		NC	
554			min	-384.325	1	-.126	1	NC		NC		NC		NC	
555		3	max	384.329	2	.126	2	NC		NC		NC		NC	
556			min	-384.325	1	-.126	1	NC		NC		NC		NC	

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
557		4	max	384.329	2	.126	2	NC		NC		NC		NC	
558			min	-384.325	1	-.126	1	NC		NC		NC		NC	
559		5	max	384.329	2	.126	2	NC		NC		NC		NC	
560			min	-384.325	1	-.126	1	NC		NC		NC		NC	
561	M59	1	max	-41.869	2	-.014	2	NC		NC		NC		NC	
562			min	-317.552	1	-.104	1	NC		NC		NC		NC	
563		2	max	-41.869	2	-.014	2	NC		NC		NC		NC	
564			min	-317.552	1	-.104	1	NC		NC		NC		NC	
565		3	max	-41.869	2	-.014	2	NC		NC		NC		NC	
566			min	-317.552	1	-.104	1	NC		NC		NC		NC	
567		4	max	-41.869	2	-.014	2	NC		NC		NC		NC	
568			min	-317.552	1	-.104	1	NC		NC		NC		NC	
569		5	max	-41.869	2	-.014	2	NC		NC		NC		NC	
570			min	-317.552	1	-.104	1	NC		NC		NC		NC	
571	M60	1	max	317.554	2	.104	2	NC		NC		NC		NC	
572			min	41.871	1	.014	1	NC		NC		NC		NC	
573		2	max	317.554	2	.104	2	NC		NC		NC		NC	
574			min	41.871	1	.014	1	NC		NC		NC		NC	
575		3	max	317.554	2	.104	2	NC		NC		NC		NC	
576			min	41.871	1	.014	1	NC		NC		NC		NC	
577		4	max	317.554	2	.104	2	NC		NC		NC		NC	
578			min	41.871	1	.014	1	NC		NC		NC		NC	
579		5	max	317.554	2	.104	2	NC		NC		NC		NC	
580			min	41.871	1	.014	1	NC		NC		NC		NC	
581	M61	1	max	384.33	2	.126	2	NC		NC		NC		NC	
582			min	-384.324	1	-.126	1	NC		NC		NC		NC	
583		2	max	384.33	2	.126	2	NC		NC		NC		NC	
584			min	-384.324	1	-.126	1	NC		NC		NC		NC	
585		3	max	384.33	2	.126	2	NC		NC		NC		NC	
586			min	-384.324	1	-.126	1	NC		NC		NC		NC	
587		4	max	384.33	2	.126	2	NC		NC		NC		NC	
588			min	-384.324	1	-.126	1	NC		NC		NC		NC	
589		5	max	384.33	2	.126	2	NC		NC		NC		NC	
590			min	-384.324	1	-.126	1	NC		NC		NC		NC	
591	M62	1	max	-241.657	2	-.079	2	NC		NC		NC		NC	
592			min	-435.95	1	-.143	1	NC		NC		NC		NC	
593		2	max	-241.657	2	-.079	2	NC		NC		NC		NC	
594			min	-435.95	1	-.143	1	NC		NC		NC		NC	
595		3	max	-241.657	2	-.079	2	NC		NC		NC		NC	
596			min	-435.95	1	-.143	1	NC		NC		NC		NC	
597		4	max	-241.657	2	-.079	2	NC		NC		NC		NC	
598			min	-435.95	1	-.143	1	NC		NC		NC		NC	
599		5	max	-241.657	2	-.079	2	NC		NC		NC		NC	
600			min	-435.95	1	-.143	1	NC		NC		NC		NC	
601	M63	1	max	211.907	2	.069	2	NC		NC		NC		NC	
602			min	14.418	1	.005	1	NC		NC		NC		NC	
603		2	max	211.907	2	.069	2	NC		NC		NC		NC	
604			min	14.418	1	.005	1	NC		NC		NC		NC	
605		3	max	211.907	2	.069	2	NC		NC		NC		NC	
606			min	14.418	1	.005	1	NC		NC		NC		NC	
607		4	max	211.907	2	.069	2	NC		NC		NC		NC	
608			min	14.418	1	.005	1	NC		NC		NC		NC	
609		5	max	211.907	2	.069	2	NC		NC		NC		NC	
610			min	14.418	1	.005	1	NC		NC		NC		NC	
611	M64	1	max	435.951	2	.143	2	NC		NC		NC		NC	
612			min	241.659	1	.079	1	NC		NC		NC		NC	
613		2	max	435.951	2	.143	2	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
614			min	241.659	1	.079	1	NC		NC		NC		NC	
615		3	max	435.951	2	.143	2	NC		NC		NC		NC	
616			min	241.659	1	.079	1	NC		NC		NC		NC	
617		4	max	435.951	2	.143	2	NC		NC		NC		NC	
618			min	241.659	1	.079	1	NC		NC		NC		NC	
619		5	max	435.951	2	.143	2	NC		NC		NC		NC	
620			min	241.659	1	.079	1	NC		NC		NC		NC	
621	M65	1	max	-14.416	2	-.005	2	NC		NC		NC		NC	
622			min	-211.906	1	-.069	1	NC		NC		NC		NC	
623		2	max	-14.416	2	-.005	2	NC		NC		NC		NC	
624			min	-211.906	1	-.069	1	NC		NC		NC		NC	
625		3	max	-14.416	2	-.005	2	NC		NC		NC		NC	
626			min	-211.906	1	-.069	1	NC		NC		NC		NC	
627		4	max	-14.416	2	-.005	2	NC		NC		NC		NC	
628			min	-211.906	1	-.069	1	NC		NC		NC		NC	
629		5	max	-14.416	2	-.005	2	NC		NC		NC		NC	
630			min	-211.906	1	-.069	1	NC		NC		NC		NC	
631	M66	1	max	384.33	2	.126	2	NC		NC		NC		NC	
632			min	-384.324	1	-.126	1	NC		NC		NC		NC	
633		2	max	384.33	2	.126	2	NC		NC		NC		NC	
634			min	-384.324	1	-.126	1	NC		NC		NC		NC	
635		3	max	384.33	2	.126	2	NC		NC		NC		NC	
636			min	-384.324	1	-.126	1	NC		NC		NC		NC	
637		4	max	384.33	2	.126	2	NC		NC		NC		NC	
638			min	-384.324	1	-.126	1	NC		NC		NC		NC	
639		5	max	384.33	2	.126	2	NC		NC		NC		NC	
640			min	-384.324	1	-.126	1	NC		NC		NC		NC	
641	M67	1	max	872.092	8	.286	8	NC		NC		NC		NC	
642			min	-872.071	5	-.286	5	NC		NC		NC		NC	
643		2	max	872.092	8	.286	8	NC		NC		NC		NC	
644			min	-872.071	5	-.286	5	NC		NC		NC		NC	
645		3	max	872.092	8	.286	8	NC		NC		NC		NC	
646			min	-872.071	5	-.286	5	NC		NC		NC		NC	
647		4	max	872.092	8	.286	8	NC		NC		NC		NC	
648			min	-872.071	5	-.286	5	NC		NC		NC		NC	
649		5	max	872.092	8	.286	8	NC		NC		NC		NC	
650			min	-872.071	5	-.286	5	NC		NC		NC		NC	
651	M68	1	max	-211.895	8	-.069	8	NC		NC		NC		NC	
652			min	-1303.365	5	-.427	5	NC		NC		NC		NC	
653		2	max	-211.895	8	-.069	8	NC		NC		NC		NC	
654			min	-1303.365	5	-.427	5	NC		NC		NC		NC	
655		3	max	-211.895	8	-.069	8	NC		NC		NC		NC	
656			min	-1303.365	5	-.427	5	NC		NC		NC		NC	
657		4	max	-211.895	8	-.069	8	NC		NC		NC		NC	
658			min	-1303.365	5	-.427	5	NC		NC		NC		NC	
659		5	max	-211.895	8	-.069	8	NC		NC		NC		NC	
660			min	-1303.365	5	-.427	5	NC		NC		NC		NC	
661	M69	1	max	-1083.896	7	-.355	7	NC		NC		NC		NC	
662			min	-1879.512	6	-.616	6	NC		NC		NC		NC	
663		2	max	-1083.896	7	-.355	7	NC		NC		NC		NC	
664			min	-1879.512	6	-.616	6	NC		NC		NC		NC	
665		3	max	-1083.896	7	-.355	7	NC		NC		NC		NC	
666			min	-1879.512	6	-.616	6	NC		NC		NC		NC	
667		4	max	-1083.896	7	-.355	7	NC		NC		NC		NC	
668			min	-1879.512	6	-.616	6	NC		NC		NC		NC	
669		5	max	-1083.896	7	-.355	7	NC		NC		NC		NC	
670			min	-1879.512	6	-.616	6	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
671	M70	1	max	-1713.993	7	-.562	7	NC		NC		NC		NC	
672			min	-2480.349	6	-.813	6	NC		NC		NC		NC	
673		2	max	-1713.993	7	-.562	7	NC		NC		NC		NC	
674			min	-2480.349	6	-.813	6	NC		NC		NC		NC	
675		3	max	-1713.993	7	-.562	7	NC		NC		NC		NC	
676			min	-2480.349	6	-.813	6	NC		NC		NC		NC	
677		4	max	-1713.993	7	-.562	7	NC		NC		NC		NC	
678			min	-2480.349	6	-.813	6	NC		NC		NC		NC	
679		5	max	-1713.993	7	-.562	7	NC		NC		NC		NC	
680			min	-2480.349	6	-.813	6	NC		NC		NC		NC	
681	M71	1	max	-925.473	7	-.183	7	NC		NC		NC		NC	
682			min	-2517.459	6	-.499	6	NC		NC		NC		NC	
683		2	max	-925.473	7	-.183	7	NC		NC		NC		NC	
684			min	-2517.459	6	-.499	6	NC		NC		NC		NC	
685		3	max	-925.473	7	-.183	7	NC		NC		NC		NC	
686			min	-2517.459	6	-.499	6	NC		NC		NC		NC	
687		4	max	-925.473	7	-.183	7	NC		NC		NC		NC	
688			min	-2517.459	6	-.499	6	NC		NC		NC		NC	
689		5	max	-925.473	7	-.183	7	NC		NC		NC		NC	
690			min	-2517.459	6	-.499	6	NC		NC		NC		NC	
691	M80	1	max	0	1	0	1	NC		NC		NC		NC	
692			min	0	1	0	1	NC		NC		NC		NC	
693		2	max	0	1	0	1	NC		NC		NC		NC	
694			min	0	1	0	1	NC		NC		NC		NC	
695		3	max	0	1	0	1	NC		NC		NC		NC	
696			min	0	1	0	1	NC		NC		NC		NC	
697		4	max	0	1	0	1	NC		NC		NC		NC	
698			min	0	1	0	1	NC		NC		NC		NC	
699		5	max	0	1	0	1	NC		NC		NC		NC	
700			min	0	1	0	1	NC		NC		NC		NC	
701	M81	1	max	109.312	7	.091	7	NC		NC		NC		NC	
702			min	-371.703	6	-.311	6	NC		NC		NC		NC	
703		2	max	109.312	7	.091	7	NC		NC		NC		NC	
704			min	-371.703	6	-.311	6	NC		NC		NC		NC	
705		3	max	109.312	7	.091	7	NC		NC		NC		NC	
706			min	-371.703	6	-.311	6	NC		NC		NC		NC	
707		4	max	109.312	7	.091	7	NC		NC		NC		NC	
708			min	-371.703	6	-.311	6	NC		NC		NC		NC	
709		5	max	109.312	7	.091	7	NC		NC		NC		NC	
710			min	-371.703	6	-.311	6	NC		NC		NC		NC	
711	M82	1	max	371.703	6	.311	6	NC		NC		NC		NC	
712			min	-109.312	7	-.091	7	NC		NC		NC		NC	
713		2	max	371.703	6	.311	6	NC		NC		NC		NC	
714			min	-109.312	7	-.091	7	NC		NC		NC		NC	
715		3	max	371.703	6	.311	6	NC		NC		NC		NC	
716			min	-109.312	7	-.091	7	NC		NC		NC		NC	
717		4	max	371.703	6	.311	6	NC		NC		NC		NC	
718			min	-109.312	7	-.091	7	NC		NC		NC		NC	
719		5	max	371.703	6	.311	6	NC		NC		NC		NC	
720			min	-109.312	7	-.091	7	NC		NC		NC		NC	
721	M83	1	max	457.131	6	.383	6	NC		NC		NC		NC	
722			min	-219.491	7	-.184	7	NC		NC		NC		NC	
723		2	max	457.131	6	.383	6	NC		NC		NC		NC	
724			min	-219.491	7	-.184	7	NC		NC		NC		NC	
725		3	max	457.131	6	.383	6	NC		NC		NC		NC	
726			min	-219.491	7	-.184	7	NC		NC		NC		NC	
727		4	max	457.131	6	.383	6	NC		NC		NC		NC	

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
728			min	-219.491	7	-.184	7	NC		NC		NC		NC	
729		5	max	457.131	6	.383	6	NC		NC		NC		NC	
730			min	-219.491	7	-.184	7	NC		NC		NC		NC	
731	M84	1	max	219.491	7	.184	7	NC		NC		NC		NC	
732			min	-457.131	6	-.383	6	NC		NC		NC		NC	
733		2	max	219.491	7	.184	7	NC		NC		NC		NC	
734			min	-457.131	6	-.383	6	NC		NC		NC		NC	
735		3	max	219.491	7	.184	7	NC		NC		NC		NC	
736			min	-457.131	6	-.383	6	NC		NC		NC		NC	
737		4	max	219.491	7	.184	7	NC		NC		NC		NC	
738			min	-457.131	6	-.383	6	NC		NC		NC		NC	
739		5	max	219.491	7	.184	7	NC		NC		NC		NC	
740			min	-457.131	6	-.383	6	NC		NC		NC		NC	
741	M85	1	max	11.733	6	.01	6	NC		NC		NC		NC	
742			min	-15.133	7	-.013	7	NC		NC		NC		NC	
743		2	max	11.733	6	.01	6	NC		NC		NC		NC	
744			min	-15.133	7	-.013	7	NC		NC		NC		NC	
745		3	max	11.733	6	.01	6	NC		NC		NC		NC	
746			min	-15.133	7	-.013	7	NC		NC		NC		NC	
747		4	max	11.733	6	.01	6	NC		NC		NC		NC	
748			min	-15.133	7	-.013	7	NC		NC		NC		NC	
749		5	max	11.733	6	.01	6	NC		NC		NC		NC	
750			min	-15.133	7	-.013	7	NC		NC		NC		NC	
751	M86	1	max	15.133	7	.013	7	NC		NC		NC		NC	
752			min	-11.733	6	-.01	6	NC		NC		NC		NC	
753		2	max	15.133	7	.013	7	NC		NC		NC		NC	
754			min	-11.733	6	-.01	6	NC		NC		NC		NC	
755		3	max	15.133	7	.013	7	NC		NC		NC		NC	
756			min	-11.733	6	-.01	6	NC		NC		NC		NC	
757		4	max	15.133	7	.013	7	NC		NC		NC		NC	
758			min	-11.733	6	-.01	6	NC		NC		NC		NC	
759		5	max	15.133	7	.013	7	NC		NC		NC		NC	
760			min	-11.733	6	-.01	6	NC		NC		NC		NC	
761	M87	1	max	506.461	7	.659	7	NC		NC		NC		NC	
762			min	-562.573	6	-.732	6	NC		NC		NC		NC	
763		2	max	506.461	7	.659	7	NC		NC		NC		NC	
764			min	-562.573	6	-.732	6	NC		NC		NC		NC	
765		3	max	506.461	7	.659	7	NC		NC		NC		NC	
766			min	-562.573	6	-.732	6	NC		NC		NC		NC	
767		4	max	506.461	7	.659	7	NC		NC		NC		NC	
768			min	-562.573	6	-.732	6	NC		NC		NC		NC	
769		5	max	506.461	7	.659	7	NC		NC		NC		NC	
770			min	-562.573	6	-.732	6	NC		NC		NC		NC	
771	M88	1	max	1211.078	7	1.576	7	NC		NC		NC		NC	
772			min	-691.838	6	-.901	6	NC		NC		NC		NC	
773		2	max	1211.078	7	1.576	7	NC		NC		NC		NC	
774			min	-691.838	6	-.901	6	NC		NC		NC		NC	
775		3	max	1211.078	7	1.576	7	NC		NC		NC		NC	
776			min	-691.838	6	-.901	6	NC		NC		NC		NC	
777		4	max	1211.078	7	1.576	7	NC		NC		NC		NC	
778			min	-691.838	6	-.901	6	NC		NC		NC		NC	
779		5	max	1211.078	7	1.576	7	NC		NC		NC		NC	
780			min	-691.838	6	-.901	6	NC		NC		NC		NC	
781	M89	1	max	1588.468	7	2.068	7	NC		NC		NC		NC	
782			min	-676.104	6	-.88	6	NC		NC		NC		NC	
783		2	max	1588.468	7	2.068	7	NC		NC		NC		NC	
784			min	-676.104	6	-.88	6	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
785		3	max	1588.468	7	2.068	7	NC		NC		NC		NC	
786			min	-676.104	6	-.88	6	NC		NC		NC		NC	
787		4	max	1588.468	7	2.068	7	NC		NC		NC		NC	
788			min	-676.104	6	-.88	6	NC		NC		NC		NC	
789		5	max	1588.468	7	2.068	7	NC		NC		NC		NC	
790			min	-676.104	6	-.88	6	NC		NC		NC		NC	
791	M90	1	max	1727.8	7	2.249	7	NC		NC		NC		NC	
792			min	-570.018	6	-.742	6	NC		NC		NC		NC	
793		2	max	1727.8	7	2.249	7	NC		NC		NC		NC	
794			min	-570.018	6	-.742	6	NC		NC		NC		NC	
795		3	max	1727.8	7	2.249	7	NC		NC		NC		NC	
796			min	-570.018	6	-.742	6	NC		NC		NC		NC	
797		4	max	1727.8	7	2.249	7	NC		NC		NC		NC	
798			min	-570.018	6	-.742	6	NC		NC		NC		NC	
799		5	max	1727.8	7	2.249	7	NC		NC		NC		NC	
800			min	-570.018	6	-.742	6	NC		NC		NC		NC	
801	M91	1	max	702.447	7	.914	7	NC		NC		NC		NC	
802			min	354.431	6	.461	6	NC		NC		NC		NC	
803		2	max	702.447	7	.914	7	NC		NC		NC		NC	
804			min	354.431	6	.461	6	NC		NC		NC		NC	
805		3	max	702.447	7	.914	7	NC		NC		NC		NC	
806			min	354.431	6	.461	6	NC		NC		NC		NC	
807		4	max	702.447	7	.914	7	NC		NC		NC		NC	
808			min	354.431	6	.461	6	NC		NC		NC		NC	
809		5	max	702.447	7	.914	7	NC		NC		NC		NC	
810			min	354.431	6	.461	6	NC		NC		NC		NC	
811	M92	1	max	735.306	7	.957	7	NC		NC		NC		NC	
812			min	390.738	6	.509	6	NC		NC		NC		NC	
813		2	max	735.306	7	.957	7	NC		NC		NC		NC	
814			min	390.738	6	.509	6	NC		NC		NC		NC	
815		3	max	735.306	7	.957	7	NC		NC		NC		NC	
816			min	390.738	6	.509	6	NC		NC		NC		NC	
817		4	max	735.306	7	.957	7	NC		NC		NC		NC	
818			min	390.738	6	.509	6	NC		NC		NC		NC	
819		5	max	735.306	7	.957	7	NC		NC		NC		NC	
820			min	390.738	6	.509	6	NC		NC		NC		NC	
821	M93	1	max	666.772	7	.868	7	NC		NC		NC		NC	
822			min	378.109	6	.492	6	NC		NC		NC		NC	
823		2	max	666.772	7	.868	7	NC		NC		NC		NC	
824			min	378.109	6	.492	6	NC		NC		NC		NC	
825		3	max	666.772	7	.868	7	NC		NC		NC		NC	
826			min	378.109	6	.492	6	NC		NC		NC		NC	
827		4	max	666.772	7	.868	7	NC		NC		NC		NC	
828			min	378.109	6	.492	6	NC		NC		NC		NC	
829		5	max	666.772	7	.868	7	NC		NC		NC		NC	
830			min	378.109	6	.492	6	NC		NC		NC		NC	
831	M94	1	max	506.94	7	.66	7	NC		NC		NC		NC	
832			min	318.127	6	.414	6	NC		NC		NC		NC	
833		2	max	506.94	7	.66	7	NC		NC		NC		NC	
834			min	318.127	6	.414	6	NC		NC		NC		NC	
835		3	max	506.94	7	.66	7	NC		NC		NC		NC	
836			min	318.127	6	.414	6	NC		NC		NC		NC	
837		4	max	506.94	7	.66	7	NC		NC		NC		NC	
838			min	318.127	6	.414	6	NC		NC		NC		NC	
839		5	max	506.94	7	.66	7	NC		NC		NC		NC	
840			min	318.127	6	.414	6	NC		NC		NC		NC	
841	M95	1	max	1206.484	7	1.01	7	NC		NC		NC		NC	

Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
842			min	686.956	6	.575	6	NC		NC		NC		NC	
843		2	max	1206.484	7	1.01	7	NC		NC		NC		NC	
844			min	686.956	6	.575	6	NC		NC		NC		NC	
845		3	max	1206.484	7	1.01	7	NC		NC		NC		NC	
846			min	686.956	6	.575	6	NC		NC		NC		NC	
847		4	max	1206.484	7	1.01	7	NC		NC		NC		NC	
848			min	686.956	6	.575	6	NC		NC		NC		NC	
849		5	max	1206.484	7	1.01	7	NC		NC		NC		NC	
850			min	686.956	6	.575	6	NC		NC		NC		NC	
851	M96	1	max	-687.343	6	-.575	6	NC		NC		NC		NC	
852			min	-992.905	7	-.831	7	NC		NC		NC		NC	
853		2	max	-687.343	6	-.575	6	NC		NC		NC		NC	
854			min	-992.905	7	-.831	7	NC		NC		NC		NC	
855		3	max	-687.343	6	-.575	6	NC		NC		NC		NC	
856			min	-992.905	7	-.831	7	NC		NC		NC		NC	
857		4	max	-687.343	6	-.575	6	NC		NC		NC		NC	
858			min	-992.905	7	-.831	7	NC		NC		NC		NC	
859		5	max	-687.343	6	-.575	6	NC		NC		NC		NC	
860			min	-992.905	7	-.831	7	NC		NC		NC		NC	
861	M97	1	max	-687.343	6	-.575	6	NC		NC		NC		NC	
862			min	-992.905	7	-.831	7	NC		NC		NC		NC	
863		2	max	-687.343	6	-.575	6	NC		NC		NC		NC	
864			min	-992.905	7	-.831	7	NC		NC		NC		NC	
865		3	max	-687.343	6	-.575	6	NC		NC		NC		NC	
866			min	-992.905	7	-.831	7	NC		NC		NC		NC	
867		4	max	-687.343	6	-.575	6	NC		NC		NC		NC	
868			min	-992.905	7	-.831	7	NC		NC		NC		NC	
869		5	max	-687.343	6	-.575	6	NC		NC		NC		NC	
870			min	-992.905	7	-.831	7	NC		NC		NC		NC	
871	M98	1	max	-687.343	6	-.575	6	NC		NC		NC		NC	
872			min	-992.905	7	-.831	7	NC		NC		NC		NC	
873		2	max	-687.343	6	-.575	6	NC		NC		NC		NC	
874			min	-992.905	7	-.831	7	NC		NC		NC		NC	
875		3	max	-687.343	6	-.575	6	NC		NC		NC		NC	
876			min	-992.905	7	-.831	7	NC		NC		NC		NC	
877		4	max	-687.343	6	-.575	6	NC		NC		NC		NC	
878			min	-992.905	7	-.831	7	NC		NC		NC		NC	
879		5	max	-687.343	6	-.575	6	NC		NC		NC		NC	
880			min	-992.905	7	-.831	7	NC		NC		NC		NC	
881	M99	1	max	-687.343	6	-.575	6	NC		NC		NC		NC	
882			min	-992.905	7	-.831	7	NC		NC		NC		NC	
883		2	max	-687.343	6	-.575	6	NC		NC		NC		NC	
884			min	-992.905	7	-.831	7	NC		NC		NC		NC	
885		3	max	-687.343	6	-.575	6	NC		NC		NC		NC	
886			min	-992.905	7	-.831	7	NC		NC		NC		NC	
887		4	max	-687.343	6	-.575	6	NC		NC		NC		NC	
888			min	-992.905	7	-.831	7	NC		NC		NC		NC	
889		5	max	-687.343	6	-.575	6	NC		NC		NC		NC	
890			min	-992.905	7	-.831	7	NC		NC		NC		NC	
891	M100	1	max	897.442	7	.751	7	NC		NC		NC		NC	
892			min	615.192	6	.515	6	NC		NC		NC		NC	
893		2	max	897.442	7	.751	7	NC		NC		NC		NC	
894			min	615.192	6	.515	6	NC		NC		NC		NC	
895		3	max	897.442	7	.751	7	NC		NC		NC		NC	
896			min	615.192	6	.515	6	NC		NC		NC		NC	
897		4	max	897.442	7	.751	7	NC		NC		NC		NC	
898			min	615.192	6	.515	6	NC		NC		NC		NC	

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
899		5	max	897.442	7	.751	7	NC		NC		NC		NC	
900			min	615.192	6	.515	6	NC		NC		NC		NC	
901	M101	1	max	897.442	7	.751	7	NC		NC		NC		NC	
902			min	615.192	6	.515	6	NC		NC		NC		NC	
903		2	max	897.442	7	.751	7	NC		NC		NC		NC	
904			min	615.192	6	.515	6	NC		NC		NC		NC	
905		3	max	897.442	7	.751	7	NC		NC		NC		NC	
906			min	615.192	6	.515	6	NC		NC		NC		NC	
907		4	max	897.442	7	.751	7	NC		NC		NC		NC	
908			min	615.192	6	.515	6	NC		NC		NC		NC	
909		5	max	897.442	7	.751	7	NC		NC		NC		NC	
910			min	615.192	6	.515	6	NC		NC		NC		NC	
911	M102	1	max	897.442	7	.751	7	NC		NC		NC		NC	
912			min	615.192	6	.515	6	NC		NC		NC		NC	
913		2	max	897.442	7	.751	7	NC		NC		NC		NC	
914			min	615.192	6	.515	6	NC		NC		NC		NC	
915		3	max	897.442	7	.751	7	NC		NC		NC		NC	
916			min	615.192	6	.515	6	NC		NC		NC		NC	
917		4	max	897.442	7	.751	7	NC		NC		NC		NC	
918			min	615.192	6	.515	6	NC		NC		NC		NC	
919		5	max	897.442	7	.751	7	NC		NC		NC		NC	
920			min	615.192	6	.515	6	NC		NC		NC		NC	
921	M103	1	max	897.442	7	.751	7	NC		NC		NC		NC	
922			min	615.192	6	.515	6	NC		NC		NC		NC	
923		2	max	897.442	7	.751	7	NC		NC		NC		NC	
924			min	615.192	6	.515	6	NC		NC		NC		NC	
925		3	max	897.442	7	.751	7	NC		NC		NC		NC	
926			min	615.192	6	.515	6	NC		NC		NC		NC	
927		4	max	897.442	7	.751	7	NC		NC		NC		NC	
928			min	615.192	6	.515	6	NC		NC		NC		NC	
929		5	max	897.442	7	.751	7	NC		NC		NC		NC	
930			min	615.192	6	.515	6	NC		NC		NC		NC	
931	M104	1	max	826.314	7	.692	7	NC		NC		NC		NC	
932			min	534.257	6	.447	6	NC		NC		NC		NC	
933		2	max	826.314	7	.692	7	NC		NC		NC		NC	
934			min	534.257	6	.447	6	NC		NC		NC		NC	
935		3	max	826.314	7	.692	7	NC		NC		NC		NC	
936			min	534.257	6	.447	6	NC		NC		NC		NC	
937		4	max	826.314	7	.692	7	NC		NC		NC		NC	
938			min	534.257	6	.447	6	NC		NC		NC		NC	
939		5	max	826.314	7	.692	7	NC		NC		NC		NC	
940			min	534.257	6	.447	6	NC		NC		NC		NC	
941	M105	1	max	604.595	7	.506	7	NC		NC		NC		NC	
942			min	302.846	6	.253	6	NC		NC		NC		NC	
943		2	max	604.595	7	.506	7	NC		NC		NC		NC	
944			min	302.846	6	.253	6	NC		NC		NC		NC	
945		3	max	604.595	7	.506	7	NC		NC		NC		NC	
946			min	302.846	6	.253	6	NC		NC		NC		NC	
947		4	max	604.595	7	.506	7	NC		NC		NC		NC	
948			min	302.846	6	.253	6	NC		NC		NC		NC	
949		5	max	604.595	7	.506	7	NC		NC		NC		NC	
950			min	302.846	6	.253	6	NC		NC		NC		NC	
951	M106	1	max	351.339	5	.294	5	NC		NC		NC		NC	
952			min	-35.179	8	-.029	8	NC		NC		NC		NC	
953		2	max	351.339	5	.294	5	NC		NC		NC		NC	
954			min	-35.179	8	-.029	8	NC		NC		NC		NC	
955		3	max	351.339	5	.294	5	NC		NC		NC		NC	

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
956			min	-35.179	8	-.029	8	NC		NC		NC		NC	
957		4	max	351.339	5	.294	5	NC		NC		NC		NC	
958			min	-35.179	8	-.029	8	NC		NC		NC		NC	
959		5	max	351.339	5	.294	5	NC		NC		NC		NC	
960			min	-35.179	8	-.029	8	NC		NC		NC		NC	
961	M107	1	max	101.348	5	.085	5	NC		NC		NC		NC	
962			min	-424.601	8	-.355	8	NC		NC		NC		NC	
963		2	max	101.348	5	.085	5	NC		NC		NC		NC	
964			min	-424.601	8	-.355	8	NC		NC		NC		NC	
965		3	max	101.348	5	.085	5	NC		NC		NC		NC	
966			min	-424.601	8	-.355	8	NC		NC		NC		NC	
967		4	max	101.348	5	.085	5	NC		NC		NC		NC	
968			min	-424.601	8	-.355	8	NC		NC		NC		NC	
969		5	max	101.348	5	.085	5	NC		NC		NC		NC	
970			min	-424.601	8	-.355	8	NC		NC		NC		NC	
971	M108	1	max	-39.368	5	-.033	5	NC		NC		NC		NC	
972			min	-591.099	8	-.495	8	NC		NC		NC		NC	
973		2	max	-39.368	5	-.033	5	NC		NC		NC		NC	
974			min	-591.099	8	-.495	8	NC		NC		NC		NC	
975		3	max	-39.368	5	-.033	5	NC		NC		NC		NC	
976			min	-591.099	8	-.495	8	NC		NC		NC		NC	
977		4	max	-39.368	5	-.033	5	NC		NC		NC		NC	
978			min	-591.099	8	-.495	8	NC		NC		NC		NC	
979		5	max	-39.368	5	-.033	5	NC		NC		NC		NC	
980			min	-591.099	8	-.495	8	NC		NC		NC		NC	
981	M109	1	max	-173.491	6	-.145	6	NC		NC		NC		NC	
982			min	-718.478	7	-.601	7	NC		NC		NC		NC	
983		2	max	-173.491	6	-.145	6	NC		NC		NC		NC	
984			min	-718.478	7	-.601	7	NC		NC		NC		NC	
985		3	max	-173.491	6	-.145	6	NC		NC		NC		NC	
986			min	-718.478	7	-.601	7	NC		NC		NC		NC	
987		4	max	-173.491	6	-.145	6	NC		NC		NC		NC	
988			min	-718.478	7	-.601	7	NC		NC		NC		NC	
989		5	max	-173.491	6	-.145	6	NC		NC		NC		NC	
990			min	-718.478	7	-.601	7	NC		NC		NC		NC	
991	M110	1	max	-320.56	6	-.268	6	NC		NC		NC		NC	
992			min	-821.801	7	-.688	7	NC		NC		NC		NC	
993		2	max	-320.56	6	-.268	6	NC		NC		NC		NC	
994			min	-821.801	7	-.688	7	NC		NC		NC		NC	
995		3	max	-320.56	6	-.268	6	NC		NC		NC		NC	
996			min	-821.801	7	-.688	7	NC		NC		NC		NC	
997		4	max	-320.56	6	-.268	6	NC		NC		NC		NC	
998			min	-821.801	7	-.688	7	NC		NC		NC		NC	
999		5	max	-320.56	6	-.268	6	NC		NC		NC		NC	
1000			min	-821.801	7	-.688	7	NC		NC		NC		NC	
1001	M111	1	max	-478.065	6	-.4	6	NC		NC		NC		NC	
1002			min	-907.788	7	-.76	7	NC		NC		NC		NC	
1003		2	max	-478.065	6	-.4	6	NC		NC		NC		NC	
1004			min	-907.788	7	-.76	7	NC		NC		NC		NC	
1005		3	max	-478.065	6	-.4	6	NC		NC		NC		NC	
1006			min	-907.788	7	-.76	7	NC		NC		NC		NC	
1007		4	max	-478.065	6	-.4	6	NC		NC		NC		NC	
1008			min	-907.788	7	-.76	7	NC		NC		NC		NC	
1009		5	max	-478.065	6	-.4	6	NC		NC		NC		NC	
1010			min	-907.788	7	-.76	7	NC		NC		NC		NC	
1011	M112	1	max	-621.143	6	-.52	6	NC		NC		NC		NC	
1012			min	-964.232	7	-.807	7	NC		NC		NC		NC	

Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
1013		2	max	-621.143	6	-.52	6	NC		NC		NC		NC	
1014			min	-964.232	7	-.807	7	NC		NC		NC		NC	
1015		3	max	-621.143	6	-.52	6	NC		NC		NC		NC	
1016			min	-964.232	7	-.807	7	NC		NC		NC		NC	
1017		4	max	-621.143	6	-.52	6	NC		NC		NC		NC	
1018			min	-964.232	7	-.807	7	NC		NC		NC		NC	
1019		5	max	-621.143	6	-.52	6	NC		NC		NC		NC	
1020			min	-964.232	7	-.807	7	NC		NC		NC		NC	
1021	M113	1	max	428.703	7	.376	7	NC		NC		NC		NC	
1022			min	30.937	6	.027	6	NC		NC		NC		NC	
1023		2	max	428.703	7	.376	7	NC		NC		NC		NC	
1024			min	30.937	6	.027	6	NC		NC		NC		NC	
1025		3	max	428.703	7	.376	7	NC		NC		NC		NC	
1026			min	30.937	6	.027	6	NC		NC		NC		NC	
1027		4	max	428.703	7	.376	7	NC		NC		NC		NC	
1028			min	30.937	6	.027	6	NC		NC		NC		NC	
1029		5	max	428.703	7	.376	7	NC		NC		NC		NC	
1030			min	30.937	6	.027	6	NC		NC		NC		NC	
1031	M114	1	max	401.076	7	.522	7	NC		NC		NC		NC	
1032			min	274.123	6	.357	6	NC		NC		NC		NC	
1033		2	max	401.076	7	.522	7	NC		NC		NC		NC	
1034			min	274.123	6	.357	6	NC		NC		NC		NC	
1035		3	max	401.076	7	.522	7	NC		NC		NC		NC	
1036			min	274.123	6	.357	6	NC		NC		NC		NC	
1037		4	max	401.076	7	.522	7	NC		NC		NC		NC	
1038			min	274.123	6	.357	6	NC		NC		NC		NC	
1039		5	max	401.076	7	.522	7	NC		NC		NC		NC	
1040			min	274.123	6	.357	6	NC		NC		NC		NC	
1041	M115	1	max	401.076	7	.522	7	NC		NC		NC		NC	
1042			min	274.123	6	.357	6	NC		NC		NC		NC	
1043		2	max	401.076	7	.522	7	NC		NC		NC		NC	
1044			min	274.123	6	.357	6	NC		NC		NC		NC	
1045		3	max	401.076	7	.522	7	NC		NC		NC		NC	
1046			min	274.123	6	.357	6	NC		NC		NC		NC	
1047		4	max	401.076	7	.522	7	NC		NC		NC		NC	
1048			min	274.123	6	.357	6	NC		NC		NC		NC	
1049		5	max	401.076	7	.522	7	NC		NC		NC		NC	
1050			min	274.123	6	.357	6	NC		NC		NC		NC	
1051	M116	1	max	401.076	7	.522	7	NC		NC		NC		NC	
1052			min	274.123	6	.357	6	NC		NC		NC		NC	
1053		2	max	401.076	7	.522	7	NC		NC		NC		NC	
1054			min	274.123	6	.357	6	NC		NC		NC		NC	
1055		3	max	401.076	7	.522	7	NC		NC		NC		NC	
1056			min	274.123	6	.357	6	NC		NC		NC		NC	
1057		4	max	401.076	7	.522	7	NC		NC		NC		NC	
1058			min	274.123	6	.357	6	NC		NC		NC		NC	
1059		5	max	401.076	7	.522	7	NC		NC		NC		NC	
1060			min	274.123	6	.357	6	NC		NC		NC		NC	
1061	M117	1	max	401.076	7	.336	7	NC		NC		NC		NC	
1062			min	274.123	6	.229	6	NC		NC		NC		NC	
1063		2	max	401.076	7	.336	7	NC		NC		NC		NC	
1064			min	274.123	6	.229	6	NC		NC		NC		NC	
1065		3	max	401.076	7	.336	7	NC		NC		NC		NC	
1066			min	274.123	6	.229	6	NC		NC		NC		NC	
1067		4	max	401.076	7	.336	7	NC		NC		NC		NC	
1068			min	274.123	6	.229	6	NC		NC		NC		NC	
1069		5	max	401.076	7	.336	7	NC		NC		NC		NC	

Company : DMJM H&N
Designer : Kevin M. Jones
Job Number : 145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
1070			min	274.123	6	.229	6	NC		NC		NC		NC	
1071	M118	1	max	16.797	7	.014	7	NC		NC		NC		NC	
1072			min	-108.093	6	-.09	6	NC		NC		NC		NC	
1073		2	max	16.797	7	.014	7	NC		NC		NC		NC	
1074			min	-108.093	6	-.09	6	NC		NC		NC		NC	
1075		3	max	16.797	7	.014	7	NC		NC		NC		NC	
1076			min	-108.093	6	-.09	6	NC		NC		NC		NC	
1077		4	max	16.797	7	.014	7	NC		NC		NC		NC	
1078			min	-108.093	6	-.09	6	NC		NC		NC		NC	
1079		5	max	16.797	7	.014	7	NC		NC		NC		NC	
1080			min	-108.093	6	-.09	6	NC		NC		NC		NC	
1081	M119	1	max	57.844	7	.048	7	NC		NC		NC		NC	
1082			min	-302.094	6	-.253	6	NC		NC		NC		NC	
1083		2	max	57.844	7	.048	7	NC		NC		NC		NC	
1084			min	-302.094	6	-.253	6	NC		NC		NC		NC	
1085		3	max	57.844	7	.048	7	NC		NC		NC		NC	
1086			min	-302.094	6	-.253	6	NC		NC		NC		NC	
1087		4	max	57.844	7	.048	7	NC		NC		NC		NC	
1088			min	-302.094	6	-.253	6	NC		NC		NC		NC	
1089		5	max	57.844	7	.048	7	NC		NC		NC		NC	
1090			min	-302.094	6	-.253	6	NC		NC		NC		NC	
1091	M120	1	max	96.528	7	.081	7	NC		NC		NC		NC	
1092			min	-422.13	6	-.353	6	NC		NC		NC		NC	
1093		2	max	96.528	7	.081	7	NC		NC		NC		NC	
1094			min	-422.13	6	-.353	6	NC		NC		NC		NC	
1095		3	max	96.528	7	.081	7	NC		NC		NC		NC	
1096			min	-422.13	6	-.353	6	NC		NC		NC		NC	
1097		4	max	96.528	7	.081	7	NC		NC		NC		NC	
1098			min	-422.13	6	-.353	6	NC		NC		NC		NC	
1099		5	max	96.528	7	.081	7	NC		NC		NC		NC	
1100			min	-422.13	6	-.353	6	NC		NC		NC		NC	
1101	M121	1	max	1097.171	8	.918	8	NC		NC		NC		NC	
1102			min	557.911	5	.467	5	NC		NC		NC		NC	
1103		2	max	1097.171	8	.918	8	NC		NC		NC		NC	
1104			min	557.911	5	.467	5	NC		NC		NC		NC	
1105		3	max	1097.171	8	.918	8	NC		NC		NC		NC	
1106			min	557.911	5	.467	5	NC		NC		NC		NC	
1107		4	max	1097.171	8	.918	8	NC		NC		NC		NC	
1108			min	557.911	5	.467	5	NC		NC		NC		NC	
1109		5	max	1097.171	8	.918	8	NC		NC		NC		NC	
1110			min	557.911	5	.467	5	NC		NC		NC		NC	
1111	M122	1	max	1123.552	8	.94	8	NC		NC		NC		NC	
1112			min	592.931	5	.496	5	NC		NC		NC		NC	
1113		2	max	1123.552	8	.94	8	NC		NC		NC		NC	
1114			min	592.931	5	.496	5	NC		NC		NC		NC	
1115		3	max	1123.552	8	.94	8	NC		NC		NC		NC	
1116			min	592.931	5	.496	5	NC		NC		NC		NC	
1117		4	max	1123.552	8	.94	8	NC		NC		NC		NC	
1118			min	592.931	5	.496	5	NC		NC		NC		NC	
1119		5	max	1123.552	8	.94	8	NC		NC		NC		NC	
1120			min	592.931	5	.496	5	NC		NC		NC		NC	
1121	M123	1	max	986.444	6	.826	6	NC		NC		NC		NC	
1122			min	376.378	7	.315	7	NC		NC		NC		NC	
1123		2	max	986.444	6	.826	6	NC		NC		NC		NC	
1124			min	376.378	7	.315	7	NC		NC		NC		NC	
1125		3	max	986.444	6	.826	6	NC		NC		NC		NC	
1126			min	376.378	7	.315	7	NC		NC		NC		NC	

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[]...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
1127		4	max	986.444	6	.826	6	NC		NC		NC		NC	
1128			min	376.378	7	.315	7	NC		NC		NC		NC	
1129		5	max	986.444	6	.826	6	NC		NC		NC		NC	
1130			min	376.378	7	.315	7	NC		NC		NC		NC	
1131	M124	1	max	370.941	5	.31	5	NC		NC		NC		NC	
1132			min	157.598	8	.132	8	NC		NC		NC		NC	
1133		2	max	370.941	5	.31	5	NC		NC		NC		NC	
1134			min	157.598	8	.132	8	NC		NC		NC		NC	
1135		3	max	370.941	5	.31	5	NC		NC		NC		NC	
1136			min	157.598	8	.132	8	NC		NC		NC		NC	
1137		4	max	370.941	5	.31	5	NC		NC		NC		NC	
1138			min	157.598	8	.132	8	NC		NC		NC		NC	
1139		5	max	370.941	5	.31	5	NC		NC		NC		NC	
1140			min	157.598	8	.132	8	NC		NC		NC		NC	
1141	M125	1	max	449.066	6	.376	6	NC		NC		NC		NC	
1142			min	183.441	7	.154	7	NC		NC		NC		NC	
1143		2	max	449.066	6	.376	6	NC		NC		NC		NC	
1144			min	183.441	7	.154	7	NC		NC		NC		NC	
1145		3	max	449.066	6	.376	6	NC		NC		NC		NC	
1146			min	183.441	7	.154	7	NC		NC		NC		NC	
1147		4	max	449.066	6	.376	6	NC		NC		NC		NC	
1148			min	183.441	7	.154	7	NC		NC		NC		NC	
1149		5	max	449.066	6	.376	6	NC		NC		NC		NC	
1150			min	183.441	7	.154	7	NC		NC		NC		NC	
1151	M126	1	max	532.193	6	.445	6	NC		NC		NC		NC	
1152			min	216.326	7	.181	7	NC		NC		NC		NC	
1153		2	max	532.193	6	.445	6	NC		NC		NC		NC	
1154			min	216.326	7	.181	7	NC		NC		NC		NC	
1155		3	max	532.193	6	.445	6	NC		NC		NC		NC	
1156			min	216.326	7	.181	7	NC		NC		NC		NC	
1157		4	max	532.193	6	.445	6	NC		NC		NC		NC	
1158			min	216.326	7	.181	7	NC		NC		NC		NC	
1159		5	max	532.193	6	.445	6	NC		NC		NC		NC	
1160			min	216.326	7	.181	7	NC		NC		NC		NC	
1161	M127	1	max	596.41	6	.499	6	NC		NC		NC		NC	
1162			min	262.242	7	.22	7	NC		NC		NC		NC	
1163		2	max	596.41	6	.499	6	NC		NC		NC		NC	
1164			min	262.242	7	.22	7	NC		NC		NC		NC	
1165		3	max	596.41	6	.499	6	NC		NC		NC		NC	
1166			min	262.242	7	.22	7	NC		NC		NC		NC	
1167		4	max	596.41	6	.499	6	NC		NC		NC		NC	
1168			min	262.242	7	.22	7	NC		NC		NC		NC	
1169		5	max	596.41	6	.499	6	NC		NC		NC		NC	
1170			min	262.242	7	.22	7	NC		NC		NC		NC	
1171	M128	1	max	369.568	8	.309	8	NC		NC		NC		NC	
1172			min	-34.251	5	-.029	5	NC		NC		NC		NC	
1173		2	max	369.568	8	.309	8	NC		NC		NC		NC	
1174			min	-34.251	5	-.029	5	NC		NC		NC		NC	
1175		3	max	369.568	8	.309	8	NC		NC		NC		NC	
1176			min	-34.251	5	-.029	5	NC		NC		NC		NC	
1177		4	max	369.568	8	.309	8	NC		NC		NC		NC	
1178			min	-34.251	5	-.029	5	NC		NC		NC		NC	
1179		5	max	369.568	8	.309	8	NC		NC		NC		NC	
1180			min	-34.251	5	-.029	5	NC		NC		NC		NC	
1181	M129	1	max	-205.86	8	-.172	8	NC		NC		NC		NC	
1182			min	-751.656	5	-.629	5	NC		NC		NC		NC	
1183		2	max	-205.86	8	-.172	8	NC		NC		NC		NC	

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
1184			min	-751.656	5	-.629	5	NC		NC		NC		NC	
1185		3	max	-205.86	8	-.172	8	NC		NC		NC		NC	
1186			min	-751.656	5	-.629	5	NC		NC		NC		NC	
1187		4	max	-205.86	8	-.172	8	NC		NC		NC		NC	
1188			min	-751.656	5	-.629	5	NC		NC		NC		NC	
1189		5	max	-205.86	8	-.172	8	NC		NC		NC		NC	
1190			min	-751.656	5	-.629	5	NC		NC		NC		NC	
1191	M130	1	max	-798.494	8	-.668	8	NC		NC		NC		NC	
1192			min	-1415.751	5	-1.185	5	NC		NC		NC		NC	
1193		2	max	-798.494	8	-.668	8	NC		NC		NC		NC	
1194			min	-1415.751	5	-1.185	5	NC		NC		NC		NC	
1195		3	max	-798.494	8	-.668	8	NC		NC		NC		NC	
1196			min	-1415.751	5	-1.185	5	NC		NC		NC		NC	
1197		4	max	-798.494	8	-.668	8	NC		NC		NC		NC	
1198			min	-1415.751	5	-1.185	5	NC		NC		NC		NC	
1199		5	max	-798.494	8	-.668	8	NC		NC		NC		NC	
1200			min	-1415.751	5	-1.185	5	NC		NC		NC		NC	
1201	M131	1	max	-1317.657	8	-1.103	8	NC		NC		NC		NC	
1202			min	-1923.049	5	-1.61	5	NC		NC		NC		NC	
1203		2	max	-1317.657	8	-1.103	8	NC		NC		NC		NC	
1204			min	-1923.049	5	-1.61	5	NC		NC		NC		NC	
1205		3	max	-1317.657	8	-1.103	8	NC		NC		NC		NC	
1206			min	-1923.049	5	-1.61	5	NC		NC		NC		NC	
1207		4	max	-1317.657	8	-1.103	8	NC		NC		NC		NC	
1208			min	-1923.049	5	-1.61	5	NC		NC		NC		NC	
1209		5	max	-1317.657	8	-1.103	8	NC		NC		NC		NC	
1210			min	-1923.049	5	-1.61	5	NC		NC		NC		NC	
1211	M132	1	max	414.335	5	.347	5	NC		NC		NC		NC	
1212			min	85.682	8	.072	8	NC		NC		NC		NC	
1213		2	max	414.335	5	.347	5	NC		NC		NC		NC	
1214			min	85.682	8	.072	8	NC		NC		NC		NC	
1215		3	max	414.335	5	.347	5	NC		NC		NC		NC	
1216			min	85.682	8	.072	8	NC		NC		NC		NC	
1217		4	max	414.335	5	.347	5	NC		NC		NC		NC	
1218			min	85.682	8	.072	8	NC		NC		NC		NC	
1219		5	max	414.335	5	.347	5	NC		NC		NC		NC	
1220			min	85.682	8	.072	8	NC		NC		NC		NC	
1221	M133	1	max	1355.824	4	1.19	4	NC		NC		NC		NC	
1222			min	1134.202	3	.995	3	NC		NC		NC		NC	
1223		2	max	1355.824	4	1.19	4	NC		NC		NC		NC	
1224			min	1134.202	3	.995	3	NC		NC		NC		NC	
1225		3	max	1355.824	4	1.19	4	NC		NC		NC		NC	
1226			min	1134.202	3	.995	3	NC		NC		NC		NC	
1227		4	max	1355.824	4	1.19	4	NC		NC		NC		NC	
1228			min	1134.202	3	.995	3	NC		NC		NC		NC	
1229		5	max	1355.824	4	1.19	4	NC		NC		NC		NC	
1230			min	1134.202	3	.995	3	NC		NC		NC		NC	
1231	M134	1	max	1387.337	7	1.218	7	NC		NC		NC		NC	
1232			min	960.974	6	.843	6	NC		NC		NC		NC	
1233		2	max	1387.337	7	1.218	7	NC		NC		NC		NC	
1234			min	960.974	6	.843	6	NC		NC		NC		NC	
1235		3	max	1387.337	7	1.218	7	NC		NC		NC		NC	
1236			min	960.974	6	.843	6	NC		NC		NC		NC	
1237		4	max	1387.337	7	1.218	7	NC		NC		NC		NC	
1238			min	960.974	6	.843	6	NC		NC		NC		NC	
1239		5	max	1387.337	7	1.218	7	NC		NC		NC		NC	
1240			min	960.974	6	.843	6	NC		NC		NC		NC	

Company : DMJM H&N
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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
1241	M135	1	max	1216.143	7	1.067	7	NC		NC		NC		NC	
1242			min	633.536	6	.556	6	NC		NC		NC		NC	
1243		2	max	1216.143	7	1.067	7	NC		NC		NC		NC	
1244			min	633.536	6	.556	6	NC		NC		NC		NC	
1245		3	max	1216.143	7	1.067	7	NC		NC		NC		NC	
1246			min	633.536	6	.556	6	NC		NC		NC		NC	
1247		4	max	1216.143	7	1.067	7	NC		NC		NC		NC	
1248			min	633.536	6	.556	6	NC		NC		NC		NC	
1249		5	max	1216.143	7	1.067	7	NC		NC		NC		NC	
1250			min	633.536	6	.556	6	NC		NC		NC		NC	
1251	M136	1	max	858.129	5	.753	5	NC		NC		NC		NC	
1252			min	210.306	8	.185	8	NC		NC		NC		NC	
1253		2	max	858.129	5	.753	5	NC		NC		NC		NC	
1254			min	210.306	8	.185	8	NC		NC		NC		NC	
1255		3	max	858.129	5	.753	5	NC		NC		NC		NC	
1256			min	210.306	8	.185	8	NC		NC		NC		NC	
1257		4	max	858.129	5	.753	5	NC		NC		NC		NC	
1258			min	210.306	8	.185	8	NC		NC		NC		NC	
1259		5	max	858.129	5	.753	5	NC		NC		NC		NC	
1260			min	210.306	8	.185	8	NC		NC		NC		NC	
1261	M137	1	max	753.983	5	.662	5	NC		NC		NC		NC	
1262			min	174.142	8	.153	8	NC		NC		NC		NC	
1263		2	max	753.983	5	.662	5	NC		NC		NC		NC	
1264			min	174.142	8	.153	8	NC		NC		NC		NC	
1265		3	max	753.983	5	.662	5	NC		NC		NC		NC	
1266			min	174.142	8	.153	8	NC		NC		NC		NC	
1267		4	max	753.983	5	.662	5	NC		NC		NC		NC	
1268			min	174.142	8	.153	8	NC		NC		NC		NC	
1269		5	max	753.983	5	.662	5	NC		NC		NC		NC	
1270			min	174.142	8	.153	8	NC		NC		NC		NC	
1271	M138	1	max	946.784	7	.831	7	NC		NC		NC		NC	
1272			min	538.124	6	.472	6	NC		NC		NC		NC	
1273		2	max	946.784	7	.831	7	NC		NC		NC		NC	
1274			min	538.124	6	.472	6	NC		NC		NC		NC	
1275		3	max	946.784	7	.831	7	NC		NC		NC		NC	
1276			min	538.124	6	.472	6	NC		NC		NC		NC	
1277		4	max	946.784	7	.831	7	NC		NC		NC		NC	
1278			min	538.124	6	.472	6	NC		NC		NC		NC	
1279		5	max	946.784	7	.831	7	NC		NC		NC		NC	
1280			min	538.124	6	.472	6	NC		NC		NC		NC	
1281	M139	1	max	1031.36	7	.905	7	NC		NC		NC		NC	
1282			min	840.402	6	.738	6	NC		NC		NC		NC	
1283		2	max	1031.36	7	.905	7	NC		NC		NC		NC	
1284			min	840.402	6	.738	6	NC		NC		NC		NC	
1285		3	max	1031.36	7	.905	7	NC		NC		NC		NC	
1286			min	840.402	6	.738	6	NC		NC		NC		NC	
1287		4	max	1031.36	7	.905	7	NC		NC		NC		NC	
1288			min	840.402	6	.738	6	NC		NC		NC		NC	
1289		5	max	1031.36	7	.905	7	NC		NC		NC		NC	
1290			min	840.402	6	.738	6	NC		NC		NC		NC	
1291	M140	1	max	807.59	2	.709	2	NC		NC		NC		NC	
1292			min	746.243	1	.655	1	NC		NC		NC		NC	
1293		2	max	807.59	2	.709	2	NC		NC		NC		NC	
1294			min	746.243	1	.655	1	NC		NC		NC		NC	
1295		3	max	807.59	2	.709	2	NC		NC		NC		NC	
1296			min	746.243	1	.655	1	NC		NC		NC		NC	
1297		4	max	807.59	2	.709	2	NC		NC		NC		NC	

Company : DMJM H&N
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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
1298			min	746.243	1	.655	1	NC		NC		NC		NC	
1299		5	max	807.59	2	.709	2	NC		NC		NC		NC	
1300			min	746.243	1	.655	1	NC		NC		NC		NC	
1301	M141	1	max	207.77	2	.182	2	NC		NC		NC		NC	
1302			min	140.992	1	.124	1	NC		NC		NC		NC	
1303		2	max	207.77	2	.182	2	NC		NC		NC		NC	
1304			min	140.992	1	.124	1	NC		NC		NC		NC	
1305		3	max	207.77	2	.182	2	NC		NC		NC		NC	
1306			min	140.992	1	.124	1	NC		NC		NC		NC	
1307		4	max	207.77	2	.182	2	NC		NC		NC		NC	
1308			min	140.992	1	.124	1	NC		NC		NC		NC	
1309		5	max	207.77	2	.182	2	NC		NC		NC		NC	
1310			min	140.992	1	.124	1	NC		NC		NC		NC	
1311	M142	1	max	-338.485	8	-.297	8	NC		NC		NC		NC	
1312			min	-409.274	5	-.359	5	NC		NC		NC		NC	
1313		2	max	-338.485	8	-.297	8	NC		NC		NC		NC	
1314			min	-409.274	5	-.359	5	NC		NC		NC		NC	
1315		3	max	-338.485	8	-.297	8	NC		NC		NC		NC	
1316			min	-409.274	5	-.359	5	NC		NC		NC		NC	
1317		4	max	-338.485	8	-.297	8	NC		NC		NC		NC	
1318			min	-409.274	5	-.359	5	NC		NC		NC		NC	
1319		5	max	-338.485	8	-.297	8	NC		NC		NC		NC	
1320			min	-409.274	5	-.359	5	NC		NC		NC		NC	
1321	M143	1	max	-775.955	8	-.681	8	NC		NC		NC		NC	
1322			min	-878.231	5	-.771	5	NC		NC		NC		NC	
1323		2	max	-775.955	8	-.681	8	NC		NC		NC		NC	
1324			min	-878.231	5	-.771	5	NC		NC		NC		NC	
1325		3	max	-775.955	8	-.681	8	NC		NC		NC		NC	
1326			min	-878.231	5	-.771	5	NC		NC		NC		NC	
1327		4	max	-775.955	8	-.681	8	NC		NC		NC		NC	
1328			min	-878.231	5	-.771	5	NC		NC		NC		NC	
1329		5	max	-775.955	8	-.681	8	NC		NC		NC		NC	
1330			min	-878.231	5	-.771	5	NC		NC		NC		NC	
1331	M144	1	max	331.996	6	.278	6	NC		NC		NC		NC	
1332			min	299.994	7	.251	7	NC		NC		NC		NC	
1333		2	max	331.996	6	.278	6	NC		NC		NC		NC	
1334			min	299.994	7	.251	7	NC		NC		NC		NC	
1335		3	max	331.996	6	.278	6	NC		NC		NC		NC	
1336			min	299.994	7	.251	7	NC		NC		NC		NC	
1337		4	max	331.996	6	.278	6	NC		NC		NC		NC	
1338			min	299.994	7	.251	7	NC		NC		NC		NC	
1339		5	max	331.996	6	.278	6	NC		NC		NC		NC	
1340			min	299.994	7	.251	7	NC		NC		NC		NC	
1341	M145	1	max	283.879	6	.238	6	NC		NC		NC		NC	
1342			min	241.509	7	.202	7	NC		NC		NC		NC	
1343		2	max	283.879	6	.238	6	NC		NC		NC		NC	
1344			min	241.509	7	.202	7	NC		NC		NC		NC	
1345		3	max	283.879	6	.238	6	NC		NC		NC		NC	
1346			min	241.509	7	.202	7	NC		NC		NC		NC	
1347		4	max	283.879	6	.238	6	NC		NC		NC		NC	
1348			min	241.509	7	.202	7	NC		NC		NC		NC	
1349		5	max	283.879	6	.238	6	NC		NC		NC		NC	
1350			min	241.509	7	.202	7	NC		NC		NC		NC	
1351	M146	1	max	224.697	8	.188	8	NC		NC		NC		NC	
1352			min	173.712	5	.145	5	NC		NC		NC		NC	
1353		2	max	224.697	8	.188	8	NC		NC		NC		NC	
1354			min	173.712	5	.145	5	NC		NC		NC		NC	

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[]...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
1355		3	max	224.697	8	.188	8	NC		NC		NC		NC	
1356			min	173.712	5	.145	5	NC		NC		NC		NC	
1357		4	max	224.697	8	.188	8	NC		NC		NC		NC	
1358			min	173.712	5	.145	5	NC		NC		NC		NC	
1359		5	max	224.697	8	.188	8	NC		NC		NC		NC	
1360			min	173.712	5	.145	5	NC		NC		NC		NC	
1361	M147	1	max	164.322	8	.138	8	NC		NC		NC		NC	
1362			min	107.085	5	.09	5	NC		NC		NC		NC	
1363		2	max	164.322	8	.138	8	NC		NC		NC		NC	
1364			min	107.085	5	.09	5	NC		NC		NC		NC	
1365		3	max	164.322	8	.138	8	NC		NC		NC		NC	
1366			min	107.085	5	.09	5	NC		NC		NC		NC	
1367		4	max	164.322	8	.138	8	NC		NC		NC		NC	
1368			min	107.085	5	.09	5	NC		NC		NC		NC	
1369		5	max	164.322	8	.138	8	NC		NC		NC		NC	
1370			min	107.085	5	.09	5	NC		NC		NC		NC	
1371	M148	1	max	36.161	6	.154	6	NC		NC		NC		NC	
1372			min	33.102	7	.141	7	NC		NC		NC		NC	
1373		2	max	36.161	6	.154	6	NC		NC		NC		NC	
1374			min	33.102	7	.141	7	NC		NC		NC		NC	
1375		3	max	36.161	6	.154	6	NC		NC		NC		NC	
1376			min	33.102	7	.141	7	NC		NC		NC		NC	
1377		4	max	36.161	6	.154	6	NC		NC		NC		NC	
1378			min	33.102	7	.141	7	NC		NC		NC		NC	
1379		5	max	36.161	6	.154	6	NC		NC		NC		NC	
1380			min	33.102	7	.141	7	NC		NC		NC		NC	
1381	M149	1	max	32.458	8	.139	8	NC		NC		NC		NC	
1382			min	28.548	5	.122	5	NC		NC		NC		NC	
1383		2	max	32.458	8	.139	8	NC		NC		NC		NC	
1384			min	28.548	5	.122	5	NC		NC		NC		NC	
1385		3	max	32.458	8	.139	8	NC		NC		NC		NC	
1386			min	28.548	5	.122	5	NC		NC		NC		NC	
1387		4	max	32.458	8	.139	8	NC		NC		NC		NC	
1388			min	28.548	5	.122	5	NC		NC		NC		NC	
1389		5	max	32.458	8	.139	8	NC		NC		NC		NC	
1390			min	28.548	5	.122	5	NC		NC		NC		NC	
1391	M150	1	max	19.426	4	.083	4	NC		NC		NC		NC	
1392			min	15.154	3	.065	3	NC		NC		NC		NC	
1393		2	max	19.426	4	.083	4	NC		NC		NC		NC	
1394			min	15.154	3	.065	3	NC		NC		NC		NC	
1395		3	max	19.426	4	.083	4	NC		NC		NC		NC	
1396			min	15.154	3	.065	3	NC		NC		NC		NC	
1397		4	max	19.426	4	.083	4	NC		NC		NC		NC	
1398			min	15.154	3	.065	3	NC		NC		NC		NC	
1399		5	max	19.426	4	.083	4	NC		NC		NC		NC	
1400			min	15.154	3	.065	3	NC		NC		NC		NC	
1401	M151	1	max	21.4	1	.007	1	NC		NC		NC		NC	
1402			min	-21.4	2	-.007	2	NC		NC		NC		NC	
1403		2	max	21.4	1	.007	1	NC		NC		NC		NC	
1404			min	-21.4	2	-.007	2	NC		NC		NC		NC	
1405		3	max	21.4	1	.007	1	NC		NC		NC		NC	
1406			min	-21.4	2	-.007	2	NC		NC		NC		NC	
1407		4	max	21.4	1	.007	1	NC		NC		NC		NC	
1408			min	-21.4	2	-.007	2	NC		NC		NC		NC	
1409		5	max	21.4	1	.007	1	NC		NC		NC		NC	
1410			min	-21.4	2	-.007	2	NC		NC		NC		NC	
1411	M152	1	max	10.922	1	.004	1	NC		NC		NC		NC	

Company : **DMJM H&N**
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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
1412			min	-10.922	2	-.004	2	NC		NC		NC		NC	
1413		2	max	10.922	1	.004	1	NC		NC		NC		NC	
1414			min	-10.922	2	-.004	2	NC		NC		NC		NC	
1415		3	max	10.922	1	.004	1	NC		NC		NC		NC	
1416			min	-10.922	2	-.004	2	NC		NC		NC		NC	
1417		4	max	10.922	1	.004	1	NC		NC		NC		NC	
1418			min	-10.922	2	-.004	2	NC		NC		NC		NC	
1419		5	max	10.922	1	.004	1	NC		NC		NC		NC	
1420			min	-10.922	2	-.004	2	NC		NC		NC		NC	
1421	M153	1	max	4.171	1	.001	1	NC		NC		NC		NC	
1422			min	-4.171	2	-.001	2	NC		NC		NC		NC	
1423		2	max	4.171	1	.001	1	NC		NC		NC		NC	
1424			min	-4.171	2	-.001	2	NC		NC		NC		NC	
1425		3	max	4.171	1	.001	1	NC		NC		NC		NC	
1426			min	-4.171	2	-.001	2	NC		NC		NC		NC	
1427		4	max	4.171	1	.001	1	NC		NC		NC		NC	
1428			min	-4.171	2	-.001	2	NC		NC		NC		NC	
1429		5	max	4.171	1	.001	1	NC		NC		NC		NC	
1430			min	-4.171	2	-.001	2	NC		NC		NC		NC	
1431	M154	1	max	.873	1	0	1	NC		NC		NC		NC	
1432			min	-.873	2	0	2	NC		NC		NC		NC	
1433		2	max	.873	1	0	1	NC		NC		NC		NC	
1434			min	-.873	2	0	2	NC		NC		NC		NC	
1435		3	max	.873	1	0	1	NC		NC		NC		NC	
1436			min	-.873	2	0	2	NC		NC		NC		NC	
1437		4	max	.873	1	0	1	NC		NC		NC		NC	
1438			min	-.873	2	0	2	NC		NC		NC		NC	
1439		5	max	.873	1	0	1	NC		NC		NC		NC	
1440			min	-.873	2	0	2	NC		NC		NC		NC	
1441	M155	1	max	0	1	0	1	NC		NC		NC		NC	
1442			min	0	1	0	1	NC		NC		NC		NC	
1443		2	max	0	1	0	1	NC		NC		NC		NC	
1444			min	0	1	0	1	NC		NC		NC		NC	
1445		3	max	0	1	0	1	NC		NC		NC		NC	
1446			min	0	1	0	1	NC		NC		NC		NC	
1447		4	max	0	1	0	1	NC		NC		NC		NC	
1448			min	0	1	0	1	NC		NC		NC		NC	
1449		5	max	0	1	0	1	NC		NC		NC		NC	
1450			min	0	1	0	1	NC		NC		NC		NC	
1451	M156	1	max	394.027	2	.129	2	NC		NC		NC		NC	
1452			min	-394.024	1	-.129	1	NC		NC		NC		NC	
1453		2	max	394.027	2	.129	2	NC		NC		NC		NC	
1454			min	-394.024	1	-.129	1	NC		NC		NC		NC	
1455		3	max	394.027	2	.129	2	NC		NC		NC		NC	
1456			min	-394.024	1	-.129	1	NC		NC		NC		NC	
1457		4	max	394.027	2	.129	2	NC		NC		NC		NC	
1458			min	-394.024	1	-.129	1	NC		NC		NC		NC	
1459		5	max	394.027	2	.129	2	NC		NC		NC		NC	
1460			min	-394.024	1	-.129	1	NC		NC		NC		NC	
1461	M157	1	max	351.818	2	.115	2	NC		NC		NC		NC	
1462			min	-351.816	1	-.115	1	NC		NC		NC		NC	
1463		2	max	351.818	2	.115	2	NC		NC		NC		NC	
1464			min	-351.816	1	-.115	1	NC		NC		NC		NC	
1465		3	max	351.818	2	.115	2	NC		NC		NC		NC	
1466			min	-351.816	1	-.115	1	NC		NC		NC		NC	
1467		4	max	351.818	2	.115	2	NC		NC		NC		NC	
1468			min	-351.816	1	-.115	1	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
1469		5	max	351.818	2	.115	2	NC		NC		NC		NC	
1470			min	-351.816	1	-.115	1	NC		NC		NC		NC	
1471	M158	1	max	238.594	2	.078	2	NC		NC		NC		NC	
1472			min	-238.593	1	-.078	1	NC		NC		NC		NC	
1473		2	max	238.594	2	.078	2	NC		NC		NC		NC	
1474			min	-238.593	1	-.078	1	NC		NC		NC		NC	
1475		3	max	238.594	2	.078	2	NC		NC		NC		NC	
1476			min	-238.593	1	-.078	1	NC		NC		NC		NC	
1477		4	max	238.594	2	.078	2	NC		NC		NC		NC	
1478			min	-238.593	1	-.078	1	NC		NC		NC		NC	
1479		5	max	238.594	2	.078	2	NC		NC		NC		NC	
1480			min	-238.593	1	-.078	1	NC		NC		NC		NC	
1481	M159	1	max	70.689	2	.023	2	NC		NC		NC		NC	
1482			min	-70.689	1	-.023	1	NC		NC		NC		NC	
1483		2	max	70.689	2	.023	2	NC		NC		NC		NC	
1484			min	-70.689	1	-.023	1	NC		NC		NC		NC	
1485		3	max	70.689	2	.023	2	NC		NC		NC		NC	
1486			min	-70.689	1	-.023	1	NC		NC		NC		NC	
1487		4	max	70.689	2	.023	2	NC		NC		NC		NC	
1488			min	-70.689	1	-.023	1	NC		NC		NC		NC	
1489		5	max	70.689	2	.023	2	NC		NC		NC		NC	
1490			min	-70.689	1	-.023	1	NC		NC		NC		NC	
1491	M160	1	max	439.952	2	.144	2	NC		NC		NC		NC	
1492			min	176.816	1	.058	1	NC		NC		NC		NC	
1493		2	max	439.952	2	.144	2	NC		NC		NC		NC	
1494			min	176.816	1	.058	1	NC		NC		NC		NC	
1495		3	max	439.952	2	.144	2	NC		NC		NC		NC	
1496			min	176.816	1	.058	1	NC		NC		NC		NC	
1497		4	max	439.952	2	.144	2	NC		NC		NC		NC	
1498			min	176.816	1	.058	1	NC		NC		NC		NC	
1499		5	max	439.952	2	.144	2	NC		NC		NC		NC	
1500			min	176.816	1	.058	1	NC		NC		NC		NC	
1501	M161	1	max	183.236	2	.06	2	NC		NC		NC		NC	
1502			min	-153.91	1	-.05	1	NC		NC		NC		NC	
1503		2	max	183.236	2	.06	2	NC		NC		NC		NC	
1504			min	-153.91	1	-.05	1	NC		NC		NC		NC	
1505		3	max	183.236	2	.06	2	NC		NC		NC		NC	
1506			min	-153.91	1	-.05	1	NC		NC		NC		NC	
1507		4	max	183.236	2	.06	2	NC		NC		NC		NC	
1508			min	-153.91	1	-.05	1	NC		NC		NC		NC	
1509		5	max	183.236	2	.06	2	NC		NC		NC		NC	
1510			min	-153.91	1	-.05	1	NC		NC		NC		NC	
1511	M162	1	max	-176.812	2	-.058	2	NC		NC		NC		NC	
1512			min	-439.95	1	-.144	1	NC		NC		NC		NC	
1513		2	max	-176.812	2	-.058	2	NC		NC		NC		NC	
1514			min	-439.95	1	-.144	1	NC		NC		NC		NC	
1515		3	max	-176.812	2	-.058	2	NC		NC		NC		NC	
1516			min	-439.95	1	-.144	1	NC		NC		NC		NC	
1517		4	max	-176.812	2	-.058	2	NC		NC		NC		NC	
1518			min	-439.95	1	-.144	1	NC		NC		NC		NC	
1519		5	max	-176.812	2	-.058	2	NC		NC		NC		NC	
1520			min	-439.95	1	-.144	1	NC		NC		NC		NC	
1521	M163	1	max	153.913	2	.05	2	NC		NC		NC		NC	
1522			min	-183.235	1	-.06	1	NC		NC		NC		NC	
1523		2	max	153.913	2	.05	2	NC		NC		NC		NC	
1524			min	-183.235	1	-.06	1	NC		NC		NC		NC	
1525		3	max	153.913	2	.05	2	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
1526			min	-183.235	1	-.06	1	NC		NC		NC		NC	
1527		4	max	153.913	2	.05	2	NC		NC		NC		NC	
1528			min	-183.235	1	-.06	1	NC		NC		NC		NC	
1529		5	max	153.913	2	.05	2	NC		NC		NC		NC	
1530			min	-183.235	1	-.06	1	NC		NC		NC		NC	
1531	M164	1	max	183.236	2	.06	2	NC		NC		NC		NC	
1532			min	-153.91	1	-.05	1	NC		NC		NC		NC	
1533		2	max	183.236	2	.06	2	NC		NC		NC		NC	
1534			min	-153.91	1	-.05	1	NC		NC		NC		NC	
1535		3	max	183.236	2	.06	2	NC		NC		NC		NC	
1536			min	-153.91	1	-.05	1	NC		NC		NC		NC	
1537		4	max	183.236	2	.06	2	NC		NC		NC		NC	
1538			min	-153.91	1	-.05	1	NC		NC		NC		NC	
1539		5	max	183.236	2	.06	2	NC		NC		NC		NC	
1540			min	-153.91	1	-.05	1	NC		NC		NC		NC	
1541	M165	1	max	153.913	2	.05	2	NC		NC		NC		NC	
1542			min	-183.235	1	-.06	1	NC		NC		NC		NC	
1543		2	max	153.913	2	.05	2	NC		NC		NC		NC	
1544			min	-183.235	1	-.06	1	NC		NC		NC		NC	
1545		3	max	153.913	2	.05	2	NC		NC		NC		NC	
1546			min	-183.235	1	-.06	1	NC		NC		NC		NC	
1547		4	max	153.913	2	.05	2	NC		NC		NC		NC	
1548			min	-183.235	1	-.06	1	NC		NC		NC		NC	
1549		5	max	153.913	2	.05	2	NC		NC		NC		NC	
1550			min	-183.235	1	-.06	1	NC		NC		NC		NC	
1551	M166	1	max	183.236	2	0	1	NC		NC		NC		NC	
1552			min	-153.91	1	0	1	NC		NC		NC		NC	
1553		2	max	183.236	2	0	1	NC		NC		NC		NC	
1554			min	-153.91	1	0	1	NC		NC		NC		NC	
1555		3	max	183.236	2	0	1	NC		NC		NC		NC	
1556			min	-153.91	1	0	1	NC		NC		NC		NC	
1557		4	max	183.236	2	0	1	NC		NC		NC		NC	
1558			min	-153.91	1	0	1	NC		NC		NC		NC	
1559		5	max	183.236	2	0	1	NC		NC		NC		NC	
1560			min	-153.91	1	0	1	NC		NC		NC		NC	
1561	M167	1	max	153.913	2	0	1	NC		NC		NC		NC	
1562			min	-183.235	1	0	1	NC		NC		NC		NC	
1563		2	max	153.913	2	0	1	NC		NC		NC		NC	
1564			min	-183.235	1	0	1	NC		NC		NC		NC	
1565		3	max	153.913	2	0	1	NC		NC		NC		NC	
1566			min	-183.235	1	0	1	NC		NC		NC		NC	
1567		4	max	153.913	2	0	1	NC		NC		NC		NC	
1568			min	-183.235	1	0	1	NC		NC		NC		NC	
1569		5	max	153.913	2	0	1	NC		NC		NC		NC	
1570			min	-183.235	1	0	1	NC		NC		NC		NC	
1571	M168	1	max	106.722	2	.035	2	NC		NC		NC		NC	
1572			min	-178.962	1	-.059	1	NC		NC		NC		NC	
1573		2	max	106.722	2	.035	2	NC		NC		NC		NC	
1574			min	-178.962	1	-.059	1	NC		NC		NC		NC	
1575		3	max	106.722	2	.035	2	NC		NC		NC		NC	
1576			min	-178.962	1	-.059	1	NC		NC		NC		NC	
1577		4	max	106.722	2	.035	2	NC		NC		NC		NC	
1578			min	-178.962	1	-.059	1	NC		NC		NC		NC	
1579		5	max	106.722	2	.035	2	NC		NC		NC		NC	
1580			min	-178.962	1	-.059	1	NC		NC		NC		NC	
1581	M169	1	max	178.965	2	.059	2	NC		NC		NC		NC	
1582			min	-106.72	1	-.035	1	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[]...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
1583		2	max	178.965	2	.059	2	NC		NC		NC		NC	
1584			min	-106.72	1	-.035	1	NC		NC		NC		NC	
1585		3	max	178.965	2	.059	2	NC		NC		NC		NC	
1586			min	-106.72	1	-.035	1	NC		NC		NC		NC	
1587		4	max	178.965	2	.059	2	NC		NC		NC		NC	
1588			min	-106.72	1	-.035	1	NC		NC		NC		NC	
1589		5	max	178.965	2	.059	2	NC		NC		NC		NC	
1590			min	-106.72	1	-.035	1	NC		NC		NC		NC	
1591	M170	1	max	409.2	2	.134	2	NC		NC		NC		NC	
1592			min	-409.19	1	-.134	1	NC		NC		NC		NC	
1593		2	max	409.2	2	.134	2	NC		NC		NC		NC	
1594			min	-409.19	1	-.134	1	NC		NC		NC		NC	
1595		3	max	409.2	2	.134	2	NC		NC		NC		NC	
1596			min	-409.19	1	-.134	1	NC		NC		NC		NC	
1597		4	max	409.2	2	.134	2	NC		NC		NC		NC	
1598			min	-409.19	1	-.134	1	NC		NC		NC		NC	
1599		5	max	409.2	2	.134	2	NC		NC		NC		NC	
1600			min	-409.19	1	-.134	1	NC		NC		NC		NC	
1601	M171	1	max	498.771	8	.163	8	NC		NC		NC		NC	
1602			min	-498.755	5	-.163	5	NC		NC		NC		NC	
1603		2	max	498.771	8	.163	8	NC		NC		NC		NC	
1604			min	-498.755	5	-.163	5	NC		NC		NC		NC	
1605		3	max	498.771	8	.163	8	NC		NC		NC		NC	
1606			min	-498.755	5	-.163	5	NC		NC		NC		NC	
1607		4	max	498.771	8	.163	8	NC		NC		NC		NC	
1608			min	-498.755	5	-.163	5	NC		NC		NC		NC	
1609		5	max	498.771	8	.163	8	NC		NC		NC		NC	
1610			min	-498.755	5	-.163	5	NC		NC		NC		NC	
1611	M172	1	max	693.536	8	.227	8	NC		NC		NC		NC	
1612			min	-693.515	5	-.227	5	NC		NC		NC		NC	
1613		2	max	693.536	8	.227	8	NC		NC		NC		NC	
1614			min	-693.515	5	-.227	5	NC		NC		NC		NC	
1615		3	max	693.536	8	.227	8	NC		NC		NC		NC	
1616			min	-693.515	5	-.227	5	NC		NC		NC		NC	
1617		4	max	693.536	8	.227	8	NC		NC		NC		NC	
1618			min	-693.515	5	-.227	5	NC		NC		NC		NC	
1619		5	max	693.536	8	.227	8	NC		NC		NC		NC	
1620			min	-693.515	5	-.227	5	NC		NC		NC		NC	
1621	M173	1	max	828.054	8	.271	8	NC		NC		NC		NC	
1622			min	-828.032	5	-.271	5	NC		NC		NC		NC	
1623		2	max	828.054	8	.271	8	NC		NC		NC		NC	
1624			min	-828.032	5	-.271	5	NC		NC		NC		NC	
1625		3	max	828.054	8	.271	8	NC		NC		NC		NC	
1626			min	-828.032	5	-.271	5	NC		NC		NC		NC	
1627		4	max	828.054	8	.271	8	NC		NC		NC		NC	
1628			min	-828.032	5	-.271	5	NC		NC		NC		NC	
1629		5	max	828.054	8	.271	8	NC		NC		NC		NC	
1630			min	-828.032	5	-.271	5	NC		NC		NC		NC	
1631	M174	1	max	754.611	8	.247	8	NC		NC		NC		NC	
1632			min	-1130.158	5	-.37	5	NC		NC		NC		NC	
1633		2	max	754.611	8	.247	8	NC		NC		NC		NC	
1634			min	-1130.158	5	-.37	5	NC		NC		NC		NC	
1635		3	max	754.611	8	.247	8	NC		NC		NC		NC	
1636			min	-1130.158	5	-.37	5	NC		NC		NC		NC	
1637		4	max	754.611	8	.247	8	NC		NC		NC		NC	
1638			min	-1130.158	5	-.37	5	NC		NC		NC		NC	
1639		5	max	754.611	8	.247	8	NC		NC		NC		NC	

Company : **DMJM H&N**
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Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
1640			min	-1130.158	5	-.37	5	NC		NC		NC		NC	
1641	M175	1	max	483.081	8	.158	8	NC		NC		NC		NC	
1642			min	-1491.663	5	-.489	5	NC		NC		NC		NC	
1643		2	max	483.081	8	.158	8	NC		NC		NC		NC	
1644			min	-1491.663	5	-.489	5	NC		NC		NC		NC	
1645		3	max	483.081	8	.158	8	NC		NC		NC		NC	
1646			min	-1491.663	5	-.489	5	NC		NC		NC		NC	
1647		4	max	483.081	8	.158	8	NC		NC		NC		NC	
1648			min	-1491.663	5	-.489	5	NC		NC		NC		NC	
1649		5	max	483.081	8	.158	8	NC		NC		NC		NC	
1650			min	-1491.663	5	-.489	5	NC		NC		NC		NC	
1651	M176	1	max	183.47	8	.06	8	NC		NC		NC		NC	
1652			min	-1610.208	5	-.528	5	NC		NC		NC		NC	
1653		2	max	183.47	8	.06	8	NC		NC		NC		NC	
1654			min	-1610.208	5	-.528	5	NC		NC		NC		NC	
1655		3	max	183.47	8	.06	8	NC		NC		NC		NC	
1656			min	-1610.208	5	-.528	5	NC		NC		NC		NC	
1657		4	max	183.47	8	.06	8	NC		NC		NC		NC	
1658			min	-1610.208	5	-.528	5	NC		NC		NC		NC	
1659		5	max	183.47	8	.06	8	NC		NC		NC		NC	
1660			min	-1610.208	5	-.528	5	NC		NC		NC		NC	
1661	M177	1	max	-97.854	8	-.032	8	NC		NC		NC		NC	
1662			min	-1468.41	5	-.481	5	NC		NC		NC		NC	
1663		2	max	-97.854	8	-.032	8	NC		NC		NC		NC	
1664			min	-1468.41	5	-.481	5	NC		NC		NC		NC	
1665		3	max	-97.854	8	-.032	8	NC		NC		NC		NC	
1666			min	-1468.41	5	-.481	5	NC		NC		NC		NC	
1667		4	max	-97.854	8	-.032	8	NC		NC		NC		NC	
1668			min	-1468.41	5	-.481	5	NC		NC		NC		NC	
1669		5	max	-97.854	8	-.032	8	NC		NC		NC		NC	
1670			min	-1468.41	5	-.481	5	NC		NC		NC		NC	
1671	M178	1	max	-48.062	8	-.106	8	NC		NC		NC		NC	
1672			min	-172.913	5	-.38	5	NC		NC		NC		NC	
1673		2	max	-48.062	8	-.106	8	NC		NC		NC		NC	
1674			min	-172.913	5	-.38	5	NC		NC		NC		NC	
1675		3	max	-48.062	8	-.106	8	NC		NC		NC		NC	
1676			min	-172.913	5	-.38	5	NC		NC		NC		NC	
1677		4	max	-48.062	8	-.106	8	NC		NC		NC		NC	
1678			min	-172.913	5	-.38	5	NC		NC		NC		NC	
1679		5	max	-48.062	8	-.106	8	NC		NC		NC		NC	
1680			min	-172.913	5	-.38	5	NC		NC		NC		NC	
1681	M179	1	max	22.461	8	.049	8	NC		NC		NC		NC	
1682			min	-103.048	5	-.227	5	NC		NC		NC		NC	
1683		2	max	22.461	8	.049	8	NC		NC		NC		NC	
1684			min	-103.048	5	-.227	5	NC		NC		NC		NC	
1685		3	max	22.461	8	.049	8	NC		NC		NC		NC	
1686			min	-103.048	5	-.227	5	NC		NC		NC		NC	
1687		4	max	22.461	8	.049	8	NC		NC		NC		NC	
1688			min	-103.048	5	-.227	5	NC		NC		NC		NC	
1689		5	max	22.461	8	.049	8	NC		NC		NC		NC	
1690			min	-103.048	5	-.227	5	NC		NC		NC		NC	
1691	M180	1	max	96.677	8	.213	8	NC		NC		NC		NC	
1692			min	-1.169	5	-.003	5	NC		NC		NC		NC	
1693		2	max	96.677	8	.213	8	NC		NC		NC		NC	
1694			min	-1.169	5	-.003	5	NC		NC		NC		NC	
1695		3	max	96.677	8	.213	8	NC		NC		NC		NC	
1696			min	-1.169	5	-.003	5	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
1697		4	max	96.677	8	.213	8	NC		NC		NC		NC	
1698			min	-1.169	5	-.003	5	NC		NC		NC		NC	
1699		5	max	96.677	8	.213	8	NC		NC		NC		NC	
1700			min	-1.169	5	-.003	5	NC		NC		NC		NC	
1701	M181	1	max	271.447	7	.597	7	NC		NC		NC		NC	
1702			min	169.585	6	.373	6	NC		NC		NC		NC	
1703		2	max	271.447	7	.597	7	NC		NC		NC		NC	
1704			min	169.585	6	.373	6	NC		NC		NC		NC	
1705		3	max	271.447	7	.597	7	NC		NC		NC		NC	
1706			min	169.585	6	.373	6	NC		NC		NC		NC	
1707		4	max	271.447	7	.597	7	NC		NC		NC		NC	
1708			min	169.585	6	.373	6	NC		NC		NC		NC	
1709		5	max	271.447	7	.597	7	NC		NC		NC		NC	
1710			min	169.585	6	.373	6	NC		NC		NC		NC	
1711	M182	1	max	593.913	7	1.307	7	NC		NC		NC		NC	
1712			min	269.942	6	.594	6	NC		NC		NC		NC	
1713		2	max	593.913	7	1.307	7	NC		NC		NC		NC	
1714			min	269.942	6	.594	6	NC		NC		NC		NC	
1715		3	max	593.913	7	1.307	7	NC		NC		NC		NC	
1716			min	269.942	6	.594	6	NC		NC		NC		NC	
1717		4	max	593.913	7	1.307	7	NC		NC		NC		NC	
1718			min	269.942	6	.594	6	NC		NC		NC		NC	
1719		5	max	593.913	7	1.307	7	NC		NC		NC		NC	
1720			min	269.942	6	.594	6	NC		NC		NC		NC	
1721	M183	1	max	764.901	7	1.683	7	NC		NC		NC		NC	
1722			min	305.086	6	.671	6	NC		NC		NC		NC	
1723		2	max	764.901	7	1.683	7	NC		NC		NC		NC	
1724			min	305.086	6	.671	6	NC		NC		NC		NC	
1725		3	max	764.901	7	1.683	7	NC		NC		NC		NC	
1726			min	305.086	6	.671	6	NC		NC		NC		NC	
1727		4	max	764.901	7	1.683	7	NC		NC		NC		NC	
1728			min	305.086	6	.671	6	NC		NC		NC		NC	
1729		5	max	764.901	7	1.683	7	NC		NC		NC		NC	
1730			min	305.086	6	.671	6	NC		NC		NC		NC	
1731	M184	1	max	208.456	8	.271	8	NC		NC		NC		NC	
1732			min	-255.32	5	-.332	5	NC		NC		NC		NC	
1733		2	max	208.456	8	.271	8	NC		NC		NC		NC	
1734			min	-255.32	5	-.332	5	NC		NC		NC		NC	
1735		3	max	208.456	8	.271	8	NC		NC		NC		NC	
1736			min	-255.32	5	-.332	5	NC		NC		NC		NC	
1737		4	max	208.456	8	.271	8	NC		NC		NC		NC	
1738			min	-255.32	5	-.332	5	NC		NC		NC		NC	
1739		5	max	208.456	8	.271	8	NC		NC		NC		NC	
1740			min	-255.32	5	-.332	5	NC		NC		NC		NC	
1741	M185	1	max	609.251	8	.793	8	NC		NC		NC		NC	
1742			min	89.263	5	.116	5	NC		NC		NC		NC	
1743		2	max	609.251	8	.793	8	NC		NC		NC		NC	
1744			min	89.263	5	.116	5	NC		NC		NC		NC	
1745		3	max	609.251	8	.793	8	NC		NC		NC		NC	
1746			min	89.263	5	.116	5	NC		NC		NC		NC	
1747		4	max	609.251	8	.793	8	NC		NC		NC		NC	
1748			min	89.263	5	.116	5	NC		NC		NC		NC	
1749		5	max	609.251	8	.793	8	NC		NC		NC		NC	
1750			min	89.263	5	.116	5	NC		NC		NC		NC	
1751	M186	1	max	15.687	8	.02	8	NC		NC		NC		NC	
1752			min	-156.808	5	-.204	5	NC		NC		NC		NC	
1753		2	max	15.687	8	.02	8	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
1754			min	-156.808	5	-.204	5	NC		NC		NC		NC	
1755		3	max	15.687	8	.02	8	NC		NC		NC		NC	
1756			min	-156.808	5	-.204	5	NC		NC		NC		NC	
1757		4	max	15.687	8	.02	8	NC		NC		NC		NC	
1758			min	-156.808	5	-.204	5	NC		NC		NC		NC	
1759		5	max	15.687	8	.02	8	NC		NC		NC		NC	
1760			min	-156.808	5	-.204	5	NC		NC		NC		NC	
1761	M187	1	max	237.203	6	.309	6	NC		NC		NC		NC	
1762			min	-31.177	7	-.041	7	NC		NC		NC		NC	
1763		2	max	237.203	6	.309	6	NC		NC		NC		NC	
1764			min	-31.177	7	-.041	7	NC		NC		NC		NC	
1765		3	max	237.203	6	.309	6	NC		NC		NC		NC	
1766			min	-31.177	7	-.041	7	NC		NC		NC		NC	
1767		4	max	237.203	6	.309	6	NC		NC		NC		NC	
1768			min	-31.177	7	-.041	7	NC		NC		NC		NC	
1769		5	max	237.203	6	.309	6	NC		NC		NC		NC	
1770			min	-31.177	7	-.041	7	NC		NC		NC		NC	
1771	M188	1	max	160.961	6	.21	6	NC		NC		NC		NC	
1772			min	-36.753	7	-.048	7	NC		NC		NC		NC	
1773		2	max	160.961	6	.21	6	NC		NC		NC		NC	
1774			min	-36.753	7	-.048	7	NC		NC		NC		NC	
1775		3	max	160.961	6	.21	6	NC		NC		NC		NC	
1776			min	-36.753	7	-.048	7	NC		NC		NC		NC	
1777		4	max	160.961	6	.21	6	NC		NC		NC		NC	
1778			min	-36.753	7	-.048	7	NC		NC		NC		NC	
1779		5	max	160.961	6	.21	6	NC		NC		NC		NC	
1780			min	-36.753	7	-.048	7	NC		NC		NC		NC	
1781	M189	1	max	160.961	6	.21	6	NC		NC		NC		NC	
1782			min	-36.753	7	-.048	7	NC		NC		NC		NC	
1783		2	max	160.961	6	.21	6	NC		NC		NC		NC	
1784			min	-36.753	7	-.048	7	NC		NC		NC		NC	
1785		3	max	160.961	6	.21	6	NC		NC		NC		NC	
1786			min	-36.753	7	-.048	7	NC		NC		NC		NC	
1787		4	max	160.961	6	.21	6	NC		NC		NC		NC	
1788			min	-36.753	7	-.048	7	NC		NC		NC		NC	
1789		5	max	160.961	6	.21	6	NC		NC		NC		NC	
1790			min	-36.753	7	-.048	7	NC		NC		NC		NC	
1791	M190	1	max	160.961	6	.21	6	NC		NC		NC		NC	
1792			min	-36.753	7	-.048	7	NC		NC		NC		NC	
1793		2	max	160.961	6	.21	6	NC		NC		NC		NC	
1794			min	-36.753	7	-.048	7	NC		NC		NC		NC	
1795		3	max	160.961	6	.21	6	NC		NC		NC		NC	
1796			min	-36.753	7	-.048	7	NC		NC		NC		NC	
1797		4	max	160.961	6	.21	6	NC		NC		NC		NC	
1798			min	-36.753	7	-.048	7	NC		NC		NC		NC	
1799		5	max	160.961	6	.21	6	NC		NC		NC		NC	
1800			min	-36.753	7	-.048	7	NC		NC		NC		NC	
1801	M191	1	max	-853.734	7	-.169	7	NC		NC		NC		NC	
1802			min	-2168.192	6	-.43	6	NC		NC		NC		NC	
1803		2	max	-853.734	7	-.169	7	NC		NC		NC		NC	
1804			min	-2168.192	6	-.43	6	NC		NC		NC		NC	
1805		3	max	-853.734	7	-.169	7	NC		NC		NC		NC	
1806			min	-2168.192	6	-.43	6	NC		NC		NC		NC	
1807		4	max	-853.734	7	-.169	7	NC		NC		NC		NC	
1808			min	-2168.192	6	-.43	6	NC		NC		NC		NC	
1809		5	max	-853.734	7	-.169	7	NC		NC		NC		NC	
1810			min	-2168.192	6	-.43	6	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
1811	M192	1	max	-437.069	3	-.087	3	NC		NC		NC		NC	
1812			min	-1403.254	4	-.278	4	NC		NC		NC		NC	
1813		2	max	-437.069	3	-.087	3	NC		NC		NC		NC	
1814			min	-1403.254	4	-.278	4	NC		NC		NC		NC	
1815		3	max	-437.069	3	-.087	3	NC		NC		NC		NC	
1816			min	-1403.254	4	-.278	4	NC		NC		NC		NC	
1817		4	max	-437.069	3	-.087	3	NC		NC		NC		NC	
1818			min	-1403.254	4	-.278	4	NC		NC		NC		NC	
1819		5	max	-437.069	3	-.087	3	NC		NC		NC		NC	
1820			min	-1403.254	4	-.278	4	NC		NC		NC		NC	
1821	M193	1	max	391.612	3	.078	3	NC		NC		NC		NC	
1822			min	-758.873	4	-.15	4	NC		NC		NC		NC	
1823		2	max	391.612	3	.078	3	NC		NC		NC		NC	
1824			min	-758.873	4	-.15	4	NC		NC		NC		NC	
1825		3	max	391.612	3	.078	3	NC		NC		NC		NC	
1826			min	-758.873	4	-.15	4	NC		NC		NC		NC	
1827		4	max	391.612	3	.078	3	NC		NC		NC		NC	
1828			min	-758.873	4	-.15	4	NC		NC		NC		NC	
1829		5	max	391.612	3	.078	3	NC		NC		NC		NC	
1830			min	-758.873	4	-.15	4	NC		NC		NC		NC	
1831	M194	1	max	1234.893	3	.245	3	NC		NC		NC		NC	
1832			min	-61.524	4	-.012	4	NC		NC		NC		NC	
1833		2	max	1234.893	3	.245	3	NC		NC		NC		NC	
1834			min	-61.524	4	-.012	4	NC		NC		NC		NC	
1835		3	max	1234.893	3	.245	3	NC		NC		NC		NC	
1836			min	-61.524	4	-.012	4	NC		NC		NC		NC	
1837		4	max	1234.893	3	.245	3	NC		NC		NC		NC	
1838			min	-61.524	4	-.012	4	NC		NC		NC		NC	
1839		5	max	1234.893	3	.245	3	NC		NC		NC		NC	
1840			min	-61.524	4	-.012	4	NC		NC		NC		NC	
1841	M195	1	max	1234.847	3	.245	3	NC		NC		NC		NC	
1842			min	-61.561	4	-.012	4	NC		NC		NC		NC	
1843		2	max	1234.847	3	.245	3	NC		NC		NC		NC	
1844			min	-61.561	4	-.012	4	NC		NC		NC		NC	
1845		3	max	1234.847	3	.245	3	NC		NC		NC		NC	
1846			min	-61.561	4	-.012	4	NC		NC		NC		NC	
1847		4	max	1234.847	3	.245	3	NC		NC		NC		NC	
1848			min	-61.561	4	-.012	4	NC		NC		NC		NC	
1849		5	max	1234.847	3	.245	3	NC		NC		NC		NC	
1850			min	-61.561	4	-.012	4	NC		NC		NC		NC	
1851	M196	1	max	-2284.3	3	-.453	3	NC		NC		NC		NC	
1852			min	-3382.935	4	-.671	4	NC		NC		NC		NC	
1853		2	max	-2284.3	3	-.453	3	NC		NC		NC		NC	
1854			min	-3382.935	4	-.671	4	NC		NC		NC		NC	
1855		3	max	-2284.3	3	-.453	3	NC		NC		NC		NC	
1856			min	-3382.935	4	-.671	4	NC		NC		NC		NC	
1857		4	max	-2284.3	3	-.453	3	NC		NC		NC		NC	
1858			min	-3382.935	4	-.671	4	NC		NC		NC		NC	
1859		5	max	-2284.3	3	-.453	3	NC		NC		NC		NC	
1860			min	-3382.935	4	-.671	4	NC		NC		NC		NC	
1861	M197	1	max	-4550.766	3	-.902	3	NC		NC		NC		NC	
1862			min	-5241.484	4	-1.039	4	NC		NC		NC		NC	
1863		2	max	-4550.766	3	-.902	3	NC		NC		NC		NC	
1864			min	-5241.484	4	-1.039	4	NC		NC		NC		NC	
1865		3	max	-4550.766	3	-.902	3	NC		NC		NC		NC	
1866			min	-5241.484	4	-1.039	4	NC		NC		NC		NC	
1867		4	max	-4550.766	3	-.902	3	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
1868			min	-5241.484	4	-1.039	4	NC		NC		NC		NC	
1869		5	max	-4550.766	3	-.902	3	NC		NC		NC		NC	
1870			min	-5241.484	4	-1.039	4	NC		NC		NC		NC	
1871	M198	1	max	-5976.034	2	-1.185	2	NC		NC		NC		NC	
1872			min	-6450.135	1	-1.278	1	NC		NC		NC		NC	
1873		2	max	-5976.034	2	-1.185	2	NC		NC		NC		NC	
1874			min	-6450.135	1	-1.278	1	NC		NC		NC		NC	
1875		3	max	-5976.034	2	-1.185	2	NC		NC		NC		NC	
1876			min	-6450.135	1	-1.278	1	NC		NC		NC		NC	
1877		4	max	-5976.034	2	-1.185	2	NC		NC		NC		NC	
1878			min	-6450.135	1	-1.278	1	NC		NC		NC		NC	
1879		5	max	-5976.034	2	-1.185	2	NC		NC		NC		NC	
1880			min	-6450.135	1	-1.278	1	NC		NC		NC		NC	
1881	M199	1	max	-6235.746	2	-1.236	2	NC		NC		NC		NC	
1882			min	-6812.21	1	-1.35	1	NC		NC		NC		NC	
1883		2	max	-6235.746	2	-1.236	2	NC		NC		NC		NC	
1884			min	-6812.21	1	-1.35	1	NC		NC		NC		NC	
1885		3	max	-6235.746	2	-1.236	2	NC		NC		NC		NC	
1886			min	-6812.21	1	-1.35	1	NC		NC		NC		NC	
1887		4	max	-6235.746	2	-1.236	2	NC		NC		NC		NC	
1888			min	-6812.21	1	-1.35	1	NC		NC		NC		NC	
1889		5	max	-6235.746	2	-1.236	2	NC		NC		NC		NC	
1890			min	-6812.21	1	-1.35	1	NC		NC		NC		NC	
1891	M200	1	max	130.227	8	.287	8	NC		NC		NC		NC	
1892			min	53.888	5	.119	5	NC		NC		NC		NC	
1893		2	max	130.227	8	.287	8	NC		NC		NC		NC	
1894			min	53.888	5	.119	5	NC		NC		NC		NC	
1895		3	max	130.227	8	.287	8	NC		NC		NC		NC	
1896			min	53.888	5	.119	5	NC		NC		NC		NC	
1897		4	max	130.227	8	.287	8	NC		NC		NC		NC	
1898			min	53.888	5	.119	5	NC		NC		NC		NC	
1899		5	max	130.227	8	.287	8	NC		NC		NC		NC	
1900			min	53.888	5	.119	5	NC		NC		NC		NC	
1901	M201	1	max	1313.992	4	1.153	4	NC		NC		NC		NC	
1902			min	1103.694	3	.969	3	NC		NC		NC		NC	
1903		2	max	1313.992	4	1.153	4	NC		NC		NC		NC	
1904			min	1103.694	3	.969	3	NC		NC		NC		NC	
1905		3	max	1313.992	4	1.153	4	NC		NC		NC		NC	
1906			min	1103.694	3	.969	3	NC		NC		NC		NC	
1907		4	max	1313.992	4	1.153	4	NC		NC		NC		NC	
1908			min	1103.694	3	.969	3	NC		NC		NC		NC	
1909		5	max	1313.992	4	1.153	4	NC		NC		NC		NC	
1910			min	1103.694	3	.969	3	NC		NC		NC		NC	
1911	M202	1	max	1313.992	4	1.153	4	NC		NC		NC		NC	
1912			min	1103.694	3	.969	3	NC		NC		NC		NC	
1913		2	max	1313.992	4	1.153	4	NC		NC		NC		NC	
1914			min	1103.694	3	.969	3	NC		NC		NC		NC	
1915		3	max	1313.992	4	1.153	4	NC		NC		NC		NC	
1916			min	1103.694	3	.969	3	NC		NC		NC		NC	
1917		4	max	1313.992	4	1.153	4	NC		NC		NC		NC	
1918			min	1103.694	3	.969	3	NC		NC		NC		NC	
1919		5	max	1313.992	4	1.153	4	NC		NC		NC		NC	
1920			min	1103.694	3	.969	3	NC		NC		NC		NC	
1921	M204	1	max	-935.256	8	-.821	8	NC		NC		NC		NC	
1922			min	-1045.519	5	-.918	5	NC		NC		NC		NC	
1923		2	max	-935.256	8	-.821	8	NC		NC		NC		NC	
1924			min	-1045.519	5	-.918	5	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
1925		3	max	-935.256	8	-.821	8	NC		NC		NC		NC	
1926			min	-1045.519	5	-.918	5	NC		NC		NC		NC	
1927		4	max	-935.256	8	-.821	8	NC		NC		NC		NC	
1928			min	-1045.519	5	-.918	5	NC		NC		NC		NC	
1929		5	max	-935.256	8	-.821	8	NC		NC		NC		NC	
1930			min	-1045.519	5	-.918	5	NC		NC		NC		NC	
1931	M205	1	max	-5.895	8	-.08	8	NC		NC		NC		NC	
1932			min	-24.608	5	-.335	5	NC		NC		NC		NC	
1933		2	max	-5.895	8	-.08	8	NC		NC		NC		NC	
1934			min	-24.608	5	-.335	5	NC		NC		NC		NC	
1935		3	max	-5.895	8	-.08	8	NC		NC		NC		NC	
1936			min	-24.608	5	-.335	5	NC		NC		NC		NC	
1937		4	max	-5.895	8	-.08	8	NC		NC		NC		NC	
1938			min	-24.608	5	-.335	5	NC		NC		NC		NC	
1939		5	max	-5.895	8	-.08	8	NC		NC		NC		NC	
1940			min	-24.608	5	-.335	5	NC		NC		NC		NC	
1941	M206	1	max	-5.895	8	-.08	8	NC		NC		NC		NC	
1942			min	-24.608	5	-.335	5	NC		NC		NC		NC	
1943		2	max	-5.895	8	-.08	8	NC		NC		NC		NC	
1944			min	-24.608	5	-.335	5	NC		NC		NC		NC	
1945		3	max	-5.895	8	-.08	8	NC		NC		NC		NC	
1946			min	-24.608	5	-.335	5	NC		NC		NC		NC	
1947		4	max	-5.895	8	-.08	8	NC		NC		NC		NC	
1948			min	-24.608	5	-.335	5	NC		NC		NC		NC	
1949		5	max	-5.895	8	-.08	8	NC		NC		NC		NC	
1950			min	-24.608	5	-.335	5	NC		NC		NC		NC	
1951	M207	1	max	34.434	6	.147	6	NC		NC		NC		NC	
1952			min	30.864	7	.132	7	NC		NC		NC		NC	
1953		2	max	34.434	6	.147	6	NC		NC		NC		NC	
1954			min	30.864	7	.132	7	NC		NC		NC		NC	
1955		3	max	34.434	6	.147	6	NC		NC		NC		NC	
1956			min	30.864	7	.132	7	NC		NC		NC		NC	
1957		4	max	34.434	6	.147	6	NC		NC		NC		NC	
1958			min	30.864	7	.132	7	NC		NC		NC		NC	
1959		5	max	34.434	6	.147	6	NC		NC		NC		NC	
1960			min	30.864	7	.132	7	NC		NC		NC		NC	
1961	M208	1	max	34.434	6	.147	6	NC		NC		NC		NC	
1962			min	30.864	7	.132	7	NC		NC		NC		NC	
1963		2	max	34.434	6	.147	6	NC		NC		NC		NC	
1964			min	30.864	7	.132	7	NC		NC		NC		NC	
1965		3	max	34.434	6	.147	6	NC		NC		NC		NC	
1966			min	30.864	7	.132	7	NC		NC		NC		NC	
1967		4	max	34.434	6	.147	6	NC		NC		NC		NC	
1968			min	30.864	7	.132	7	NC		NC		NC		NC	
1969		5	max	34.434	6	.147	6	NC		NC		NC		NC	
1970			min	30.864	7	.132	7	NC		NC		NC		NC	
1971	M209	1	max	-27.019	5	-.115	5	NC		NC		NC		NC	
1972			min	-28.024	8	-.12	8	NC		NC		NC		NC	
1973		2	max	-27.019	5	-.115	5	NC		NC		NC		NC	
1974			min	-28.024	8	-.12	8	NC		NC		NC		NC	
1975		3	max	-27.019	5	-.115	5	NC		NC		NC		NC	
1976			min	-28.024	8	-.12	8	NC		NC		NC		NC	
1977		4	max	-27.019	5	-.115	5	NC		NC		NC		NC	
1978			min	-28.024	8	-.12	8	NC		NC		NC		NC	
1979		5	max	-27.019	5	-.115	5	NC		NC		NC		NC	
1980			min	-28.024	8	-.12	8	NC		NC		NC		NC	
1981	M210	1	max	-13.162	5	-.056	5	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
1982			min	-14.055	8	-.06	8	NC		NC		NC		NC	
1983		2	max	-13.162	5	-.056	5	NC		NC		NC		NC	
1984			min	-14.055	8	-.06	8	NC		NC		NC		NC	
1985		3	max	-13.162	5	-.056	5	NC		NC		NC		NC	
1986			min	-14.055	8	-.06	8	NC		NC		NC		NC	
1987		4	max	-13.162	5	-.056	5	NC		NC		NC		NC	
1988			min	-14.055	8	-.06	8	NC		NC		NC		NC	
1989		5	max	-13.162	5	-.056	5	NC		NC		NC		NC	
1990			min	-14.055	8	-.06	8	NC		NC		NC		NC	
1991	M211	1	max	-13.162	5	-.056	5	NC		NC		NC		NC	
1992			min	-14.055	8	-.06	8	NC		NC		NC		NC	
1993		2	max	-13.162	5	-.056	5	NC		NC		NC		NC	
1994			min	-14.055	8	-.06	8	NC		NC		NC		NC	
1995		3	max	-13.162	5	-.056	5	NC		NC		NC		NC	
1996			min	-14.055	8	-.06	8	NC		NC		NC		NC	
1997		4	max	-13.162	5	-.056	5	NC		NC		NC		NC	
1998			min	-14.055	8	-.06	8	NC		NC		NC		NC	
1999		5	max	-13.162	5	-.056	5	NC		NC		NC		NC	
2000			min	-14.055	8	-.06	8	NC		NC		NC		NC	
2001	M212	1	max	-13.162	5	-.056	5	NC		NC		NC		NC	
2002			min	-14.055	8	-.06	8	NC		NC		NC		NC	
2003		2	max	-13.162	5	-.056	5	NC		NC		NC		NC	
2004			min	-14.055	8	-.06	8	NC		NC		NC		NC	
2005		3	max	-13.162	5	-.056	5	NC		NC		NC		NC	
2006			min	-14.055	8	-.06	8	NC		NC		NC		NC	
2007		4	max	-13.162	5	-.056	5	NC		NC		NC		NC	
2008			min	-14.055	8	-.06	8	NC		NC		NC		NC	
2009		5	max	-13.162	5	-.056	5	NC		NC		NC		NC	
2010			min	-14.055	8	-.06	8	NC		NC		NC		NC	
2011	M213	1	max	-9.047	1	-.039	1	NC		NC		NC		NC	
2012			min	-9.844	2	-.042	2	NC		NC		NC		NC	
2013		2	max	-9.047	1	-.039	1	NC		NC		NC		NC	
2014			min	-9.844	2	-.042	2	NC		NC		NC		NC	
2015		3	max	-9.047	1	-.039	1	NC		NC		NC		NC	
2016			min	-9.844	2	-.042	2	NC		NC		NC		NC	
2017		4	max	-9.047	1	-.039	1	NC		NC		NC		NC	
2018			min	-9.844	2	-.042	2	NC		NC		NC		NC	
2019		5	max	-9.047	1	-.039	1	NC		NC		NC		NC	
2020			min	-9.844	2	-.042	2	NC		NC		NC		NC	
2021	M214	1	max	-5.615	6	-.024	6	NC		NC		NC		NC	
2022			min	-6.221	7	-.027	7	NC		NC		NC		NC	
2023		2	max	-5.615	6	-.024	6	NC		NC		NC		NC	
2024			min	-6.221	7	-.027	7	NC		NC		NC		NC	
2025		3	max	-5.615	6	-.024	6	NC		NC		NC		NC	
2026			min	-6.221	7	-.027	7	NC		NC		NC		NC	
2027		4	max	-5.615	6	-.024	6	NC		NC		NC		NC	
2028			min	-6.221	7	-.027	7	NC		NC		NC		NC	
2029		5	max	-5.615	6	-.024	6	NC		NC		NC		NC	
2030			min	-6.221	7	-.027	7	NC		NC		NC		NC	
2031	M215	1	max	-6.98	8	-.03	8	NC		NC		NC		NC	
2032			min	-7.691	5	-.033	5	NC		NC		NC		NC	
2033		2	max	-6.98	8	-.03	8	NC		NC		NC		NC	
2034			min	-7.691	5	-.033	5	NC		NC		NC		NC	
2035		3	max	-6.98	8	-.03	8	NC		NC		NC		NC	
2036			min	-7.691	5	-.033	5	NC		NC		NC		NC	
2037		4	max	-6.98	8	-.03	8	NC		NC		NC		NC	
2038			min	-7.691	5	-.033	5	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
2039		5	max	-6.98	8	-.03	8	NC		NC		NC		NC	
2040			min	-7.691	5	-.033	5	NC		NC		NC		NC	
2041	M216	1	max	-6.98	8	-.03	8	NC		NC		NC		NC	
2042			min	-7.691	5	-.033	5	NC		NC		NC		NC	
2043		2	max	-6.98	8	-.03	8	NC		NC		NC		NC	
2044			min	-7.691	5	-.033	5	NC		NC		NC		NC	
2045		3	max	-6.98	8	-.03	8	NC		NC		NC		NC	
2046			min	-7.691	5	-.033	5	NC		NC		NC		NC	
2047		4	max	-6.98	8	-.03	8	NC		NC		NC		NC	
2048			min	-7.691	5	-.033	5	NC		NC		NC		NC	
2049		5	max	-6.98	8	-.03	8	NC		NC		NC		NC	
2050			min	-7.691	5	-.033	5	NC		NC		NC		NC	
2051	M217	1	max	-6.98	8	-.03	8	NC		NC		NC		NC	
2052			min	-7.691	5	-.033	5	NC		NC		NC		NC	
2053		2	max	-6.98	8	-.03	8	NC		NC		NC		NC	
2054			min	-7.691	5	-.033	5	NC		NC		NC		NC	
2055		3	max	-6.98	8	-.03	8	NC		NC		NC		NC	
2056			min	-7.691	5	-.033	5	NC		NC		NC		NC	
2057		4	max	-6.98	8	-.03	8	NC		NC		NC		NC	
2058			min	-7.691	5	-.033	5	NC		NC		NC		NC	
2059		5	max	-6.98	8	-.03	8	NC		NC		NC		NC	
2060			min	-7.691	5	-.033	5	NC		NC		NC		NC	
2061	M218	1	max	-6.98	8	-.03	8	NC		NC		NC		NC	
2062			min	-7.691	5	-.033	5	NC		NC		NC		NC	
2063		2	max	-6.98	8	-.03	8	NC		NC		NC		NC	
2064			min	-7.691	5	-.033	5	NC		NC		NC		NC	
2065		3	max	-6.98	8	-.03	8	NC		NC		NC		NC	
2066			min	-7.691	5	-.033	5	NC		NC		NC		NC	
2067		4	max	-6.98	8	-.03	8	NC		NC		NC		NC	
2068			min	-7.691	5	-.033	5	NC		NC		NC		NC	
2069		5	max	-6.98	8	-.03	8	NC		NC		NC		NC	
2070			min	-7.691	5	-.033	5	NC		NC		NC		NC	
2071	M219	1	max	-11.397	8	-.049	8	NC		NC		NC		NC	
2072			min	-19.817	5	-.085	5	NC		NC		NC		NC	
2073		2	max	-11.397	8	-.049	8	NC		NC		NC		NC	
2074			min	-19.817	5	-.085	5	NC		NC		NC		NC	
2075		3	max	-11.397	8	-.049	8	NC		NC		NC		NC	
2076			min	-19.817	5	-.085	5	NC		NC		NC		NC	
2077		4	max	-11.397	8	-.049	8	NC		NC		NC		NC	
2078			min	-19.817	5	-.085	5	NC		NC		NC		NC	
2079		5	max	-11.397	8	-.049	8	NC		NC		NC		NC	
2080			min	-19.817	5	-.085	5	NC		NC		NC		NC	
2081	M220	1	max	-15.506	8	-.066	8	NC		NC		NC		NC	
2082			min	-35.372	5	-.151	5	NC		NC		NC		NC	
2083		2	max	-15.506	8	-.066	8	NC		NC		NC		NC	
2084			min	-35.372	5	-.151	5	NC		NC		NC		NC	
2085		3	max	-15.506	8	-.066	8	NC		NC		NC		NC	
2086			min	-35.372	5	-.151	5	NC		NC		NC		NC	
2087		4	max	-15.506	8	-.066	8	NC		NC		NC		NC	
2088			min	-35.372	5	-.151	5	NC		NC		NC		NC	
2089		5	max	-15.506	8	-.066	8	NC		NC		NC		NC	
2090			min	-35.372	5	-.151	5	NC		NC		NC		NC	
2091	M221	1	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2092			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2093		2	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2094			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2095		3	max	-14.328	8	-.061	8	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
2096			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2097		4	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2098			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2099		5	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2100			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2101	M222	1	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2102			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2103		2	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2104			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2105		3	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2106			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2107		4	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2108			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2109		5	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2110			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2111	M223	1	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2112			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2113		2	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2114			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2115		3	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2116			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2117		4	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2118			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2119		5	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2120			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2121	M224	1	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2122			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2123		2	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2124			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2125		3	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2126			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2127		4	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2128			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2129		5	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2130			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2131	M225	1	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2132			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2133		2	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2134			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2135		3	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2136			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2137		4	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2138			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2139		5	max	-14.328	8	-.061	8	NC		NC		NC		NC	
2140			min	-36.188	5	-.155	5	NC		NC		NC		NC	
2141	M226	1	max	353.378	6	.296	6	NC		NC		NC		NC	
2142			min	326.161	7	.273	7	NC		NC		NC		NC	
2143		2	max	353.378	6	.296	6	NC		NC		NC		NC	
2144			min	326.161	7	.273	7	NC		NC		NC		NC	
2145		3	max	353.378	6	.296	6	NC		NC		NC		NC	
2146			min	326.161	7	.273	7	NC		NC		NC		NC	
2147		4	max	353.378	6	.296	6	NC		NC		NC		NC	
2148			min	326.161	7	.273	7	NC		NC		NC		NC	
2149		5	max	353.378	6	.296	6	NC		NC		NC		NC	
2150			min	326.161	7	.273	7	NC		NC		NC		NC	
2151	M227	1	max	353.378	6	.296	6	NC		NC		NC		NC	
2152			min	326.161	7	.273	7	NC		NC		NC		NC	

Company : **DMJM H&N**
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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
2153		2	max	353.378	6	.296	6	NC		NC		NC		NC	
2154			min	326.161	7	.273	7	NC		NC		NC		NC	
2155		3	max	353.378	6	.296	6	NC		NC		NC		NC	
2156			min	326.161	7	.273	7	NC		NC		NC		NC	
2157		4	max	353.378	6	.296	6	NC		NC		NC		NC	
2158			min	326.161	7	.273	7	NC		NC		NC		NC	
2159		5	max	353.378	6	.296	6	NC		NC		NC		NC	
2160			min	326.161	7	.273	7	NC		NC		NC		NC	
2161	M228	1	max	315.448	6	.264	6	NC		NC		NC		NC	
2162			min	270.985	7	.227	7	NC		NC		NC		NC	
2163		2	max	315.448	6	.264	6	NC		NC		NC		NC	
2164			min	270.985	7	.227	7	NC		NC		NC		NC	
2165		3	max	315.448	6	.264	6	NC		NC		NC		NC	
2166			min	270.985	7	.227	7	NC		NC		NC		NC	
2167		4	max	315.448	6	.264	6	NC		NC		NC		NC	
2168			min	270.985	7	.227	7	NC		NC		NC		NC	
2169		5	max	315.448	6	.264	6	NC		NC		NC		NC	
2170			min	270.985	7	.227	7	NC		NC		NC		NC	
2171	M229	1	max	10.134	6	.138	6	NC		NC		NC		NC	
2172			min	-61.838	7	-.843	7	NC		NC		NC		NC	
2173		2	max	10.134	6	.138	6	NC		NC		NC		NC	
2174			min	-61.838	7	-.843	7	NC		NC		NC		NC	
2175		3	max	10.134	6	.138	6	NC		NC		NC		NC	
2176			min	-61.838	7	-.843	7	NC		NC		NC		NC	
2177		4	max	10.134	6	.138	6	NC		NC		NC		NC	
2178			min	-61.838	7	-.843	7	NC		NC		NC		NC	
2179		5	max	10.134	6	.138	6	NC		NC		NC		NC	
2180			min	-61.838	7	-.843	7	NC		NC		NC		NC	
2181	M230	1	max	-38.927	8	-.531	8	NC		NC		NC		NC	
2182			min	-199.789	5	-2.724	5	NC		NC		NC		NC	
2183		2	max	-38.927	8	-.531	8	NC		NC		NC		NC	
2184			min	-199.789	5	-2.724	5	NC		NC		NC		NC	
2185		3	max	-38.927	8	-.531	8	NC		NC		NC		NC	
2186			min	-199.789	5	-2.724	5	NC		NC		NC		NC	
2187		4	max	-38.927	8	-.531	8	NC		NC		NC		NC	
2188			min	-199.789	5	-2.724	5	NC		NC		NC		NC	
2189		5	max	-38.927	8	-.531	8	NC		NC		NC		NC	
2190			min	-199.789	5	-2.724	5	NC		NC		NC		NC	
2191	M231	1	max	-10.064	6	-.137	6	NC		NC		NC		NC	
2192			min	-64.216	7	-.875	7	NC		NC		NC		NC	
2193		2	max	-10.064	6	-.137	6	NC		NC		NC		NC	
2194			min	-64.216	7	-.875	7	NC		NC		NC		NC	
2195		3	max	-10.064	6	-.137	6	NC		NC		NC		NC	
2196			min	-64.216	7	-.875	7	NC		NC		NC		NC	
2197		4	max	-10.064	6	-.137	6	NC		NC		NC		NC	
2198			min	-64.216	7	-.875	7	NC		NC		NC		NC	
2199		5	max	-10.064	6	-.137	6	NC		NC		NC		NC	
2200			min	-64.216	7	-.875	7	NC		NC		NC		NC	
2201	M232	1	max	8.083	5	.035	5	NC		NC		NC		NC	
2202			min	-.009	8	0	8	NC		NC		NC		NC	
2203		2	max	8.083	5	.035	5	NC		NC		NC		NC	
2204			min	-.009	8	0	8	NC		NC		NC		NC	
2205		3	max	8.083	5	.035	5	NC		NC		NC		NC	
2206			min	-.009	8	0	8	NC		NC		NC		NC	
2207		4	max	8.083	5	.035	5	NC		NC		NC		NC	
2208			min	-.009	8	0	8	NC		NC		NC		NC	
2209		5	max	8.083	5	.035	5	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
2210			min	-.009	8	0	8	NC		NC		NC		NC	
2211	M233	1	max	8.083	5	.11	5	NC		NC		NC		NC	
2212			min	-.009	8	0	8	NC		NC		NC		NC	
2213		2	max	8.083	5	.11	5	NC		NC		NC		NC	
2214			min	-.009	8	0	8	NC		NC		NC		NC	
2215		3	max	8.083	5	.11	5	NC		NC		NC		NC	
2216			min	-.009	8	0	8	NC		NC		NC		NC	
2217		4	max	8.083	5	.11	5	NC		NC		NC		NC	
2218			min	-.009	8	0	8	NC		NC		NC		NC	
2219		5	max	8.083	5	.11	5	NC		NC		NC		NC	
2220			min	-.009	8	0	8	NC		NC		NC		NC	
2221	M234	1	max	8.083	5	.11	5	NC		NC		NC		NC	
2222			min	-.009	8	0	8	NC		NC		NC		NC	
2223		2	max	8.083	5	.11	5	NC		NC		NC		NC	
2224			min	-.009	8	0	8	NC		NC		NC		NC	
2225		3	max	8.083	5	.11	5	NC		NC		NC		NC	
2226			min	-.009	8	0	8	NC		NC		NC		NC	
2227		4	max	8.083	5	.11	5	NC		NC		NC		NC	
2228			min	-.009	8	0	8	NC		NC		NC		NC	
2229		5	max	8.083	5	.11	5	NC		NC		NC		NC	
2230			min	-.009	8	0	8	NC		NC		NC		NC	
2231	M235	1	max	-231.213	6	-.194	6	NC		NC		NC		NC	
2232			min	-401.71	7	-.336	7	NC		NC		NC		NC	
2233		2	max	-231.213	6	-.194	6	NC		NC		NC		NC	
2234			min	-401.71	7	-.336	7	NC		NC		NC		NC	
2235		3	max	-231.213	6	-.194	6	NC		NC		NC		NC	
2236			min	-401.71	7	-.336	7	NC		NC		NC		NC	
2237		4	max	-231.213	6	-.194	6	NC		NC		NC		NC	
2238			min	-401.71	7	-.336	7	NC		NC		NC		NC	
2239		5	max	-231.213	6	-.194	6	NC		NC		NC		NC	
2240			min	-401.71	7	-.336	7	NC		NC		NC		NC	
2241	M236	1	max	-217.737	5	-.182	5	NC		NC		NC		NC	
2242			min	-607	8	-.508	8	NC		NC		NC		NC	
2243		2	max	-217.737	5	-.182	5	NC		NC		NC		NC	
2244			min	-607	8	-.508	8	NC		NC		NC		NC	
2245		3	max	-217.737	5	-.182	5	NC		NC		NC		NC	
2246			min	-607	8	-.508	8	NC		NC		NC		NC	
2247		4	max	-217.737	5	-.182	5	NC		NC		NC		NC	
2248			min	-607	8	-.508	8	NC		NC		NC		NC	
2249		5	max	-217.737	5	-.182	5	NC		NC		NC		NC	
2250			min	-607	8	-.508	8	NC		NC		NC		NC	
2251	M237	1	max	-148.287	5	-.124	5	NC		NC		NC		NC	
2252			min	-754.433	8	-.631	8	NC		NC		NC		NC	
2253		2	max	-148.287	5	-.124	5	NC		NC		NC		NC	
2254			min	-754.433	8	-.631	8	NC		NC		NC		NC	
2255		3	max	-148.287	5	-.124	5	NC		NC		NC		NC	
2256			min	-754.433	8	-.631	8	NC		NC		NC		NC	
2257		4	max	-148.287	5	-.124	5	NC		NC		NC		NC	
2258			min	-754.433	8	-.631	8	NC		NC		NC		NC	
2259		5	max	-148.287	5	-.124	5	NC		NC		NC		NC	
2260			min	-754.433	8	-.631	8	NC		NC		NC		NC	
2261	M238	1	max	-52.468	5	-.044	5	NC		NC		NC		NC	
2262			min	-802.531	8	-.672	8	NC		NC		NC		NC	
2263		2	max	-52.468	5	-.044	5	NC		NC		NC		NC	
2264			min	-802.531	8	-.672	8	NC		NC		NC		NC	
2265		3	max	-52.468	5	-.044	5	NC		NC		NC		NC	
2266			min	-802.531	8	-.672	8	NC		NC		NC		NC	

Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
2267		4	max	-52.468	5	-.044	5	NC		NC		NC		NC	
2268			min	-802.531	8	-.672	8	NC		NC		NC		NC	
2269		5	max	-52.468	5	-.044	5	NC		NC		NC		NC	
2270			min	-802.531	8	-.672	8	NC		NC		NC		NC	
2271	M239	1	max	.908	5	0	5	NC		NC		NC		NC	
2272			min	-787.95	8	-.66	8	NC		NC		NC		NC	
2273		2	max	.908	5	0	5	NC		NC		NC		NC	
2274			min	-787.95	8	-.66	8	NC		NC		NC		NC	
2275		3	max	.908	5	0	5	NC		NC		NC		NC	
2276			min	-787.95	8	-.66	8	NC		NC		NC		NC	
2277		4	max	.908	5	0	5	NC		NC		NC		NC	
2278			min	-787.95	8	-.66	8	NC		NC		NC		NC	
2279		5	max	.908	5	0	5	NC		NC		NC		NC	
2280			min	-787.95	8	-.66	8	NC		NC		NC		NC	
2281	M240	1	max	-42.065	5	-.035	5	NC		NC		NC		NC	
2282			min	-657.301	8	-.55	8	NC		NC		NC		NC	
2283		2	max	-42.065	5	-.035	5	NC		NC		NC		NC	
2284			min	-657.301	8	-.55	8	NC		NC		NC		NC	
2285		3	max	-42.065	5	-.035	5	NC		NC		NC		NC	
2286			min	-657.301	8	-.55	8	NC		NC		NC		NC	
2287		4	max	-42.065	5	-.035	5	NC		NC		NC		NC	
2288			min	-657.301	8	-.55	8	NC		NC		NC		NC	
2289		5	max	-42.065	5	-.035	5	NC		NC		NC		NC	
2290			min	-657.301	8	-.55	8	NC		NC		NC		NC	
2291	M241	1	max	-21.985	7	-.018	7	NC		NC		NC		NC	
2292			min	-471.814	6	-.395	6	NC		NC		NC		NC	
2293		2	max	-21.985	7	-.018	7	NC		NC		NC		NC	
2294			min	-471.814	6	-.395	6	NC		NC		NC		NC	
2295		3	max	-21.985	7	-.018	7	NC		NC		NC		NC	
2296			min	-471.814	6	-.395	6	NC		NC		NC		NC	
2297		4	max	-21.985	7	-.018	7	NC		NC		NC		NC	
2298			min	-471.814	6	-.395	6	NC		NC		NC		NC	
2299		5	max	-21.985	7	-.018	7	NC		NC		NC		NC	
2300			min	-471.814	6	-.395	6	NC		NC		NC		NC	
2301	M242	1	max	192.963	7	.162	7	NC		NC		NC		NC	
2302			min	-452.03	6	-.378	6	NC		NC		NC		NC	
2303		2	max	192.963	7	.162	7	NC		NC		NC		NC	
2304			min	-452.03	6	-.378	6	NC		NC		NC		NC	
2305		3	max	192.963	7	.162	7	NC		NC		NC		NC	
2306			min	-452.03	6	-.378	6	NC		NC		NC		NC	
2307		4	max	192.963	7	.162	7	NC		NC		NC		NC	
2308			min	-452.03	6	-.378	6	NC		NC		NC		NC	
2309		5	max	192.963	7	.162	7	NC		NC		NC		NC	
2310			min	-452.03	6	-.378	6	NC		NC		NC		NC	
2311	M243	1	max	351.523	7	.294	7	NC		NC		NC		NC	
2312			min	-382.427	6	-.32	6	NC		NC		NC		NC	
2313		2	max	351.523	7	.294	7	NC		NC		NC		NC	
2314			min	-382.427	6	-.32	6	NC		NC		NC		NC	
2315		3	max	351.523	7	.294	7	NC		NC		NC		NC	
2316			min	-382.427	6	-.32	6	NC		NC		NC		NC	
2317		4	max	351.523	7	.294	7	NC		NC		NC		NC	
2318			min	-382.427	6	-.32	6	NC		NC		NC		NC	
2319		5	max	351.523	7	.294	7	NC		NC		NC		NC	
2320			min	-382.427	6	-.32	6	NC		NC		NC		NC	
2321	M244	1	max	411.135	8	.344	8	NC		NC		NC		NC	
2322			min	-347.386	5	-.291	5	NC		NC		NC		NC	
2323		2	max	411.135	8	.344	8	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
2324			min	-347.386	5	-.291	5	NC		NC		NC		NC	
2325		3	max	411.135	8	.344	8	NC		NC		NC		NC	
2326			min	-347.386	5	-.291	5	NC		NC		NC		NC	
2327		4	max	411.135	8	.344	8	NC		NC		NC		NC	
2328			min	-347.386	5	-.291	5	NC		NC		NC		NC	
2329		5	max	411.135	8	.344	8	NC		NC		NC		NC	
2330			min	-347.386	5	-.291	5	NC		NC		NC		NC	
2331	M245	1	max	661.406	7	.554	7	NC		NC		NC		NC	
2332			min	-268.028	6	-.224	6	NC		NC		NC		NC	
2333		2	max	661.406	7	.554	7	NC		NC		NC		NC	
2334			min	-268.028	6	-.224	6	NC		NC		NC		NC	
2335		3	max	661.406	7	.554	7	NC		NC		NC		NC	
2336			min	-268.028	6	-.224	6	NC		NC		NC		NC	
2337		4	max	661.406	7	.554	7	NC		NC		NC		NC	
2338			min	-268.028	6	-.224	6	NC		NC		NC		NC	
2339		5	max	661.406	7	.554	7	NC		NC		NC		NC	
2340			min	-268.028	6	-.224	6	NC		NC		NC		NC	
2341	M246	1	max	1142.672	7	.956	7	NC		NC		NC		NC	
2342			min	-101.35	6	-.085	6	NC		NC		NC		NC	
2343		2	max	1142.672	7	.956	7	NC		NC		NC		NC	
2344			min	-101.35	6	-.085	6	NC		NC		NC		NC	
2345		3	max	1142.672	7	.956	7	NC		NC		NC		NC	
2346			min	-101.35	6	-.085	6	NC		NC		NC		NC	
2347		4	max	1142.672	7	.956	7	NC		NC		NC		NC	
2348			min	-101.35	6	-.085	6	NC		NC		NC		NC	
2349		5	max	1142.672	7	.956	7	NC		NC		NC		NC	
2350			min	-101.35	6	-.085	6	NC		NC		NC		NC	
2351	M247	1	max	1490.159	7	1.247	7	NC		NC		NC		NC	
2352			min	86.544	6	.072	6	NC		NC		NC		NC	
2353		2	max	1490.159	7	1.247	7	NC		NC		NC		NC	
2354			min	86.544	6	.072	6	NC		NC		NC		NC	
2355		3	max	1490.159	7	1.247	7	NC		NC		NC		NC	
2356			min	86.544	6	.072	6	NC		NC		NC		NC	
2357		4	max	1490.159	7	1.247	7	NC		NC		NC		NC	
2358			min	86.544	6	.072	6	NC		NC		NC		NC	
2359		5	max	1490.159	7	1.247	7	NC		NC		NC		NC	
2360			min	86.544	6	.072	6	NC		NC		NC		NC	
2361	M248	1	max	1651.601	7	1.382	7	NC		NC		NC		NC	
2362			min	266.455	6	.223	6	NC		NC		NC		NC	
2363		2	max	1651.601	7	1.382	7	NC		NC		NC		NC	
2364			min	266.455	6	.223	6	NC		NC		NC		NC	
2365		3	max	1651.601	7	1.382	7	NC		NC		NC		NC	
2366			min	266.455	6	.223	6	NC		NC		NC		NC	
2367		4	max	1651.601	7	1.382	7	NC		NC		NC		NC	
2368			min	266.455	6	.223	6	NC		NC		NC		NC	
2369		5	max	1651.601	7	1.382	7	NC		NC		NC		NC	
2370			min	266.455	6	.223	6	NC		NC		NC		NC	
2371	M249	1	max	1659.205	7	1.389	7	NC		NC		NC		NC	
2372			min	345.041	6	.289	6	NC		NC		NC		NC	
2373		2	max	1659.205	7	1.389	7	NC		NC		NC		NC	
2374			min	345.041	6	.289	6	NC		NC		NC		NC	
2375		3	max	1659.205	7	1.389	7	NC		NC		NC		NC	
2376			min	345.041	6	.289	6	NC		NC		NC		NC	
2377		4	max	1659.205	7	1.389	7	NC		NC		NC		NC	
2378			min	345.041	6	.289	6	NC		NC		NC		NC	
2379		5	max	1659.205	7	1.389	7	NC		NC		NC		NC	
2380			min	345.041	6	.289	6	NC		NC		NC		NC	

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
2:24 PM
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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
2381	M250	1	max	1385.839	7	1.16	7	NC		NC		NC		NC	
2382			min	280.956	6	.235	6	NC		NC		NC		NC	
2383		2	max	1385.839	7	1.16	7	NC		NC		NC		NC	
2384			min	280.956	6	.235	6	NC		NC		NC		NC	
2385		3	max	1385.839	7	1.16	7	NC		NC		NC		NC	
2386			min	280.956	6	.235	6	NC		NC		NC		NC	
2387		4	max	1385.839	7	1.16	7	NC		NC		NC		NC	
2388			min	280.956	6	.235	6	NC		NC		NC		NC	
2389		5	max	1385.839	7	1.16	7	NC		NC		NC		NC	
2390			min	280.956	6	.235	6	NC		NC		NC		NC	
2391	M251	1	max	628.821	7	.526	7	NC		NC		NC		NC	
2392			min	135.563	6	.113	6	NC		NC		NC		NC	
2393		2	max	628.821	7	.526	7	NC		NC		NC		NC	
2394			min	135.563	6	.113	6	NC		NC		NC		NC	
2395		3	max	628.821	7	.526	7	NC		NC		NC		NC	
2396			min	135.563	6	.113	6	NC		NC		NC		NC	
2397		4	max	628.821	7	.526	7	NC		NC		NC		NC	
2398			min	135.563	6	.113	6	NC		NC		NC		NC	
2399		5	max	628.821	7	.526	7	NC		NC		NC		NC	
2400			min	135.563	6	.113	6	NC		NC		NC		NC	
2401	M252	1	max	-17.293	6	-.014	6	NC		NC		NC		NC	
2402			min	-287.881	7	-.241	7	NC		NC		NC		NC	
2403		2	max	-17.293	6	-.014	6	NC		NC		NC		NC	
2404			min	-287.881	7	-.241	7	NC		NC		NC		NC	
2405		3	max	-17.293	6	-.014	6	NC		NC		NC		NC	
2406			min	-287.881	7	-.241	7	NC		NC		NC		NC	
2407		4	max	-17.293	6	-.014	6	NC		NC		NC		NC	
2408			min	-287.881	7	-.241	7	NC		NC		NC		NC	
2409		5	max	-17.293	6	-.014	6	NC		NC		NC		NC	
2410			min	-287.881	7	-.241	7	NC		NC		NC		NC	
2411	M253	1	max	-153.457	6	-.128	6	NC		NC		NC		NC	
2412			min	-1225.59	7	-1.026	7	NC		NC		NC		NC	
2413		2	max	-153.457	6	-.128	6	NC		NC		NC		NC	
2414			min	-1225.59	7	-1.026	7	NC		NC		NC		NC	
2415		3	max	-153.457	6	-.128	6	NC		NC		NC		NC	
2416			min	-1225.59	7	-1.026	7	NC		NC		NC		NC	
2417		4	max	-153.457	6	-.128	6	NC		NC		NC		NC	
2418			min	-1225.59	7	-1.026	7	NC		NC		NC		NC	
2419		5	max	-153.457	6	-.128	6	NC		NC		NC		NC	
2420			min	-1225.59	7	-1.026	7	NC		NC		NC		NC	
2421	M254	1	max	-206.352	6	-.173	6	NC		NC		NC		NC	
2422			min	-1666.024	7	-1.395	7	NC		NC		NC		NC	
2423		2	max	-206.352	6	-.173	6	NC		NC		NC		NC	
2424			min	-1666.024	7	-1.395	7	NC		NC		NC		NC	
2425		3	max	-206.352	6	-.173	6	NC		NC		NC		NC	
2426			min	-1666.024	7	-1.395	7	NC		NC		NC		NC	
2427		4	max	-206.352	6	-.173	6	NC		NC		NC		NC	
2428			min	-1666.024	7	-1.395	7	NC		NC		NC		NC	
2429		5	max	-206.352	6	-.173	6	NC		NC		NC		NC	
2430			min	-1666.024	7	-1.395	7	NC		NC		NC		NC	
2431	M255	1	max	200.487	6	.168	6	NC		NC		NC		NC	
2432			min	119.033	7	.1	7	NC		NC		NC		NC	
2433		2	max	200.487	6	.168	6	NC		NC		NC		NC	
2434			min	119.033	7	.1	7	NC		NC		NC		NC	
2435		3	max	200.487	6	.168	6	NC		NC		NC		NC	
2436			min	119.033	7	.1	7	NC		NC		NC		NC	
2437		4	max	200.487	6	.168	6	NC		NC		NC		NC	

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 26, 2006
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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
2438			min	119.033	7	.1	7	NC		NC		NC		NC	
2439		5	max	200.487	6	.168	6	NC		NC		NC		NC	
2440			min	119.033	7	.1	7	NC		NC		NC		NC	
2441	M256	1	max	52.117	6	.044	6	NC		NC		NC		NC	
2442			min	-62.152	7	-.052	7	NC		NC		NC		NC	
2443		2	max	52.117	6	.044	6	NC		NC		NC		NC	
2444			min	-62.152	7	-.052	7	NC		NC		NC		NC	
2445		3	max	52.117	6	.044	6	NC		NC		NC		NC	
2446			min	-62.152	7	-.052	7	NC		NC		NC		NC	
2447		4	max	52.117	6	.044	6	NC		NC		NC		NC	
2448			min	-62.152	7	-.052	7	NC		NC		NC		NC	
2449		5	max	52.117	6	.044	6	NC		NC		NC		NC	
2450			min	-62.152	7	-.052	7	NC		NC		NC		NC	
2451	M257	1	max	-105.306	6	-.088	6	NC		NC		NC		NC	
2452			min	-243.217	7	-.204	7	NC		NC		NC		NC	
2453		2	max	-105.306	6	-.088	6	NC		NC		NC		NC	
2454			min	-243.217	7	-.204	7	NC		NC		NC		NC	
2455		3	max	-105.306	6	-.088	6	NC		NC		NC		NC	
2456			min	-243.217	7	-.204	7	NC		NC		NC		NC	
2457		4	max	-105.306	6	-.088	6	NC		NC		NC		NC	
2458			min	-243.217	7	-.204	7	NC		NC		NC		NC	
2459		5	max	-105.306	6	-.088	6	NC		NC		NC		NC	
2460			min	-243.217	7	-.204	7	NC		NC		NC		NC	
2461	M258	1	max	-179.12	6	-.15	6	NC		NC		NC		NC	
2462			min	-325.274	7	-.272	7	NC		NC		NC		NC	
2463		2	max	-179.12	6	-.15	6	NC		NC		NC		NC	
2464			min	-325.274	7	-.272	7	NC		NC		NC		NC	
2465		3	max	-179.12	6	-.15	6	NC		NC		NC		NC	
2466			min	-325.274	7	-.272	7	NC		NC		NC		NC	
2467		4	max	-179.12	6	-.15	6	NC		NC		NC		NC	
2468			min	-325.274	7	-.272	7	NC		NC		NC		NC	
2469		5	max	-179.12	6	-.15	6	NC		NC		NC		NC	
2470			min	-325.274	7	-.272	7	NC		NC		NC		NC	
2471	M259	1	max	-179.12	6	-.15	6	NC		NC		NC		NC	
2472			min	-325.274	7	-.272	7	NC		NC		NC		NC	
2473		2	max	-179.12	6	-.15	6	NC		NC		NC		NC	
2474			min	-325.274	7	-.272	7	NC		NC		NC		NC	
2475		3	max	-179.12	6	-.15	6	NC		NC		NC		NC	
2476			min	-325.274	7	-.272	7	NC		NC		NC		NC	
2477		4	max	-179.12	6	-.15	6	NC		NC		NC		NC	
2478			min	-325.274	7	-.272	7	NC		NC		NC		NC	
2479		5	max	-179.12	6	-.15	6	NC		NC		NC		NC	
2480			min	-325.274	7	-.272	7	NC		NC		NC		NC	
2481	M260	1	max	-179.12	6	-.15	6	NC		NC		NC		NC	
2482			min	-325.274	7	-.272	7	NC		NC		NC		NC	
2483		2	max	-179.12	6	-.15	6	NC		NC		NC		NC	
2484			min	-325.274	7	-.272	7	NC		NC		NC		NC	
2485		3	max	-179.12	6	-.15	6	NC		NC		NC		NC	
2486			min	-325.274	7	-.272	7	NC		NC		NC		NC	
2487		4	max	-179.12	6	-.15	6	NC		NC		NC		NC	
2488			min	-325.274	7	-.272	7	NC		NC		NC		NC	
2489		5	max	-179.12	6	-.15	6	NC		NC		NC		NC	
2490			min	-325.274	7	-.272	7	NC		NC		NC		NC	
2491	M261	1	max	1028.609	7	.903	7	NC		NC		NC		NC	
2492			min	956.93	6	.84	6	NC		NC		NC		NC	
2493		2	max	1028.609	7	.903	7	NC		NC		NC		NC	
2494			min	956.93	6	.84	6	NC		NC		NC		NC	

amec

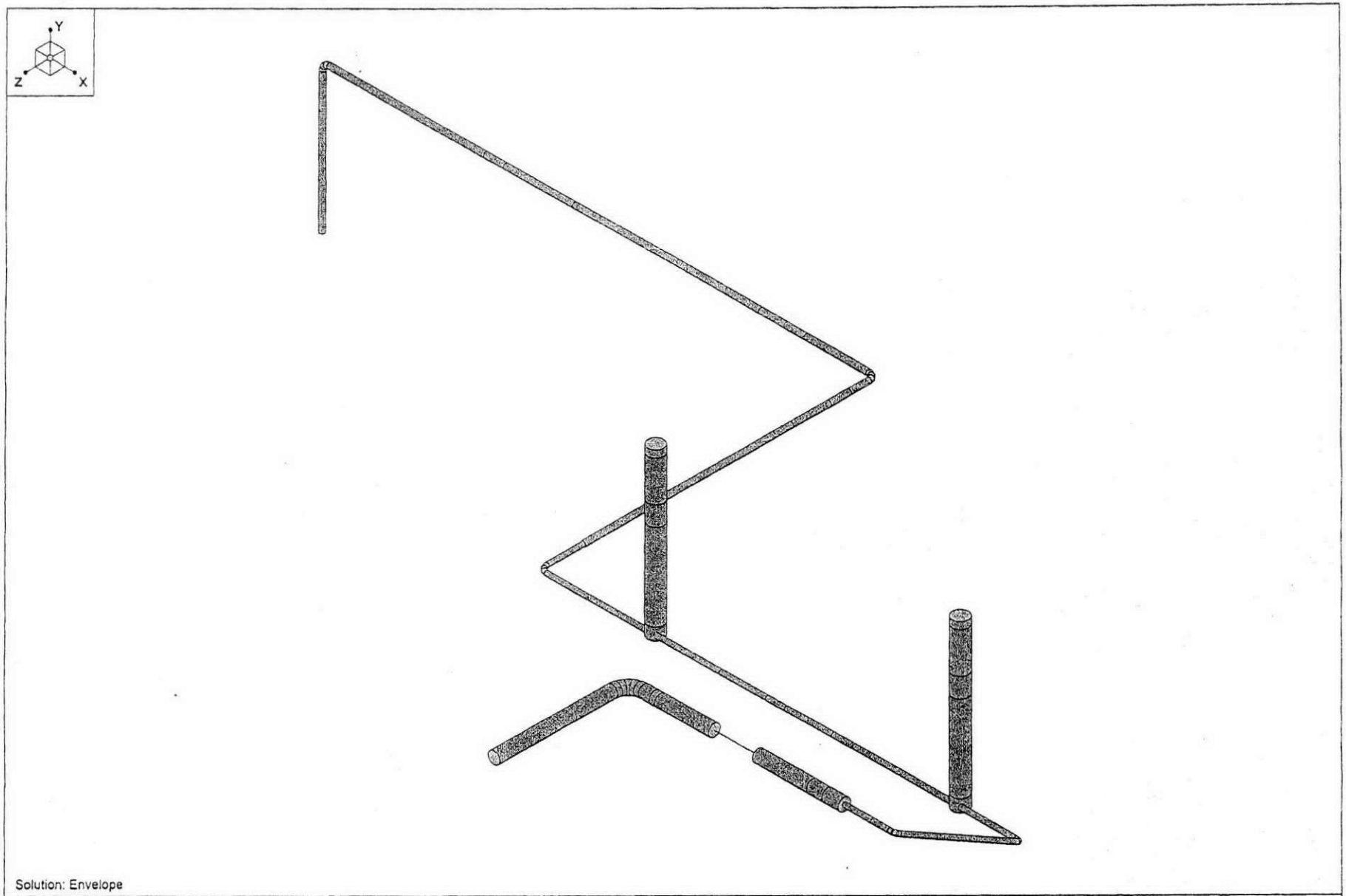
CALCULATION SHEET

CALC. NO.:	145579-V-CA-005	REV:	1	DATE:	March 26, 2006
CALC. TITLE:	Off-Gas Treatment System Pipe Stress Analysis				
PROJECT NO.:	145579	PROJECT TITLE:	Final DBVS Design		

Attachment 5: Model 2 RISA 3D Analysis Input and Output Data

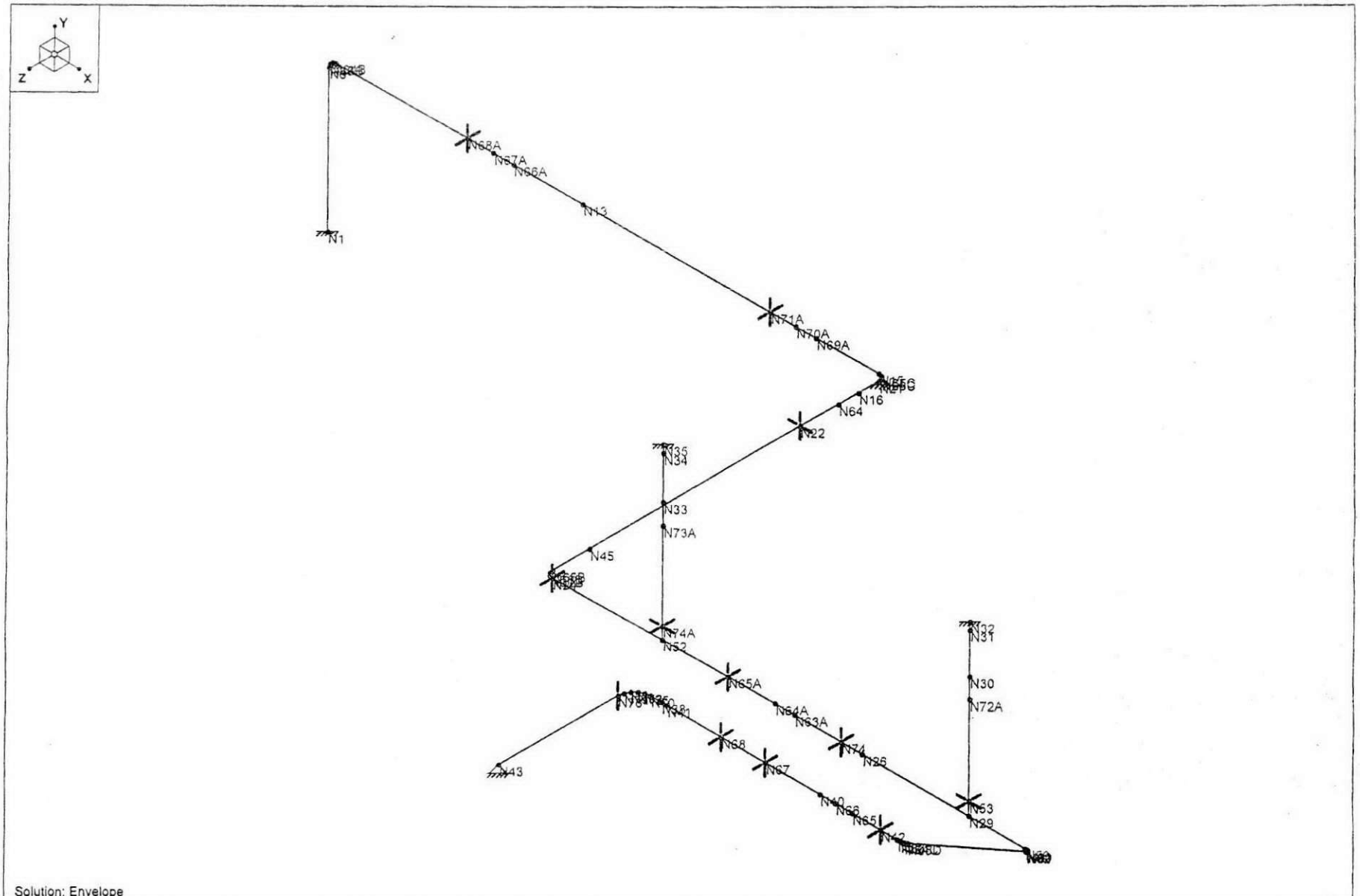
NOTE: This cover sheet represents the approval signatures of the originator and checker for all pages of this attachment

ORIGINATOR:	DATE:	CHECKER:	DATE:
Kevin M. Jones KMJ	3/26/06	J. Van Corbach JVC	3/26/06



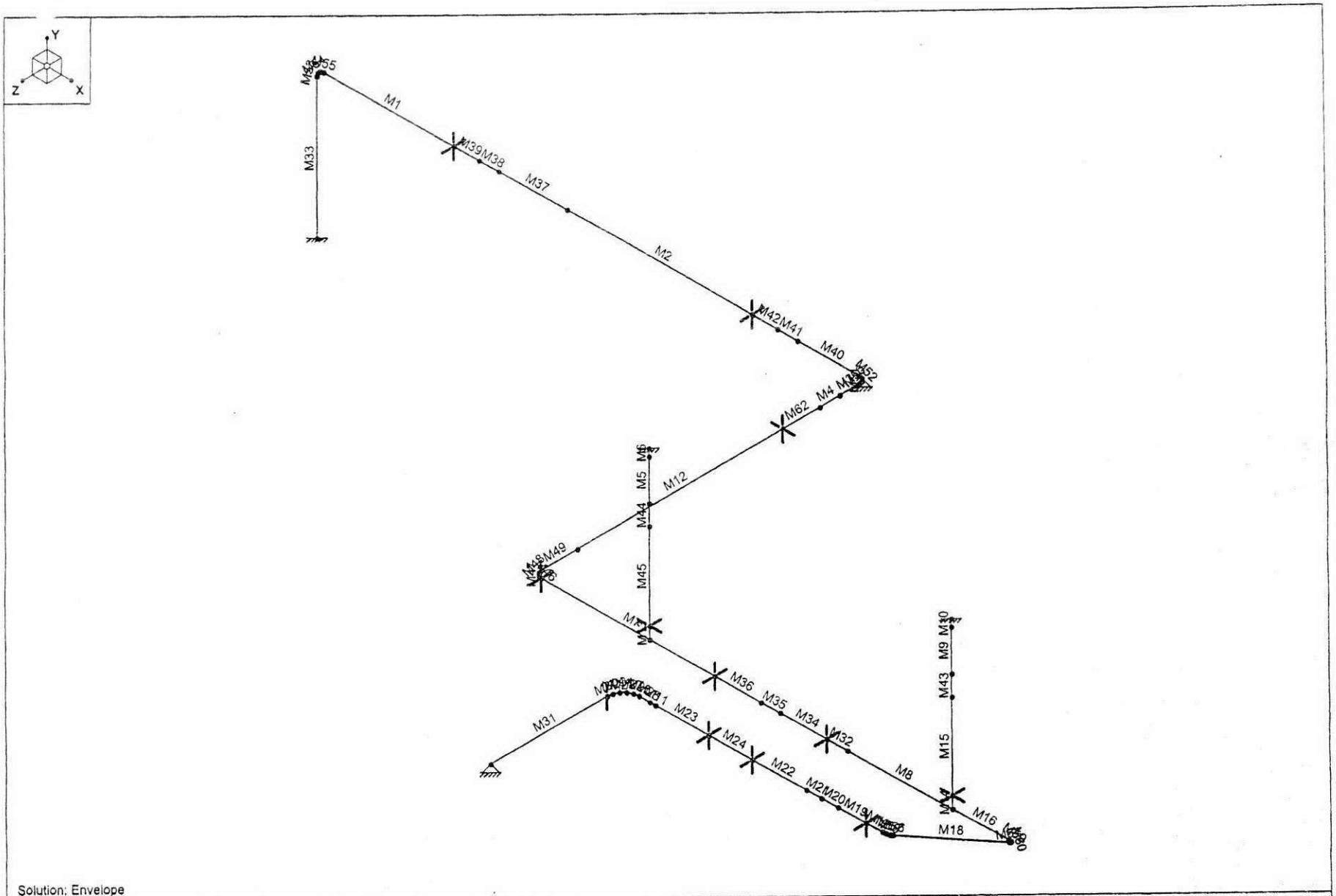
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Feb 24, 2006 at 8:14 AM
145579-V-CA-005 - Model 2	Rendered Model Geometry	145579-V-CA-005 Model 2.r3d



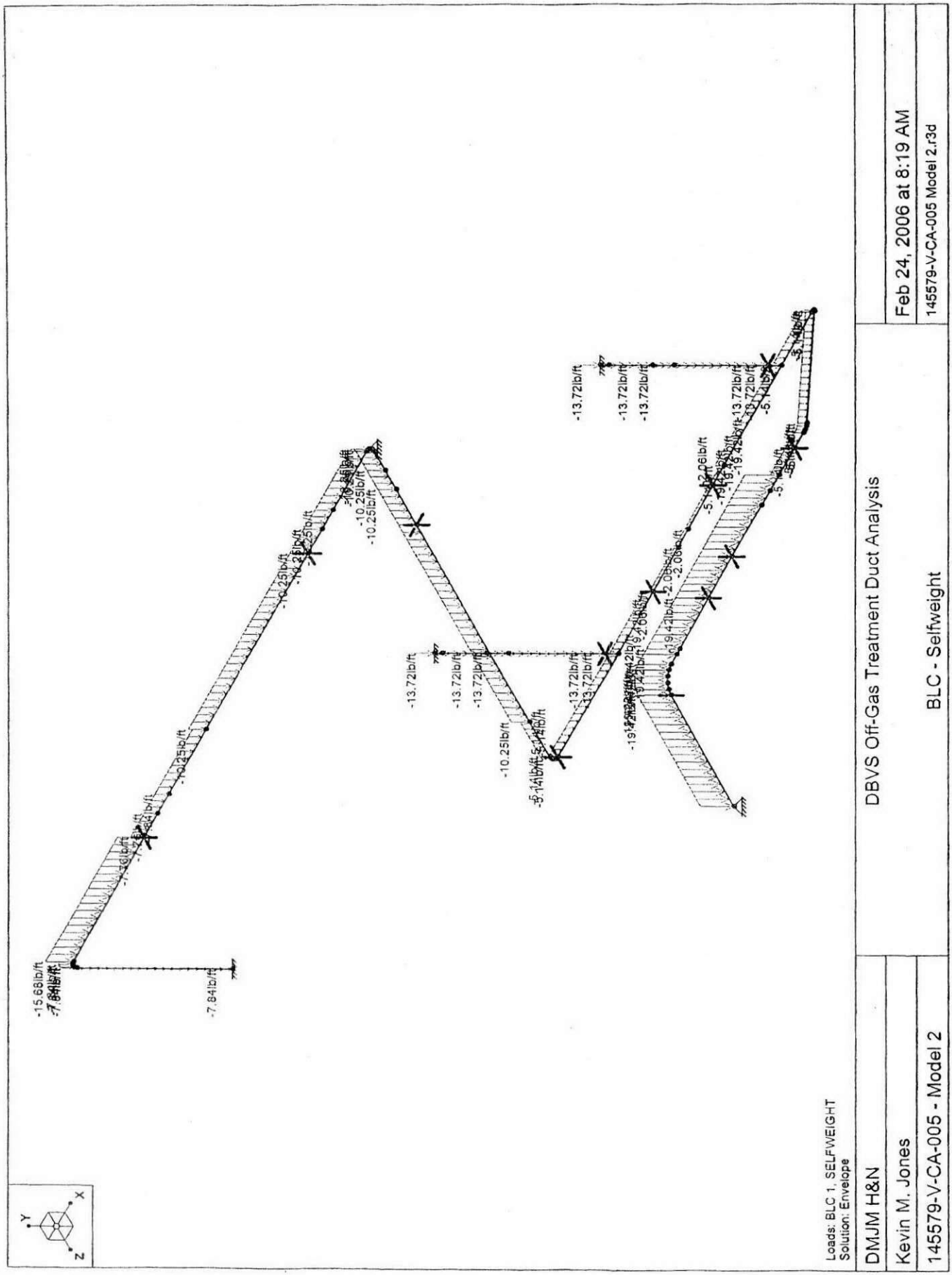
Solution: Envelope

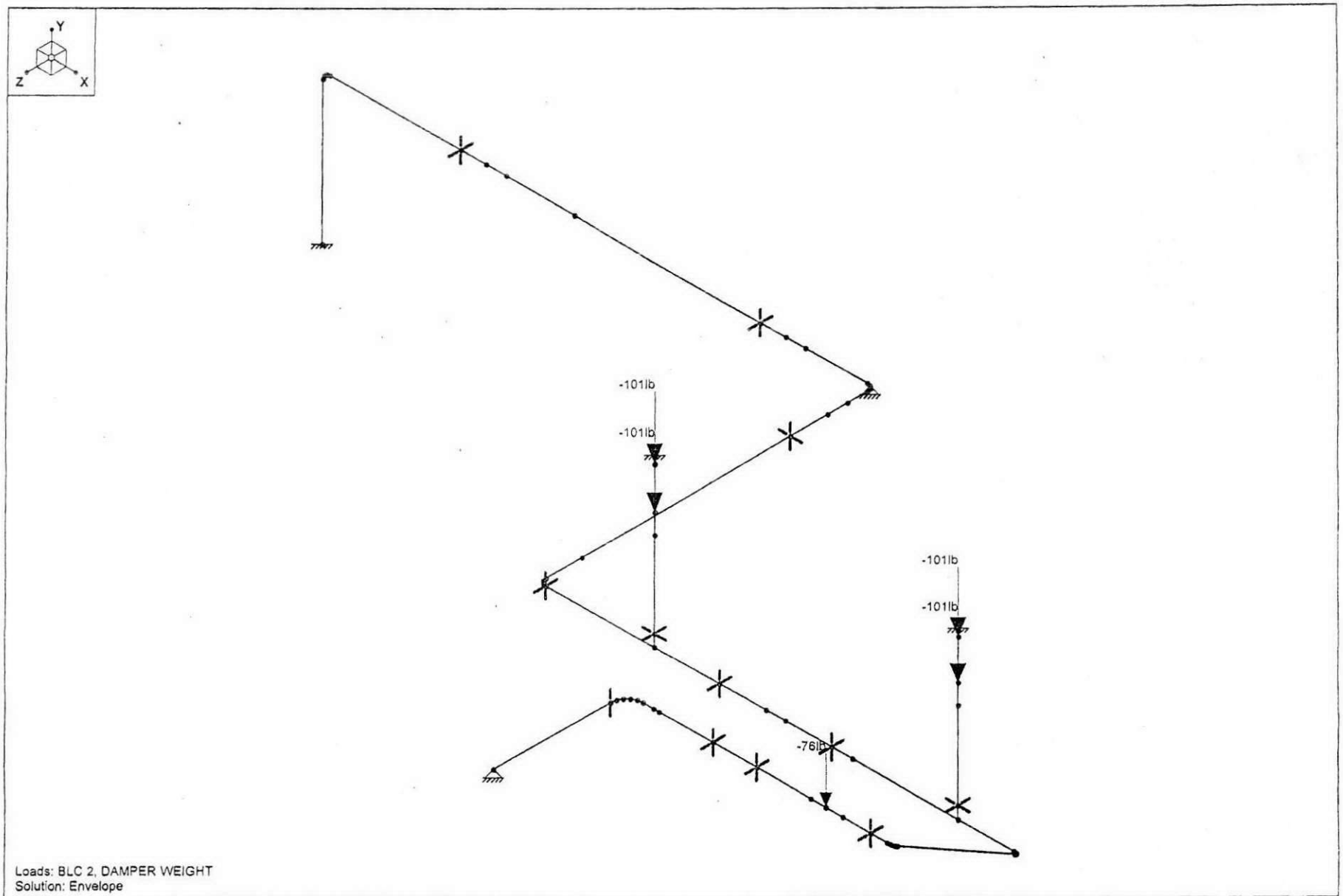
DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Feb 24, 2006 at 8:15 AM
145579-V-CA-005 - Model 2	Nodes and Support Locations	145579-V-CA-005 Model 2.r3d



Solution: Envelope

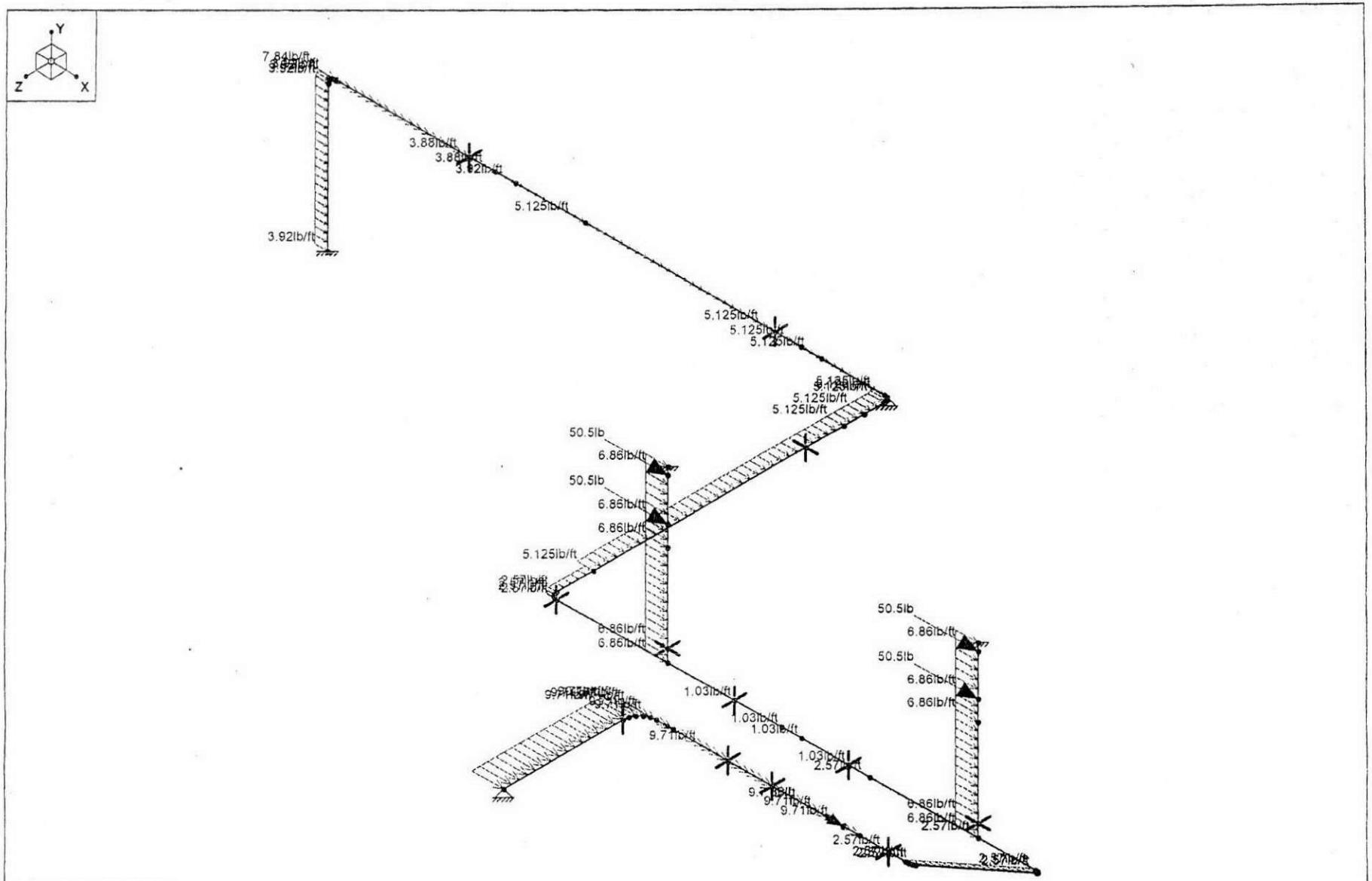
DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Feb 24, 2006 at 8:16 AM
145579-V-CA-005 - Model 2	Members	145579-V-CA-005 Model 2.r3d


-15.68lb/ft
-7.84lb/ft
-10.25lb/ft
-13.72lb/ft
-19.42lb/ft
-2.06lb/ft
-5.14lb/ft
Loads: BLC 1, SELFWEIGHT
Solution: Envelope
DMJM H&N
Kevin M. Jones
145579-V-CA-005 - Model 2
DBVS Off-Gas Treatment Duct Analysis
BLC - Selfweight
Feb 24, 2006 at 8:19 AM
145579-V-CA-005 Model 2.r3d
X
Y
Z



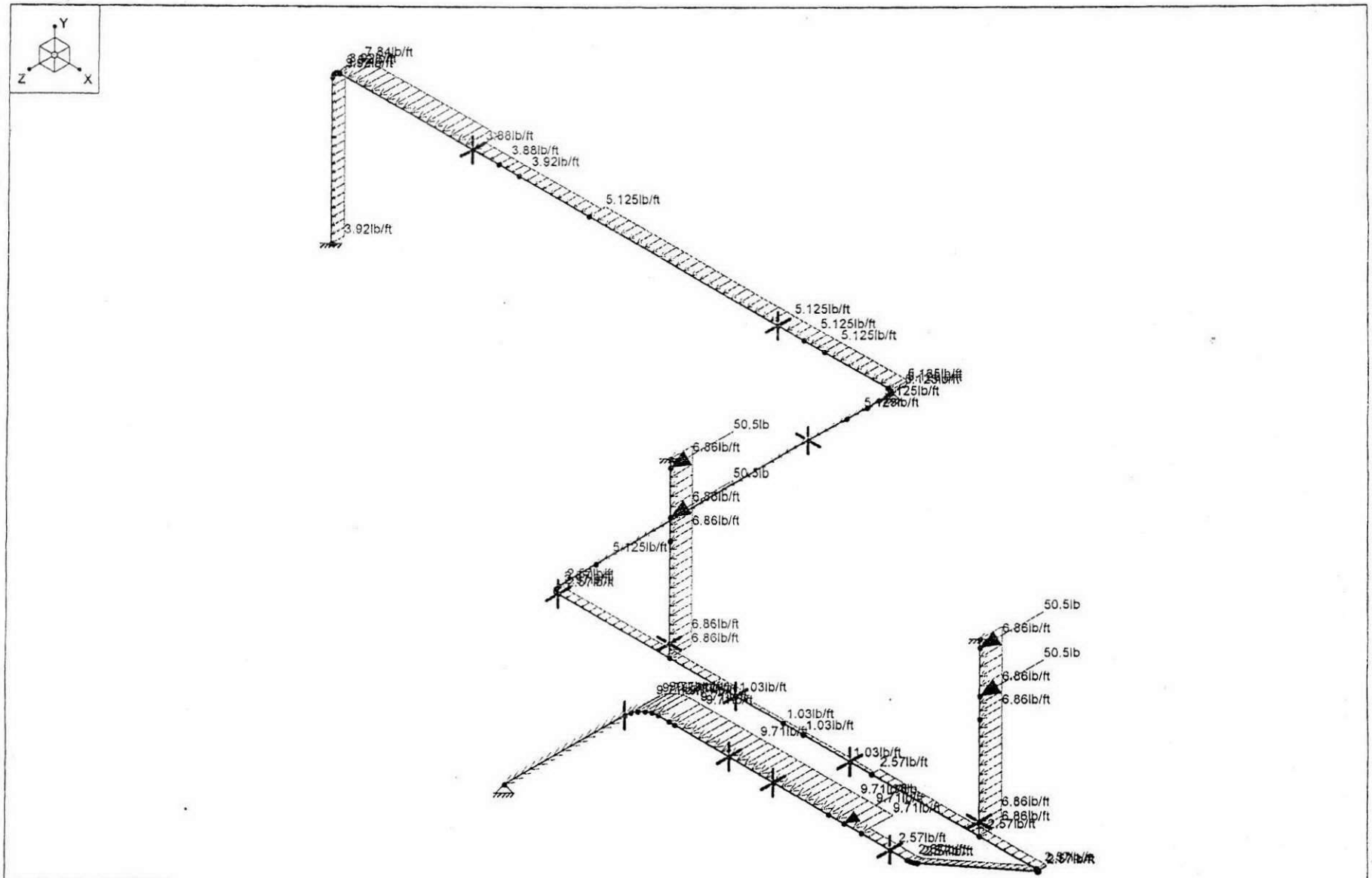
Loads: BLC 2, DAMPER WEIGHT
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Feb 24, 2006 at 8:19 AM
145579-V-CA-005 - Model 2	BLC - Dampers	145579-V-CA-005 Model 2.r3d



Loads: BLC 3, SEISMIC X
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Feb 24, 2006 at 8:20 AM
145579-V-CA-005 - Model 2	BLC - Seismic X	145579-V-CA-005 Model 2.r3d



Loads: BLC 4, SEISMIC Z
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
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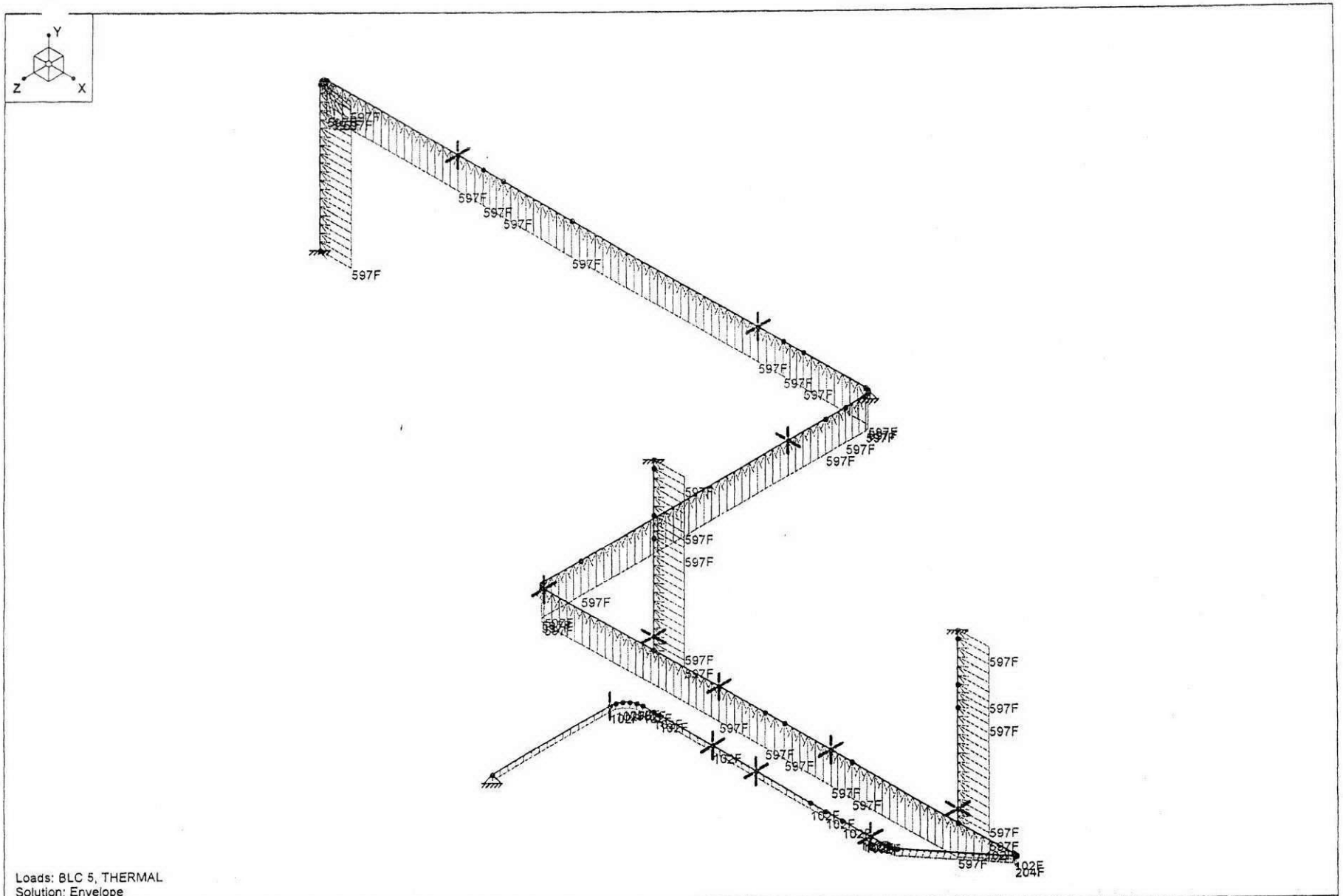
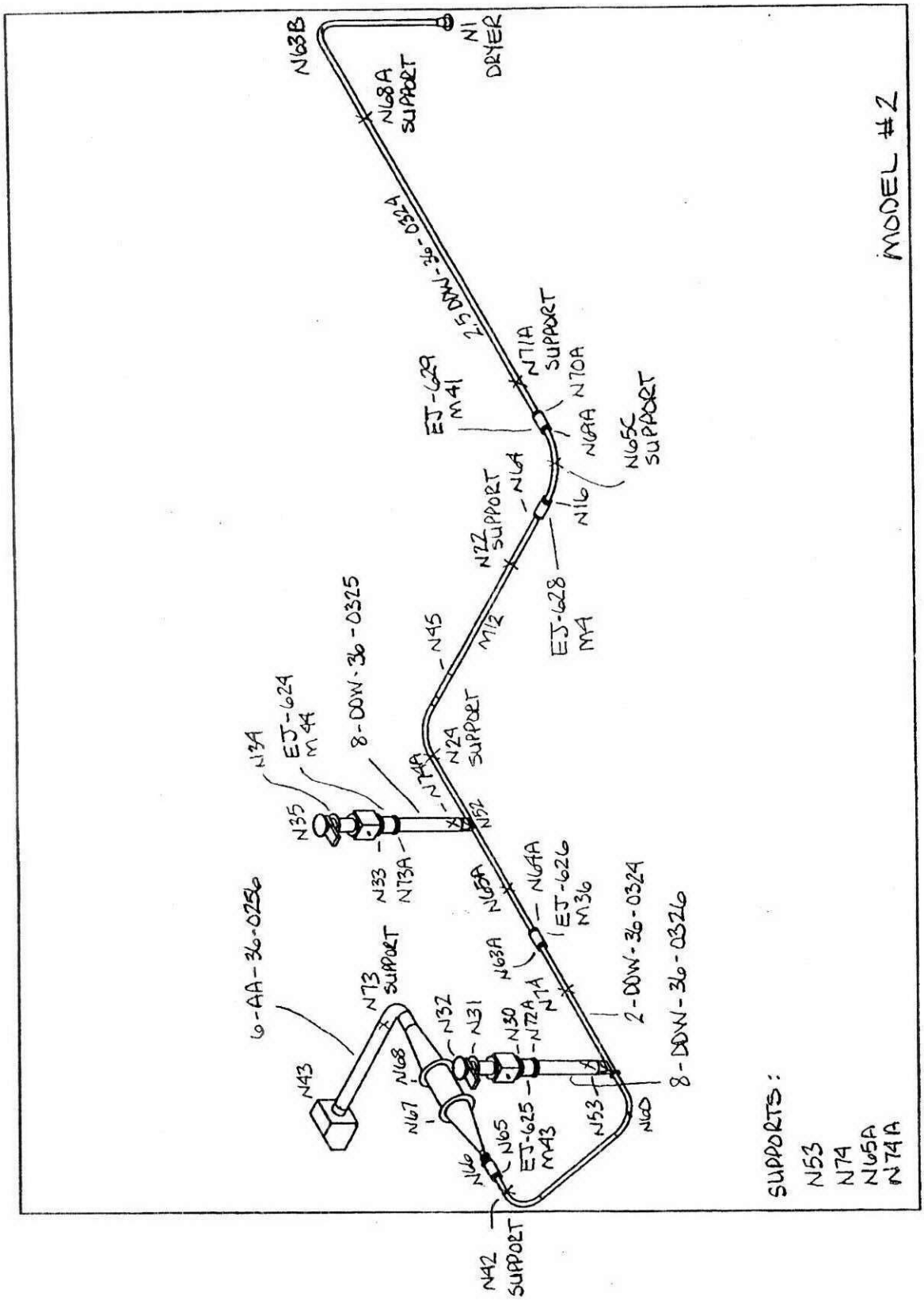
145579-V-CA-005 - Model 2	BLC - Seismic Z	145579-V-CA-005 Model 2.r3d



Loads: BLC 5, THERMAL
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones		Feb 24, 2006 at 8:21 AM
145579-V-CA-005 - Model 2	BLC - Thermal	145579-V-CA-005 Model 2.r3d


MODEL #2
N1
DRYER
N63B
N68A
SUPPORT
2.5 DOW-36-0324
N71A
SUPPORT
N70A
N69A
N65C
SUPPORT
EJ-629
M41
N16
N22
SUPPORT
N14
EJ-628
M4
N45
N72
8-DOW-36-0325
N24
SUPPORT
N49
N52
EJ-624
M44
N34
N35
N33
N73A
N64A
EJ-626
M36
N65A
N63A
N74A
2-DOW-36-0324
8-DOW-36-0326
6-AA-36-0256
N73
SUPPORT
N32
N31
N30
N72A
N43
N68
N67
N66
N65
EJ-625
M43
N53
N42
SUPPORT
SUPPORTS:
N53
N74
N65A
N74A

Global

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation	Yes
Include Warping	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Vertical Axis	Y

Hot Rolled Steel Code	AISC: ASD 9th
Cold Formed Steel Code	AISI 99: ASD
NDS Wood Code	NDS 91: ASD
NDS Temperature	< 100F
Concrete Code	ACI 1999

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	PCA Load Contour
Parme Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections	Yes
Bad Framing Warnings	No
Unused Force Warnings	Yes

Joint Coordinates and Temperatures

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diaphragm
1	N1	0	-57.75	0	0	
2	N6	0	21.5	0	0	
3	N7	3.75	25.25	0	0	
4	N13	139	25.25	0	0	
5	N15	301.75	25.25	0	0	
6	N16	305.5	25.25	14.75	0	
7	N21	305.5	25.25	3.75	0	
8	N22	305.5	25.25	46.375	0	
9	N24	309.25	25.25	185.5	0	
10	N26	479.42	25.25	185.5	0	
11	N29	537.5	25.25	185.5	0	
12	N30	537.5	91.1245	185.5	0	
13	N31	537.5	114.0005	185.5	0	
14	N32	537.5	118.0625	185.5	0	
15	N33	369.75	91.1245	185.5	0	
16	N34	369.75	114.0005	185.5	0	
17	N35	369.75	118.0625	185.5	0	
18	N38	439.045	64.262	254.978	0	
19	N40	525.92	64.262	254.978	0	
20	N41	442.17	64.262	254.978	0	
21	N42	559.045	64.262	254.978	0	
22	N43	424.045	64.262	328.978	0	
23	N45	305.5	25.25	161.5	0	
24	N52	369.75	25.25	185.5	0	
25	N53	537.5	32	185.5	0	
26	N58	568.045	64.262	254.978	0	
27	N59	568.045	25.25	185.5	0	
28	N65	543.42	64.262	254.978	0	
29	N66	534.295	64.262	254.978	0	
30	N67	496.107	64.262	254.978	0	
31	N68	471.982	64.262	254.978	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diaphragm
32	N69	425.764	64.262	258.688	0	
33	N70	433.045	64.262	254.978	0	
34	N71	424.485	64.262	261.197	0	
35	N72	427.755	64.262	256.697	0	
36	N73	424.045	64.262	263.978	0	
37	N74	467.92	25.25	185.5	0	
38	N75	430.263	64.262	255.419	0	
39	N63A	442.319	25.25	185.5	0	
40	N64A	431.692	25.25	185.5	0	
41	N65A	406.092	25.25	185.5	0	
42	N66A	101	25.25	0	0	
43	N67A	90	25.25	0	0	
44	N68A	76	25.25	0	0	
45	N69A	267.5	25.25	0	0	
46	N70A	256.5	25.25	0	0	
47	N71A	242.5	25.25	0	0	
48	N72A	537.5	80.1245	185.5	0	
49	N73A	369.75	80.1245	185.5	0	
50	N74A	369.75	32	185.5	0	
51	N65B	305.5	25.25	181.75	0	
52	N66B	306.002	25.25	183.625	0	
53	N67B	307.375	25.25	184.998	0	
54	N65C	303.625	25.25	.502	0	
55	N66C	304.998	25.25	1.875	0	
56	N63B	.502	23.375	0	0	
57	N64B	1.875	24.748	0	0	
58	N60	569.545	25.441	185.845	0	
59	N61	570.643	25.963	186.787	0	
60	N62	571.045	26.677	188.074	0	
61	N63	569.545	64.071	254.633	0	
62	N64C	570.643	63.549	253.691	0	
63	N65D	571.045	62.835	252.404	0	
64	N64	305.5	25.25	25.75	0	

Joint Boundary Conditions

	Joint Label	X [lb/in]	Y [lb/in]	Z [lb/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N13						
2	N22	Reaction	Reaction				
3	N32	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
4	N35	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
5	N1	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
6	N41						
7	N42		Reaction	Reaction			
8	N38						
9	N74		Reaction	Reaction			
10	N43	Reaction	Reaction	Reaction			
11	N65A		Reaction	Reaction			
12	N68		Reaction	Reaction			
13	N67		Reaction	Reaction			
14	N73		Reaction				
15	N68A		Reaction	Reaction			
16	N71A		Reaction	Reaction			
17	N53	Reaction		Reaction			
18	N74A	Reaction		Reaction			
19	N65C	Reaction	Reaction	Reaction			
20	N24		Reaction	Reaction			

General Material Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E5 F)	Density[lb/in^3]
1	gen_Conc3NW	3155	1372	.15	.6	.084
2	gen_Conc4NW	3644	1584	.15	.6	.084
3	gen_Conc3LW	2085	906	.15	.6	.064
4	gen_Conc4LW	2408	1047	.15	.6	.064
5	gen_Alum	10600	4077	.3	1.29	.1
6	gen_Steel	29000	11154	.3	.65	.284
7	RIGID	1e+7		0	0	0

General Section Sets

	Label	Shape	Type	Material	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	GEN1A	RE4X4	Beam	gen_Conc3NW	16	21.333	21.333	36.053
2	RIGID		None	RIGID	1e+6	1e+8	1e+8	1e+6

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E5 F)	Density[lb/in^3]	Yield[ksi]
1	A36	29000	11154	.3	.779	.283	36
2	A312TP316L	29000	11154	.3	1.013	.29	25
3	A312TP316	29000	11154	.3	1.013	.29	30

Hot Rolled Steel Section Sets

	Label	Shape	Design List	Type	Material	Design Rules	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	2DIADUCTSCH80	2 in Sch 80...	Pipe	Beam	A312TP316L	Typical	1.241	.752	.752	1.504
2	2-1/2DIADUCTSC...	2-1/2 in Sc...	Pipe	Beam	A312TP316L	Typical	1.894	1.671	1.671	3.342
3	2-1/2DIADUCTSC...	2-1/2 in Sc...	Pipe	Beam	A312TP316L	Typical	2.494	2.082	2.082	4.163
4	3DIADUCT	3 in Sch 40...	Pipe	Beam	A312TP316L	Typical	1.86	2.572	2.572	5.145
5	4DIADUCT	4 in Sch 40...	Pipe	Beam	A312TP316L	Typical	2.644	6.136	6.136	12.272
6	5DIADUCT	5 in Sch 40...	Pipe	Beam	A312TP316L	Typical	3.578	12.82	12.82	25.64
7	6DIADUCT	6 in Sch 40...	Pipe	Beam	A312TP316L	Typical	4.64	23.744	23.744	47.488
8	8DIADUCT	8 in dia Sch...	Pipe	Beam	A312TP316L	Typical	3.262	29.483	29.483	58.965
9	12DIADUCT	12 in dia Sc...	Pipe	Beam	A312TP316L	Typical	5.879	116.711	116.711	233.423
10	16DIADUCT	16 in dia Sc...	Pipe	Beam	A312TP316L	Typical	7.721	242.316	242.316	484.632

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(de...	Section/Shape	Design List	Type	Material	Design Rules
1	M1	N7	N68A			2-1/2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
2	M2	N13	N71A			2-1/2DIADUCTSCH...	Pipe	Beam	A312TP3...	Typical
3	M3	N21	N16			2-1/2DIADUCTSCH...	Pipe	Beam	A312TP3...	Typical
4	M4	N16	N64			2-1/2DIADUCTSCH...	Pipe	Beam	A312TP3...	Typical
5	M5	N33	N34			8DIADUCT	Pipe	Beam	A312TP3...	Typical
6	M6	N34	N35			8DIADUCT	Pipe	Beam	A312TP3...	Typical
7	M7	N24	N65A			2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
8	M8	N26	N29			2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
9	M9	N30	N31			8DIADUCT	Pipe	Beam	A312TP3...	Typical
10	M10	N31	N32			8DIADUCT	Pipe	Beam	A312TP3...	Typical
11	M11	N41	N38			6DIADUCT	Pipe	Beam	A312TP3...	Typical
12	M12	N45	N22			2-1/2DIADUCTSCH...	Pipe	Beam	A312TP3...	Typical
13	M13	N52	N74A			8DIADUCT	Pipe	Beam	A312TP3...	Typical
14	M14	N29	N53			8DIADUCT	Pipe	Beam	A312TP3...	Typical
15	M15	N53	N72A			8DIADUCT	Pipe	Beam	A312TP3...	Typical
16	M16	N29	N59			2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
17	M17	N42	N58			2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(de...	Section/Shape	Design List	Type	Material	Design Rules
18	M18	N65D	N62			2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
19	M19	N42	N65			2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
20	M20	N65	N66			6DIADUCT	Pipe	Beam	A312TP3...	Typical
21	M21	N66	N40			6DIADUCT	Pipe	Beam	A312TP3...	Typical
22	M22	N40	N67			6DIADUCT	Pipe	Beam	A312TP3...	Typical
23	M23	N68	N41			6DIADUCT	Pipe	Beam	A312TP3...	Typical
24	M24	N68	N67			RIGID	None	None	RIGID	Typical
25	M25	N38	N70			6DIADUCT	Pipe	Beam	A312TP3...	Typical
26	M26	N70	N75			6DIADUCT	Pipe	Beam	A312TP3...	Typical
27	M27	N75	N72			6DIADUCT	Pipe	Beam	A312TP3...	Typical
28	M28	N72	N69			6DIADUCT	Pipe	Beam	A312TP3...	Typical
29	M29	N69	N71			6DIADUCT	Pipe	Beam	A312TP3...	Typical
30	M30	N71	N73			6DIADUCT	Pipe	Beam	A312TP3...	Typical
31	M31	N73	N43			6DIADUCT	Pipe	Beam	A312TP3...	Typical
32	M32	N74	N26			2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
33	M33	N1	N6			2-1/2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
34	M34	N63A	N74			2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
35	M35	N64A	N63A			2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
36	M36	N65A	N64A			2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
37	M37	N66A	N13			2-1/2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
38	M38	N67A	N66A			2-1/2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
39	M39	N68A	N67A			2-1/2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
40	M40	N69A	N15			2-1/2DIADUCTSCH...	Pipe	Beam	A312TP3...	Typical
41	M41	N70A	N69A			2-1/2DIADUCTSCH...	Pipe	Beam	A312TP3...	Typical
42	M42	N71A	N70A			2-1/2DIADUCTSCH...	Pipe	Beam	A312TP3...	Typical
43	M43	N72A	N30			8DIADUCT	Pipe	Beam	A312TP3...	Typical
44	M44	N73A	N33			8DIADUCT	Pipe	Beam	A312TP3...	Typical
45	M45	N74A	N73A			8DIADUCT	Pipe	Beam	A312TP3...	Typical
46	M46	N24	N67B			2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
47	M47	N67B	N66B			2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
48	M48	N66B	N65B			2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
49	M49	N65B	N45			2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
50	M50	N21	N66C			2-1/2DIADUCTSCH...	Pipe	Beam	A312TP3...	Typical
51	M51	N66C	N65C			2-1/2DIADUCTSCH...	Pipe	Beam	A312TP3...	Typical
52	M52	N65C	N15			2-1/2DIADUCTSCH...	Pipe	Beam	A312TP3...	Typical
53	M53	N6	N63B			2-1/2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
54	M54	N63B	N64B			2-1/2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
55	M55	N64B	N7			2-1/2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
56	M56	N65D	N64C			2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
57	M57	N64C	N63			2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
58	M58	N63	N58			2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
59	M59	N59	N60			2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
60	M60	N60	N61			2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
61	M61	N61	N62			2DIADUCTSCH80	Pipe	Beam	A312TP3...	Typical
62	M62	N64	N22			2-1/2DIADUCTSCH...	Pipe	Beam	A312TP3...	Typical

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area (Me...	Surface (...
1	SELFWEIGHT	DL						63		
2	DAMPER WEIGHT	DL				5				
3	SEISMIC X	ELX				5		63		
4	SEISMIC Z	ELZ				5		63		
5	THERMAL	None						62		
6	WIND X	WLX								
7	WIND Z	WLZ								

Joint Loads and Enforced Displacements (BLC 2 : DAMPER WEIGHT)

	Joint Label	L,D,M	Direction	Magnitude[lb,lb-ft in,rad lb*s^2/in]
1	N34	L	Y	-101
2	N31	L	Y	-101
3	N30	L	Y	-101
4	N33	L	Y	-101
5	N66	L	Y	-76

Joint Loads and Enforced Displacements (BLC 3 : SEISMIC X)

	Joint Label	L,D,M	Direction	Magnitude[lb,lb-ft in,rad lb*s^2/in]
1	N34	L	X	50.5
2	N31	L	X	50.5
3	N30	L	X	50.5
4	N33	L	X	50.5
5	N66	L	X	38

Joint Loads and Enforced Displacements (BLC 4 : SEISMIC Z)

	Joint Label	L,D,M	Direction	Magnitude[lb,lb-ft in,rad lb*s^2/in]
1	N34	L	Z	50.5
2	N31	L	Z	50.5
3	N30	L	Z	50.5
4	N33	L	Z	50.5
5	N66	L	Z	38

Member Distributed Loads (BLC 1 : SELFWEIGHT)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
1	M1	Y	-7.84	-7.84	0	0
2	M2	Y	-10.25	-10.25	0	0
3	M3	Y	-10.25	-10.25	0	0
4	M4	Y	-10.25	-10.25	0	0
5	M12	Y	-10.25	-10.25	0	0
6	M5	Y	-13.72	-13.72	0	0
7	M6	Y	-13.72	-13.72	0	0
8	M7	Y	-5.14	-5.14	0	0
9	M8	Y	-5.14	-5.14	0	0
10	M9	Y	-13.72	-13.72	0	0
11	M10	Y	-13.72	-13.72	0	0
12	M11	Y	-19.42	-19.42	0	0
13	M13	Y	-13.72	-13.72	0	0
14	M14	Y	-13.72	-13.72	0	0
15	M15	Y	-13.72	-13.72	0	0
16	M16	Y	-5.14	-5.14	0	0
17	M17	Y	-5.14	-5.14	0	0
18	M18	Y	-5.14	-5.14	0	0
19	M19	Y	-5.14	-5.14	0	0
20	M20	Y	-19.42	-19.42	0	0
21	M21	Y	-19.42	-19.42	0	0
22	M22	Y	-19.42	-19.42	0	0
23	M23	Y	-19.42	-19.42	0	0
24	M24	Y	-19.42	-19.42	0	0
25	M25	Y	-19.42	-19.42	0	0
26	M26	Y	-19.42	-19.42	0	0
27	M27	Y	-19.42	-19.42	0	0
28	M28	Y	-19.42	-19.42	0	0
29	M29	Y	-19.42	-19.42	0	0
30	M30	Y	-19.42	-19.42	0	0

Member Distributed Loads (BLC 1 : SELFWEIGHT) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
31	M31	Y	-19.42	-19.42	0	0
32	M32	Y	-5.14	-5.14	0	0
33	M33	Y	-7.84	-7.84	0	0
34	M34	Y	-5.14	-5.14	0	0
35	M35	Y	-5.14	-5.14	0	0
36	M36	Y	-5.14	-5.14	0	0
37	M37	Y	-5.14	-5.14	0	0
38	M38	Y	-7.76	-7.76	0	0
39	M39	Y	-7.76	-7.76	0	0
40	M40	Y	-10.25	-10.25	0	0
41	M41	Y	-10.25	-10.25	0	0
42	M42	Y	-10.25	-10.25	0	0
43	M43	Y	-13.72	-13.72	0	0
44	M44	Y	-13.72	-13.72	0	0
45	M45	Y	-13.72	-13.72	0	0
46	M62	Y	-10.25	-10.25	0	0
47	M58	Y	-5.14	-5.14	0	0
48	M57	Y	-5.14	-5.14	0	0
49	M56	Y	-5.14	-5.14	0	0
50	M61	Y	-5.14	-5.14	0	0
51	M60	Y	-5.14	-5.14	0	0
52	M59	Y	-5.14	-5.14	0	0
53	M46	Y	-5.14	-5.14	0	0
54	M47	Y	-5.14	-5.14	0	0
55	M48	Y	-5.14	-5.14	0	0
56	M49	Y	-5.14	-5.14	0	0
57	M50	Y	-10.25	-10.25	0	0
58	M51	Y	-10.25	-10.25	0	0
59	M52	Y	-10.25	-10.25	0	0
60	M55	Y	-7.84	-7.84	0	0
61	M54	Y	-7.84	-7.84	0	0
62	M53	Y	-7.84	-7.84	0	0
63	M1	Y	-7.84	-7.84	0	0

Member Distributed Loads (BLC 3 : SEISMIC X)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
1	M1	X	3.92	3.92	0	0
2	M2	X	5.125	5.125	0	0
3	M3	X	5.125	5.125	0	0
4	M4	X	5.125	5.125	0	0
5	M12	X	5.125	5.125	0	0
6	M5	X	6.86	6.86	0	0
7	M6	X	6.86	6.86	0	0
8	M7	X	2.57	2.57	0	0
9	M8	X	2.57	2.57	0	0
10	M9	X	6.86	6.86	0	0
11	M10	X	6.86	6.86	0	0
12	M11	X	9.71	9.71	0	0
13	M13	X	6.86	6.86	0	0
14	M14	X	6.86	6.86	0	0
15	M15	X	6.86	6.86	0	0
16	M16	X	2.57	2.57	0	0
17	M17	X	2.57	2.57	0	0
18	M18	X	2.57	2.57	0	0
19	M19	X	2.57	2.57	0	0
20	M20	X	9.71	9.71	0	0
21	M21	X	9.71	9.71	0	0

Member Distributed Loads (BLC 3 : SEISMIC X) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
22	M22	X	9.71	9.71	0	0
23	M23	X	9.71	9.71	0	0
24	M24	X	9.71	9.71	0	0
25	M25	X	9.71	9.71	0	0
26	M26	X	9.71	9.71	0	0
27	M27	X	9.71	9.71	0	0
28	M28	X	9.71	9.71	0	0
29	M29	X	9.71	9.71	0	0
30	M30	X	9.71	9.71	0	0
31	M31	X	9.71	9.71	0	0
32	M32	X	2.57	2.57	0	0
33	M33	X	3.92	3.92	0	0
34	M34	X	2.57	2.57	0	0
35	M35	X	2.57	2.57	0	0
36	M36	X	2.57	2.57	0	0
37	M37	X	2.57	2.57	0	0
38	M38	X	3.88	3.88	0	0
39	M39	X	3.88	3.88	0	0
40	M40	X	5.125	5.125	0	0
41	M41	X	5.125	5.125	0	0
42	M42	X	5.125	5.125	0	0
43	M43	X	6.86	6.86	0	0
44	M44	X	6.86	6.86	0	0
45	M45	X	6.86	6.86	0	0
46	M62	X	5.125	5.125	0	0
47	M58	X	2.57	2.57	0	0
48	M57	X	2.57	2.57	0	0
49	M56	X	2.57	2.57	0	0
50	M61	X	2.57	2.57	0	0
51	M60	X	2.57	2.57	0	0
52	M59	X	2.57	2.57	0	0
53	M46	X	2.57	2.57	0	0
54	M47	X	2.57	2.57	0	0
55	M48	X	2.57	2.57	0	0
56	M49	X	2.57	2.57	0	0
57	M50	X	5.125	5.125	0	0
58	M51	X	5.125	5.125	0	0
59	M52	X	5.125	5.125	0	0
60	M55	X	3.92	3.92	0	0
61	M54	X	3.92	3.92	0	0
62	M53	X	3.92	3.92	0	0
63	M1	X	3.92	3.92	0	0

Member Distributed Loads (BLC 4 : SEISMIC Z)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
1	M1	Z	3.92	3.92	0	0
2	M2	Z	5.125	5.125	0	0
3	M3	Z	5.125	5.125	0	0
4	M4	Z	5.125	5.125	0	0
5	M12	Z	5.125	5.125	0	0
6	M5	Z	6.86	6.86	0	0
7	M6	Z	6.86	6.86	0	0
8	M7	Z	2.57	2.57	0	0
9	M8	Z	2.57	2.57	0	0
10	M9	Z	6.86	6.86	0	0
11	M10	Z	6.86	6.86	0	0
12	M11	Z	9.71	9.71	0	0

Member Distributed Loads (BLC 4 : SEISMIC Z) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
13	M13	Z	6.86	6.86	0	0
14	M14	Z	6.86	6.86	0	0
15	M15	Z	6.86	6.86	0	0
16	M16	Z	2.57	2.57	0	0
17	M17	Z	2.57	2.57	0	0
18	M18	Z	2.57	2.57	0	0
19	M19	Z	2.57	2.57	0	0
20	M20	Z	9.71	9.71	0	0
21	M21	Z	9.71	9.71	0	0
22	M22	Z	9.71	9.71	0	0
23	M23	Z	9.71	9.71	0	0
24	M24	Z	9.71	9.71	0	0
25	M25	Z	9.71	9.71	0	0
26	M26	Z	9.71	9.71	0	0
27	M27	Z	9.71	9.71	0	0
28	M28	Z	9.71	9.71	0	0
29	M29	Z	9.71	9.71	0	0
30	M30	Z	9.71	9.71	0	0
31	M31	Z	9.71	9.71	0	0
32	M32	Z	2.57	2.57	0	0
33	M33	Z	3.92	3.92	0	0
34	M34	Z	2.57	2.57	0	0
35	M35	Z	2.57	2.57	0	0
36	M36	Z	2.57	2.57	0	0
37	M37	Z	2.57	2.57	0	0
38	M38	Z	3.88	3.88	0	0
39	M39	Z	3.88	3.88	0	0
40	M40	Z	5.125	5.125	0	0
41	M41	Z	5.125	5.125	0	0
42	M42	Z	5.125	5.125	0	0
43	M43	Z	6.86	6.86	0	0
44	M44	Z	6.86	6.86	0	0
45	M45	Z	6.86	6.86	0	0
46	M62	Z	5.125	5.125	0	0
47	M58	Z	2.57	2.57	0	0
48	M57	Z	2.57	2.57	0	0
49	M56	Z	2.57	2.57	0	0
50	M61	Z	2.57	2.57	0	0
51	M60	Z	2.57	2.57	0	0
52	M59	Z	2.57	2.57	0	0
53	M46	Z	2.57	2.57	0	0
54	M47	Z	2.57	2.57	0	0
55	M48	Z	2.57	2.57	0	0
56	M49	Z	2.57	2.57	0	0
57	M50	Z	5.125	5.125	0	0
58	M51	Z	5.125	5.125	0	0
59	M52	Z	5.125	5.125	0	0
60	M55	Z	3.92	3.92	0	0
61	M54	Z	3.92	3.92	0	0
62	M53	Z	3.92	3.92	0	0
63	M1	Z	3.92	3.92	0	0

Member Distributed Loads (BLC 5 : THERMAL)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
1	M1	T	597	597	0	0
2	M2	T	597	597	0	0
3	M3	T	597	597	0	0

Member Distributed Loads (BLC 5 : THERMAL) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
4	M4	T	597	597	0	0
5	M5	T	597	597	0	0
6	M6	T	597	597	0	0
7	M7	T	597	597	0	0
8	M8	T	597	597	0	0
9	M9	T	597	597	0	0
10	M10	T	597	597	0	0
11	M11	T	102	102	0	0
12	M12	T	597	597	0	0
13	M13	T	597	597	0	0
14	M14	T	597	597	0	0
15	M15	T	597	597	0	0
16	M16	T	597	102	0	0
17	M17	T	102	102	0	0
18	M18	T	102	102	0	0
19	M19	T	102	102	0	0
20	M20	T	102	102	0	0
21	M21	T	102	102	0	0
22	M22	T	102	102	0	0
23	M23	T	102	102	0	0
24	M24	T	102	102	0	0
25	M25	T	102	102	0	0
26	M26	T	102	102	0	0
27	M27	T	102	102	0	0
28	M28	T	102	102	0	0
29	M29	T	102	102	0	0
30	M30	T	102	102	0	0
31	M31	T	102	102	0	0
32	M32	T	597	597	0	0
33	M33	T	597	597	0	0
34	M34	T	597	597	0	0
35	M35	T	597	597	0	0
36	M36	T	597	597	0	0
37	M37	T	597	597	0	0
38	M38	T	597	597	0	0
39	M39	T	597	597	0	0
40	M40	T	597	597	0	0
41	M41	T	597	597	0	0
42	M42	T	597	597	0	0
43	M43	T	597	597	0	0
44	M44	T	597	597	0	0
45	M45	T	597	597	0	0
46	M62	T	597	597	0	0
47	M53	T	597	597	0	0
48	M55	T	597	597	0	0
49	M54	T	597	597	0	0
50	M52	T	597	597	0	0
51	M51	T	597	597	0	0
52	M50	T	597	597	0	0
53	M49	T	597	597	0	0
54	M48	T	597	597	0	0
55	M47	T	597	597	0	0
56	M46	T	597	597	0	0
57	M59	T	102	102	0	0
58	M59	T	102	102	0	0
59	M61	T	102	102	0	0
60	M56	T	102	102	0	0

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 24, 2006
4:32 PM
Checked By:_____

Member Distributed Loads (BLC 5 : THERMAL) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
61	M57	T	102	102	0	0
62	M58	T	102	102	0	0

Member Point Loads

Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
No Data to Print ...			

Load Combinations

	Description	Sol...	PD...	SR...	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	Normal Load	Yes			DL	1														
2	Normal + Wind (+X) + Ther...	Yes			DL	1	WLX	1	5	1										
3	Normal + Wind (-X) + Thermal	Yes			DL	1	WLX	-1	5	1										
4	Normal + Wind (+Z) + Thermal	Yes			DL	1	WLZ	1	5	1										
5	Normal + Wind (-Z) + Thermal	Yes			DL	1	WLZ	-1	5	1										
6	Normal + Seismic (+X)(+Z) +..	Yes			DL	1	ELX	1	ELZ	1	5	1								
7	Normal + Seismic (+X)(-Z) + ..	Yes			DL	1	ELX	1	ELZ	-1	5	1								
8	Normal + Seismic (-X)(+Z) +..	Yes			DL	1	ELX	-1	ELZ	1	5	1								
9	Normal + Seismic (-X)(-Z) + ...	Yes			DL	1	ELX	-1	ELZ	-1	5	1								

Envelope Joint Reactions

	Joint		X [lb]	lc	Y [lb]	lc	Z [lb]	lc	MX [lb-ft]	lc	MY [lb-ft]	lc	MZ [lb-ft]	lc
1	N22	max	176.562	8	123.071	8	0	1	0	1	0	1	0	1
2		min	-.094	1	117.863	7	0	1	0	1	0	1	0	1
3	N32	max	72.829	9	245.376	1	136.667	7	85.989	8	159.847	1	4.098	9
4		min	-167.144	6	245.376	2	-108.358	8	-151.237	7	-25.554	7	-221.482	6
5	N35	max	145.495	8	245.376	1	134.627	7	99.689	8	-.863	1	171.583	8
6		min	-92.049	7	245.376	2	-114.303	8	-146.535	7	-65.102	7	-48.397	7
7	N1	max	141.398	8	263.739	8	31.001	7	113.578	7	22.002	7	852.152	6
8		min	-141.398	6	82.775	1	-31.196	8	-112.183	8	-21.324	8	-237.842	9
9	N42	max	0	1	174.856	7	168.625	7	0	1	0	1	0	1
10		min	0	1	149.107	8	38.55	8	0	1	0	1	0	1
11	N74	max	0	1	127.854	8	13.187	9	0	1	0	1	0	1
12		min	0	1	79.118	1	-16.146	6	0	1	0	1	0	1
13	N43	max	232.21	8	39.52	1	-24.3	1	0	1	0	1	0	1
14		min	-163.148	7	34.736	8	-1899.069	8	0	1	0	1	0	1
15	N65A	max	0	1	81.843	1	18.927	7	0	1	0	1	0	1
16		min	0	1	64.198	8	-5.21	8	0	1	0	1	0	1
17	N68	max	0	1	106.915	6	4931.783	8	0	1	0	1	0	1
18		min	0	1	59.366	1	114.369	1	0	1	0	1	0	1
19	N67	max	0	1	104.285	1	-134.145	1	0	1	0	1	0	1
20		min	0	1	33.458	6	-3255.658	8	0	1	0	1	0	1
21	N73	max	0	1	104.472	8	0	1	0	1	0	1	0	1
22		min	0	1	101.761	1	0	1	0	1	0	1	0	1
23	N68A	max	0	1	121.011	1	75.106	9	0	1	0	1	0	1
24		min	0	1	-110.538	8	-75.018	6	0	1	0	1	0	1
25	N71A	max	0	1	206.304	8	51.751	7	0	1	0	1	0	1
26		min	0	1	116.173	1	-57.598	8	0	1	0	1	0	1
27	N53	max	96.782	8	0	1	11.762	9	0	1	0	1	0	1
28		min	-71.549	7	0	1	-116.06	1	0	1	0	1	0	1
29	N74A	max	20.703	9	0	1	-2.746	1	0	1	0	1	0	1
30		min	-149.894	6	0	1	-108.809	6	0	1	0	1	0	1
31	N65C	max	.058	1	-9.345	1	14.248	9	0	1	0	1	0	1
32		min	-92.069	6	-52.103	8	-8.295	6	0	1	0	1	0	1

Envelope Joint Reactions (Continued)

	Joint		X [lb]	lc	Y [lb]	lc	Z [lb]	lc	MX [lb-ft]	lc	MY [lb-ft]	lc	MZ [lb-ft]	lc
33	N24	max	0	1	69.469	8	130.697	7	0	1	0	1	0	1
34		min	0	1	68.974	1	-37.748	8	0	1	0	1	0	1
35	Totals:	max	814.056	8	1628.126	1	814.063	7						
36		min	-814.075	7	1628.126	7	-814.063	6						

Envelope Joint Displacements

	Joint		X [in]	lc	Y [in]	lc	Z [in]	lc	X Rotation ...	lc	Y Rotation ...	lc	Z Rotation ...	lc
1	N1	max	0	6	0	1	0	8	0	8	0	8	0	9
2		min	0	8	0	8	0	7	0	7	0	7	0	6
3	N6	max	.433	6	.479	7	.045	8	7.391e-4	8	5.439e-4	8	-9.478e-5	1
4		min	.004	1	0	1	-.046	7	-7.791e-4	7	-5.612e-4	7	-8.118e-3	6
5	N7	max	.486	6	.485	9	.046	8	7.268e-4	8	5.788e-4	8	-9.676e-5	1
6		min	.004	1	0	1	-.047	7	-7.714e-4	7	-5.975e-4	7	-8.078e-3	6
7	N13	max	1.304	6	-.035	1	.007	6	3.007e-4	8	2.174e-4	9	-1.595e-5	8
8		min	.004	1	-.173	9	-.006	9	-4.646e-4	7	-2.237e-4	6	-3.804e-4	1
9	N15	max	0	1	0	8	0	1	-1.084e-4	6	1.533e-4	9	-1.455e-4	1
10		min	-.011	9	0	1	-.003	6	-1.708e-4	9	-3.757e-7	1	-5.284e-4	9
11	N16	max	.013	9	.001	1	.086	6	-1.058e-4	1	7.66e-5	8	-1.843e-4	1
12		min	0	1	0	8	0	1	-1.26e-4	9	-4.551e-6	7	-5.519e-4	9
13	N21	max	.012	9	0	1	.019	6	-1.216e-4	6	1.678e-4	9	-1.567e-4	1
14		min	0	1	0	8	0	1	-1.626e-4	9	-3.612e-7	1	-5.352e-4	9
15	N22	max	0	1	0	7	0	1	3.125e-4	1	7.153e-7	1	-2.637e-4	1
16		min	0	8	0	8	-.849	7	2.882e-4	8	-1.206e-3	8	-6.012e-4	8
17	N24	max	0	1	0	1	0	8	-8.699e-4	8	-2.991e-7	1	-7.406e-4	1
18		min	-.366	9	0	8	0	7	-8.871e-4	7	-1.699e-3	7	-9.037e-4	8
19	N26	max	0	1	-.018	1	0	6	-9.421e-6	8	9.07e-5	1	-1.797e-3	1
20		min	-.352	8	-.029	8	0	1	-3.977e-5	7	-3.132e-5	6	-2.933e-3	8
21	N29	max	0	1	-.101	1	0	7	-1.362e-5	8	4.327e-5	7	-2.334e-5	1
22		min	0	6	-.171	8	0	8	-4.148e-5	7	-2.707e-4	1	-1.055e-4	6
23	N30	max	0	6	0	1	0	8	1.682e-5	7	1.256e-5	7	3.044e-5	6
24		min	0	9	-.163	2	0	7	-4.16e-6	8	-7.856e-5	1	5.13e-6	1
25	N31	max	0	6	0	1	0	8	7.311e-6	7	1.894e-6	7	1.102e-5	6
26		min	0	9	-.025	2	0	7	-3.864e-6	8	-1.185e-5	1	4.616e-7	9
27	N32	max	0	6	0	2	0	8	0	7	0	7	0	6
28		min	0	9	0	1	0	7	0	8	0	1	0	9
29	N33	max	0	7	0	1	0	8	1.59e-5	7	3.2e-5	7	-3.131e-6	7
30		min	0	8	-.163	2	0	7	-6.818e-6	8	4.241e-7	1	-2.076e-5	8
31	N34	max	0	7	0	1	0	8	7.062e-6	7	4.825e-6	7	1.878e-6	7
32		min	0	8	-.025	2	0	7	-4.588e-6	8	6.395e-8	1	-8.386e-6	8
33	N35	max	0	7	0	2	0	8	0	7	0	7	0	7
34		min	0	8	0	1	0	7	0	8	0	1	0	8
35	N38	max	.224	7	0	1	0	1	-2.314e-5	1	1.901e-6	1	2.516e-6	8
36		min	-.003	1	0	8	-.044	9	-4.442e-5	8	-2.095e-3	6	-6.048e-7	1
37	N40	max	.289	7	0	6	.002	6	-9.43e-5	1	-4.763e-5	9	3.376e-5	6
38		min	-.003	1	0	1	0	9	-1.546e-4	8	-1.115e-4	6	5.433e-6	1
39	N41	max	.227	7	0	1	0	1	-2.668e-5	1	7.691e-8	1	3.49e-6	8
40		min	-.003	1	0	8	-.037	9	-4.99e-5	8	-1.969e-3	6	5.253e-7	1
41	N42	max	.323	7	0	8	0	8	-6.734e-4	1	7.799e-4	6	-2.17e-4	1
42		min	-.003	1	0	7	0	7	-1.052e-3	8	3.892e-4	1	-4.374e-4	6
43	N43	max	0	7	0	8	0	8	-9.278e-6	8	5.378e-5	1	-2.91e-6	8
44		min	0	8	0	1	0	1	-1.4e-5	1	-3.005e-3	7	-5.756e-6	1
45	N45	max	0	1	-.017	8	0	1	-6.644e-4	6	1.976e-6	1	-5.527e-4	1
46		min	-.337	8	-.018	1	-.152	7	-6.734e-4	9	-3.539e-3	7	-7.819e-4	8
47	N52	max	0	8	-.033	1	0	7	-1.485e-6	8	1.102e-4	7	6.006e-5	8
48		min	0	1	-.038	8	0	8	-3.654e-5	7	1.461e-6	1	4.294e-5	1
49	N53	max	0	7	-.101	1	0	1	-7.364e-6	8	4.013e-5	7	-1.776e-5	1

Envelope Joint Displacements (Continued)

	Joint		X [in]	lc	Y [in]	lc	Z [in]	lc	X Rotation ...	lc	Y Rotation ...	lc	Z Rotation ...	lc
50		min	0	8	-.131	8	0	9	-3.644e-5	7	-2.51e-4	1	-8.36e-5	6
51	N58	max	.332	7	-.003	1	-.005	1	-9.956e-4	1	1.449e-3	7	-4.598e-4	1
52		min	-.003	1	-.006	6	-.01	6	-1.551e-3	8	6.132e-4	1	-9.504e-4	6
53	N59	max	.108	9	-.09	1	.036	1	-7.113e-4	1	1.376e-3	7	4.692e-4	1
54		min	0	1	-.179	8	-.018	7	-1.189e-3	9	-1.376e-3	1	-8.963e-4	6
55	N65	max	.307	7	.001	6	.004	6	-1.141e-4	1	-5.29e-5	1	5.399e-5	6
56		min	-.003	1	0	1	.002	9	-1.854e-4	8	-1.087e-4	6	2.404e-5	1
57	N66	max	.297	7	0	6	.003	6	-1.038e-4	1	-5.385e-5	1	4.632e-5	6
58		min	-.003	1	0	1	.001	9	-1.693e-4	8	-1.15e-4	6	1.583e-5	1
59	N67	max	.258	7	0	6	0	8	-6.049e-5	1	0	1	0	6
60		min	-.003	1	0	1	0	1	-1.023e-4	8	0	8	0	1
61	N68	max	.258	7	0	1	0	1	-6.049e-5	1	0	1	0	6
62		min	-.003	1	0	6	0	8	-1.023e-4	8	0	8	0	1
63	N69	max	.201	7	0	1	0	1	-6.765e-6	1	1.454e-5	1	-1.985e-6	8
64		min	-.003	1	0	8	-.068	9	-1.94e-5	8	-2.48e-3	6	-5.035e-6	1
65	N70	max	.217	7	0	1	0	1	-1.633e-5	1	6.37e-6	1	7.672e-7	8
66		min	-.003	1	0	8	-.057	9	-3.388e-5	8	-2.294e-3	6	-2.57e-6	1
67	N71	max	.193	7	0	1	0	1	-3.629e-6	1	1.75e-5	1	-2.661e-6	8
68		min	-.003	1	0	8	-.068	7	-1.488e-5	8	-2.522e-3	6	-5.564e-6	1
69	N72	max	.208	7	0	1	0	1	-9.903e-6	1	1.164e-5	1	-1.044e-6	8
70		min	-.003	1	0	8	-.066	9	-2.406e-5	8	-2.429e-3	6	-4.266e-6	1
71	N73	max	.186	7	0	1	0	1	-3.248e-7	1	2.043e-5	1	-2.91e-6	8
72		min	-.003	1	0	8	-.067	7	-1.028e-5	8	-2.56e-3	6	-5.756e-6	1
73	N74	max	0	1	0	1	0	6	-8.589e-6	8	6.384e-5	1	-1.311e-3	1
74		min	-.421	8	0	8	0	9	-3.943e-5	7	-2.059e-6	7	-2.076e-3	8
75	N75	max	.214	7	0	1	0	1	-1.31e-5	1	8.894e-6	1	-6.483e-8	8
76		min	-.003	1	0	8	-.062	9	-2.891e-5	8	-2.368e-3	6	-3.405e-6	1
77	N63A	max	0	1	.026	8	0	6	-6.737e-6	8	2.176e-5	6	-1.084e-4	8
78		min	-.576	8	.017	1	0	9	-3.868e-5	7	-5.988e-6	9	-1.305e-4	1
79	N64A	max	.375	8	.024	8	0	6	-5.968e-6	8	1.073e-5	7	4.43e-4	8
80		min	0	1	.017	1	0	9	-3.836e-5	7	-1.811e-5	1	2.439e-4	1
81	N65A	max	.22	8	0	8	0	8	-4.115e-6	8	-7.857e-6	9	1.32e-3	8
82		min	0	1	0	1	0	7	-3.761e-5	7	-4.438e-5	6	1.055e-3	1
83	N66A	max	1.074	6	-.013	1	.002	7	4.204e-4	8	1.057e-4	9	-6.615e-4	1
84		min	.004	1	-.112	9	-.002	8	-5.508e-4	7	-1.209e-4	6	-3.299e-3	9
85	N67A	max	1.007	6	-.006	1	.003	7	4.551e-4	8	3.564e-5	8	-5.54e-4	1
86		min	.004	1	-.07	9	-.002	8	-5.757e-4	7	-5.283e-5	7	-4.342e-3	9
87	N68A	max	.923	6	0	8	0	6	4.992e-4	8	3.193e-4	8	-2.534e-4	1
88		min	.004	1	0	1	0	9	-6.075e-4	7	-3.386e-4	7	-5.688e-3	9
89	N69A	max	0	1	.013	9	0	9	-2.247e-5	6	5.911e-5	7	1.631e-6	9
90		min	-.219	9	.004	1	-.002	6	-2.325e-4	9	1.362e-8	1	-1.617e-5	1
91	N70A	max	2.014	6	.011	9	0	9	5.12e-6	6	5.239e-5	6	4.216e-4	9
92		min	.004	1	.003	1	-.001	6	-2.523e-4	9	-1.109e-5	9	1.125e-4	1
93	N71A	max	1.93	6	0	1	0	8	4.024e-5	6	1.416e-4	6	1.18e-3	9
94		min	.004	1	0	8	0	7	-2.775e-4	9	-1.156e-4	9	3.866e-4	1
95	N72A	max	.001	6	.182	7	0	8	9.045e-6	7	1.769e-5	7	2.08e-5	6
96		min	0	1	-.101	1	0	7	1.87e-6	8	-1.106e-4	1	4.425e-6	1
97	N73A	max	0	7	.295	7	0	8	8.259e-6	7	4.506e-5	7	-8.158e-6	7
98		min	0	8	-.033	1	0	7	-4.222e-7	8	5.973e-7	1	-1.245e-5	8
99	N74A	max	0	6	.004	7	0	6	1.834e-6	8	1.022e-4	7	5.01e-5	8
100		min	0	9	-.033	1	0	1	-3.328e-5	7	1.355e-6	1	3.26e-5	7
101	N65B	max	0	1	0	8	0	1	-9.24e-4	8	3.031e-7	1	-6.933e-4	1
102		min	-.383	8	0	1	-.03	7	-9.393e-4	7	-2.277e-3	7	-8.698e-4	8
103	N66B	max	0	1	.001	8	0	1	-9.13e-4	8	1.069e-7	1	-7.069e-4	1
104		min	-.383	8	0	1	-.018	7	-9.289e-4	7	-2.099e-3	7	-8.784e-4	8
105	N67B	max	0	1	.001	8	0	1	-8.949e-4	8	-9.459e-8	1	-7.212e-4	1
106		min	-.376	8	0	1	-.006	7	-9.115e-4	7	-1.906e-3	7	-8.882e-4	8

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Envelope Joint Displacements (Continued)

	Joint		X [in]	Ic	Y [in]	Ic	Z [in]	Ic	X Rotation ...	Ic	Y Rotation ...	Ic	Z Rotation ...	Ic
107	N65C	max	0	6	0	8	0	6	-1.137e-4	6	1.608e-4	9	-1.484e-4	1
108		min	0	1	0	1	0	9	-1.68e-4	9	-3.735e-7	1	-5.309e-4	9
109	N66C	max	.009	9	0	1	.008	6	-1.184e-4	6	1.665e-4	9	-1.521e-4	1
110		min	0	1	0	8	0	1	-1.655e-4	9	-3.689e-7	1	-5.326e-4	9
111	N63B	max	.451	6	.488	9	.046	8	7.356e-4	8	5.568e-4	8	-9.68e-5	1
112		min	.004	1	0	1	-.048	7	-7.769e-4	7	-5.746e-4	7	-8.115e-3	6
113	N64B	max	.47	6	.49	9	.046	8	7.32e-4	8	5.682e-4	8	-9.77e-5	1
114		min	.004	1	0	1	-.048	7	-7.748e-4	7	-5.865e-4	7	-8.101e-3	6
115	N60	max	.111	7	-.089	1	.038	1	-7.451e-4	1	1.481e-3	7	4.421e-4	1
116		min	0	1	-.179	8	-.019	7	-1.246e-3	9	-1.327e-3	1	-9.612e-4	6
117	N61	max	.113	7	-.088	1	.039	1	-7.753e-4	1	1.586e-3	7	4.096e-4	1
118		min	-.002	1	-.179	8	-.022	7	-1.297e-3	9	-1.272e-3	1	-1.029e-3	6
119	N62	max	.116	7	-.086	1	.039	1	-8.02e-4	1	1.688e-3	7	3.771e-4	1
120		min	-.004	1	-.176	8	-.022	7	-1.341e-3	9	-1.212e-3	1	-1.093e-3	6
121	N63	max	.333	7	-.004	1	-.006	1	-1.049e-3	1	1.555e-3	7	-4.673e-4	1
122		min	-.003	1	-.009	6	-.012	6	-1.634e-3	8	6.184e-4	1	-1.012e-3	6
123	N64C	max	.332	7	-.006	1	-.006	1	-1.095e-3	1	1.655e-3	7	-4.645e-4	1
124		min	-.004	1	-.012	6	-.014	7	-1.706e-3	8	6.158e-4	1	-1.064e-3	6
125	N65D	max	.329	7	-.008	1	-.005	1	-1.134e-3	1	1.747e-3	7	-4.599e-4	1
126		min	-.005	1	-.015	6	-.015	7	-1.766e-3	8	6.059e-4	1	-1.115e-3	6
127	N64	max	.013	9	.002	1	0	1	-3.046e-5	1	-2.275e-8	1	-2.119e-4	1
128		min	0	1	.002	8	-.973	7	-5.214e-5	8	-2.234e-4	7	-5.688e-4	8

Envelope Member Section Stresses

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
1	M1	1	...	.06	8	.22	8	.003	7	.598	7	5.996	8	.24	7	.233	8
2			...	-.06	7	.029	1	-.004	8	-5.9...	8	.598	7	-.233	8	-.24	7
3		2	...	.054	8	.195	8	.009	6	1.68	6	2.945	9	.198	7	.195	8
4			...	-.054	7	.004	1	-.009	9	-2.9...	9	-1.68	6	-.195	8	-.198	7
5		3	...	.048	8	.17	8	.021	6	2.3...	6	.261	9	.031	6	.031	9
6			...	-.048	7	-.021	1	-.022	9	-.261	9	-2.395	6	-.031	9	-.031	6
7		4	...	.041	8	.145	8	.034	6	2.7...	6	.34	1	.438	6	.44	9
8			...	-.041	7	-.046	1	-.034	9	-.34	1	-2.743	6	-.44	9	-.438	6
9		5	...	.035	8	.12	8	.046	6	4.0...	8	1.201	1	1.028	6	1.033	9
10			...	-.035	7	-.071	1	-.047	9	-1.2...	1	-4.007	8	-1.033	9	-1.028	6
11	M2	1	...	.02	8	.017	1	.012	9	2.5...	9	-.599	1	.132	9	.141	6
12			...	-.02	6	-.023	8	-.012	6	.599	1	-2.579	9	-.141	6	-.132	9
13		2	...	.016	8	0	1	.003	9	1.86	9	-.783	1	.297	9	.308	6
14			...	-.016	6	-.041	8	-.003	6	.783	1	-1.86	9	-.308	6	-.297	9
15		3	...	.011	8	-.018	1	.006	8	.745	9	-.572	1	.266	9	.279	6
16			...	-.011	6	-.059	8	-.006	7	.572	1	-.745	9	-.279	6	-.266	9
17		4	...	.007	8	-.036	1	.015	8	-.034	1	.765	8	.037	9	.052	6
18			...	-.007	6	-.077	8	-.015	7	-.765	8	.034	1	-.052	6	-.037	9
19		5	...	.002	8	-.054	1	.024	8	-1.0...	1	2.669	8	.394	8	.411	7
20			...	-.002	6	-.094	8	-.024	7	-2.6...	8	1.034	1	-.411	7	-.394	8
21	M3	1	...	.002	7	-.011	7	.07	8	.055	8	.077	7	.122	7	.047	8
22			...	-.002	6	-.015	8	0	1	-.077	7	-.055	8	-.047	8	-.122	7
23		2	...	.001	7	-.013	7	.071	8	.016	8	.105	7	.246	7	0	1
24			...	-.001	6	-.017	8	0	1	-.105	7	-.016	8	0	1	-.246	7
25		3	...	0	7	-.015	7	.072	8	-.026	8	.139	7	.367	7	0	1
26			...	0	6	-.019	8	0	1	-.139	7	.026	8	0	1	-.367	7
27		4	...	0	7	-.017	7	.073	8	-.074	8	.176	7	.51	9	0	1
28			...	0	6	-.021	8	0	1	-.176	7	.074	8	0	1	-.51	9
29		5	...	0	1	-.019	7	.074	8	-.125	8	.218	7	.675	9	0	1
30			...	0	1	-.023	8	0	1	-.218	7	.125	8	0	1	-.675	9
31	M4	1	...	0	1	-.019	7	.074	8	-.125	8	.218	7	.675	9	0	1

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
32			...	0	1	-.023	8	0	1	-.218	7	.125	8	0	1	-.675	9
33		2	...	0	6	-.021	7	.075	8	-.182	8	.265	7	.843	9	0	1
34			...	0	7	-.025	8	0	1	-.265	7	.182	8	0	1	-.843	9
35		3	...	0	6	-.022	7	.076	8	-.242	8	.316	7	1.013	9	0	1
36			...	0	7	-.027	8	0	1	-.316	7	.242	8	0	1	-1.013	9
37		4	...	.001	6	-.024	7	.077	8	-.307	8	.372	7	1.185	9	0	1
38			...	-.001	7	-.028	8	0	1	-.372	7	.307	8	0	1	-1.185	9
39		5	...	.002	6	-.026	7	.078	8	-.377	8	.432	7	1.359	9	.001	1
40			...	-.002	7	-.03	8	0	1	-.432	7	.377	8	-.001	1	-1.359	9
41	M5	1	...	-.035	2	.049	8	.03	8	.078	6	.073	9	.074	9	.076	6
42			...	-.035	1	-.016	7	-.042	7	-.073	9	-.078	6	-.076	6	-.074	9
43		2	...	-.037	2	.051	8	.032	8	.055	6	.005	9	.017	9	.036	6
44			...	-.037	1	-.018	7	-.044	7	-.005	9	-.055	6	-.036	6	-.017	9
45		3	...	-.039	2	.053	8	.034	8	.066	8	-.029	7	.01	8	.047	7
46			...	-.039	1	-.02	7	-.046	7	.029	7	-.066	8	-.047	7	-.01	8
47		4	...	-.041	2	.055	8	.036	8	.139	8	0	7	.058	8	.111	7
48			...	-.041	1	-.022	7	-.048	7	0	7	-.139	8	-.111	7	-.058	8
49		5	...	-.043	2	.057	8	.038	8	.215	8	.031	7	.108	8	.178	7
50			...	-.043	1	-.024	7	-.05	7	-.031	7	-.215	8	-.178	7	-.108	8
51	M6	1	...	-.074	2	.088	8	.069	8	.215	8	.031	7	.108	8	.178	7
52			...	-.074	1	-.055	7	-.081	7	-.031	7	-.215	8	-.178	7	-.108	8
53		2	...	-.074	2	.088	8	.069	8	.237	8	.044	7	.124	8	.198	7
54			...	-.074	1	-.055	7	-.081	7	-.044	7	-.237	8	-.198	7	-.124	8
55		3	...	-.075	2	.089	8	.069	8	.258	8	.058	7	.141	8	.217	7
56			...	-.075	1	-.056	7	-.082	7	-.058	7	-.258	8	-.217	7	-.141	8
57		4	...	-.075	2	.089	8	.07	8	.28	8	.071	7	.158	8	.237	7
58			...	-.075	1	-.056	7	-.082	7	-.071	7	-.28	8	-.237	7	-.158	8
59		5	...	-.075	2	.089	8	.07	8	.301	8	.085	7	.175	8	.257	7
60			...	-.075	1	-.056	7	-.083	7	-.085	7	-.301	8	-.257	7	-.175	8
61	M7	1	...	.049	6	.045	8	.101	7	-.355	9	.427	1	.004	1	3.805	7
62			...	0	1	.043	1	0	1	-.427	1	.355	9	-3.805	7	-.004	1
63		2	...	.054	6	.028	8	.092	7	.5	8	-.404	1	0	1	1.518	7
64			...	0	1	.027	1	0	1	.404	1	-.5	8	-1.518	7	0	1
65		3	...	.058	6	.011	8	.088	6	.96	8	-.838	1	.571	7	.004	1
66			...	0	1	.01	1	0	1	.838	1	-.96	8	-.004	1	-.571	7
67		4	...	.009	8	-.107	8	.002	1	1.8...	8	-1.647	1	.206	7	0	1
68			...	-.009	6	-.108	1	-.012	6	1.6...	1	-1.875	8	0	1	-.206	7
69		5	...	.004	8	-.124	8	.002	1	-.855	8	1.109	1	.046	1	.143	7
70			...	-.004	6	-.125	1	-.019	7	-1.1...	1	.855	8	-.143	7	-.046	1
71	M8	1	...	.008	7	.135	8	.009	1	-.964	1	1.789	8	.035	6	.032	1
72			...	-.008	8	.084	1	-.009	6	-1.7...	8	.964	1	-.032	1	-.035	6
73		2	...	.011	7	.125	8	.009	1	.162	1	-.066	8	.091	1	.057	6
74			...	-.011	8	.074	1	-.004	6	.066	8	-.162	1	-.057	6	-.091	1
75		3	...	.013	7	.115	8	.009	1	1.7...	8	-1.146	1	.214	1	.077	6
76			...	-.013	8	.064	1	-.004	7	1.1...	1	-1.778	8	-.077	6	-.214	1
77		4	...	.016	7	.105	8	.009	1	3.3...	8	-1.988	1	.337	1	.066	7
78			...	-.016	8	.054	1	-.009	7	1.9...	1	-3.348	8	-.066	7	-.337	1
79		5	...	.018	7	.095	8	.012	8	4.7...	8	-2.687	1	.46	1	.231	7
80			...	-.018	8	.044	1	-.014	7	2.6...	1	-4.775	8	-.231	7	-.46	1
81	M9	1	...	-.035	2	.004	9	.026	8	.071	7	.081	8	.074	9	.077	6
82			...	-.035	1	-.062	6	-.043	7	-.081	8	-.071	7	-.077	6	-.074	9
83		2	...	-.037	2	.006	9	.028	8	-.011	1	.077	8	.014	9	.041	6
84			...	-.037	1	-.064	6	-.045	7	-.077	8	.011	1	-.041	6	-.014	9
85		3	...	-.039	2	.008	9	.03	8	-.02	1	.104	6	0	8	.05	7
86			...	-.039	1	-.066	6	-.047	7	-.104	6	.02	1	-.05	7	0	8
87		4	...	-.041	2	.01	9	.032	8	-.03	1	.196	6	.042	8	.116	7
88			...	-.041	1	-.068	6	-.049	7	-.196	6	.03	1	-.116	7	-.042	8

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

Mar 24, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	lc	y Shear[..	lc	z Shear[k...	lc	y-T...	lc	y-Bot[ksi]	lc	z-Top[ksi]	lc	z-Bot[ksi]	lc
89		5	...	-.043	2	.012	9	.034	8	-.035	9	.29	6	.087	8	.185	7
90			...	-.043	1	-.07	6	-.051	7	-.29	6	.035	9	-.185	7	-.087	8
91	M10	1	...	-.074	2	.043	9	.065	8	-.035	9	.29	6	.087	8	.185	7
92			...	-.074	1	-.101	6	-.082	7	-.29	6	.035	9	-.185	7	-.087	8
93		2	...	-.074	2	.044	9	.065	8	-.025	9	.315	6	.103	8	.205	7
94			...	-.074	1	-.101	6	-.083	7	-.315	6	.025	9	-.205	7	-.103	8
95		3	...	-.075	2	.044	9	.066	8	-.014	9	.339	6	.119	8	.225	7
96			...	-.075	1	-.102	6	-.083	7	-.339	6	.014	9	-.225	7	-.119	8
97		4	...	-.075	2	.044	9	.066	8	-.004	9	.364	6	.135	8	.245	7
98			...	-.075	1	-.102	6	-.083	7	-.364	6	.004	9	-.245	7	-.135	8
99		5	...	-.075	2	.045	9	.066	8	.007	9	.389	6	.151	8	.265	7
100			...	-.075	1	-.102	6	-.084	7	-.389	6	-.007	9	-.265	7	-.151	8
101	M11	1	...	.035	8	.002	8	-.01	1	.035	1	-.03	8	4.11	6	.051	1
102			...	-.02	7	0	1	-.788	8	.03	8	-.035	1	-.051	1	-4.11	6
103		2	...	.035	8	0	8	-.01	1	.035	1	-.03	8	3.992	6	.053	1
104			...	-.02	7	0	1	-.788	8	.03	8	-.035	1	-.053	1	-3.992	6
105		3	...	.035	8	0	8	-.01	1	.035	1	-.03	8	3.874	6	.056	1
106			...	-.02	7	0	1	-.788	8	.03	8	-.035	1	-.056	1	-3.874	6
107		4	...	.035	8	0	8	-.01	1	.035	1	-.03	8	3.756	6	.059	1
108			...	-.02	7	-.001	1	-.789	8	.03	8	-.035	1	-.059	1	-3.756	6
109		5	...	.035	8	0	8	-.01	1	.034	1	-.03	8	3.638	6	.061	1
110			...	-.02	7	-.002	1	-.789	8	.03	8	-.034	1	-.061	1	-3.638	6
111	M12	1	...	.025	6	.025	1	0	1	.434	7	-.428	8	.887	8	0	1
112			...	-.025	7	.025	8	-.045	6	.428	8	-.434	7	0	1	-.887	8
113		2	...	.02	6	.005	1	0	1	.802	7	-.794	8	.332	8	.4	7
114			...	-.02	7	.005	8	-.035	6	.794	8	-.802	7	-.4	7	-.332	8
115		3	...	.015	6	-.015	1	0	1	.682	7	-.671	8	0	1	1.107	7
116			...	-.015	7	-.015	8	-.037	8	.671	8	-.682	7	-1.107	7	0	1
117		4	...	.01	6	-.034	1	0	1	.074	7	-.059	8	.001	1	1.593	6
118			...	-.01	7	-.035	8	-.047	8	.059	8	-.074	7	-1.593	6	-.001	1
119		5	...	.005	6	-.054	1	0	1	-1.0...	1	1.041	8	.002	1	2.795	8
120			...	-.005	7	-.054	8	-.057	8	-1.0...	8	1.023	1	-2.795	8	-.002	1
121	M13	1	...	.019	1	.007	9	.041	6	-.183	1	.192	6	.036	1	-.035	7
122			...	.019	2	-.054	6	0	1	-.192	6	.183	1	.035	7	-.036	1
123		2	...	.019	1	.008	9	.042	6	-.183	1	.214	6	.052	6	-.035	1
124			...	.019	2	-.054	6	0	1	-.214	6	.183	1	.035	1	-.052	6
125		3	...	.018	1	.008	9	.042	6	-.183	1	.236	6	.069	6	-.035	1
126			...	.018	2	-.055	6	0	1	-.236	6	.183	1	.035	1	-.069	6
127		4	...	.017	1	.009	9	.043	6	-.18	9	.258	6	.086	6	-.035	1
128			...	.017	2	-.056	6	0	1	-.258	6	.18	9	.035	1	-.086	6
129		5	...	.017	1	.01	9	.044	6	-.176	9	.28	6	.104	6	-.034	1
130			...	.017	2	-.056	6	0	1	-.28	6	.176	9	.034	1	-.104	6
131	M14	1	...	.019	1	.008	9	.06	1	.465	8	-.109	1	.094	8	-.054	1
132			...	.019	2	-.051	6	.004	9	.109	1	-.465	8	.054	1	-.094	8
133		2	...	.019	1	.009	9	.06	1	.468	8	-.106	1	.105	8	-.078	1
134			...	.019	2	-.051	6	.003	9	.106	1	-.468	8	.078	1	-.105	8
135		3	...	.018	1	.009	9	.06	1	.471	8	-.103	1	.116	8	-.094	7
136			...	.018	2	-.052	6	.003	9	.103	1	-.471	8	.094	7	-.116	8
137		4	...	.017	1	.01	9	.06	1	.475	8	-.101	1	.13	6	-.096	9
138			...	.017	2	-.052	6	.002	9	.101	1	-.475	8	.096	9	-.13	6
139		5	...	.017	1	.011	9	.06	1	.479	8	-.098	1	.151	1	-.097	9
140			...	.017	2	-.053	6	.002	9	.098	1	-.479	8	.097	9	-.151	1
141	M15	1	...	.017	1	-.007	1	.009	9	.479	8	-.098	1	.151	1	-.097	9
142			...	.017	2	-.05	8	-.026	6	.098	1	-.479	8	.097	9	-.151	1
143		2	...	.013	1	-.007	1	.005	9	.341	8	-.078	1	.121	7	-.071	8
144			...	.013	2	-.046	8	-.022	6	.078	1	-.341	8	.071	8	-.121	7
145		3	...	.008	1	-.007	1	0	9	.279	6	-.058	1	.126	7	-.016	8

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 24, 2006
4:32 PM
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[..	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
146			...	.008	2	-.042	8	-.018	6	.058	1	-.279	6	.016	8	-.126	7
147		4	...	.004	1	-.007	1	-.004	9	.219	6	-.037	1	.12	7	.027	8
148			...	.004	2	-.037	8	-.013	6	.037	1	-.219	6	-.027	8	-.12	7
149		5	...	0	1	-.007	1	-.008	9	.147	6	.005	9	.101	7	.059	8
150			...	0	1	-.033	8	-.011	1	-.005	9	-.147	6	-.059	8	-.101	7
151	M16	1	...	-.007	9	-.006	8	-.023	9	1.5...	1	.527	6	3.488	1	.715	7
152			...	-.048	6	-.057	1	-.15	1	-.527	6	-1.513	1	-.715	7	-3.488	1
153		2	...	-.009	1	-.011	8	-.026	9	1.0...	1	.676	6	2.367	1	1.092	7
154			...	-.047	6	-.062	1	-.15	1	-.676	6	-1.067	1	-1.092	7	-2.367	1
155		3	...	-.009	1	-.016	8	-.029	9	.582	1	.865	6	1.246	1	1.489	7
156			...	-.046	6	-.068	1	-.15	1	-.865	6	-.582	1	-1.489	7	-1.246	1
157		4	...	-.009	1	-.022	8	-.031	9	.057	1	1.094	6	.125	1	1.915	6
158			...	-.044	6	-.073	1	-.15	1	-1.0...	6	-.057	1	-1.915	6	-.125	1
159		5	...	-.009	1	-.027	8	-.034	9	-.507	1	1.361	6	-.995	1	2.479	6
160			...	-.043	6	-.078	1	-.15	1	-1.3...	6	.507	1	-2.479	6	.995	1
161	M17	1	...	.03	8	.142	1	.15	1	-1.5...	1	2.404	6	-1.518	1	3.173	7
162			...	.009	1	.09	8	.017	8	-2.4...	6	1.544	1	-3.173	7	1.518	1
163		2	...	.03	8	.14	1	.15	1	-1.2...	1	2.181	6	-1.188	1	2.972	7
164			...	.009	1	.089	8	.017	8	-2.1...	6	1.234	1	-2.972	7	1.188	1
165		3	...	.03	8	.139	1	.15	1	-.927	1	1.961	6	-.857	1	2.773	7
166			...	.009	1	.087	8	.018	8	-1.9...	6	.927	1	-2.773	7	.857	1
167		4	...	.029	8	.137	1	.15	1	-.623	1	1.745	6	-.527	1	2.576	7
168			...	.009	1	.086	8	.019	8	-1.7...	6	.623	1	-2.576	7	.527	1
169		5	...	.029	8	.135	1	.15	1	-.323	1	1.532	6	-.197	1	2.38	7
170			...	.009	1	.084	8	.02	8	-1.5...	6	.323	1	-2.38	7	.197	1
171	M18	1	...	-.029	8	.06	8	.059	6	-.821	1	1.29	8	.298	1	2.34	6
172			...	-.098	1	.042	1	.018	1	-1.29	8	.821	1	-2.34	6	-.298	1
173		2	...	-.029	8	.046	8	.065	6	-.166	1	.408	9	.614	1	1.221	6
174			...	-.095	1	.031	1	.018	1	-.408	9	.166	1	-1.221	6	-.614	1
175		3	...	-.028	8	.032	8	.072	6	.373	6	-.192	9	.931	1	.027	7
176			...	-.091	1	.02	1	.018	1	.192	9	-.373	6	-.027	7	-.931	1
177		4	...	-.028	8	.021	9	.078	6	.817	8	-.543	1	1.364	6	-.914	9
178			...	-.088	1	.009	1	.018	1	.543	1	-.817	8	.914	9	-1.364	6
179		5	...	-.024	9	.013	9	.084	6	1.0...	8	-.596	1	2.828	6	-1.462	9
180			...	-.085	1	-.003	1	.018	1	.596	1	-1.006	8	1.462	9	-2.828	6
181	M19	1	...	.03	8	.176	6	-.046	8	-1.5...	1	2.404	6	3.173	7	-1.518	1
182			...	.009	1	.136	1	-.18	7	-2.4...	6	1.544	1	1.518	1	-3.173	7
183		2	...	.031	8	.174	6	-.047	8	-1.0...	1	1.735	6	2.485	7	-1.246	1
184			...	.009	1	.133	1	-.179	7	-1.7...	6	1.029	1	1.246	1	-2.485	7
185		3	...	.032	8	.171	6	-.048	8	-.524	1	1.076	6	1.962	6	-.974	1
186			...	.009	1	.131	1	-.178	7	-1.0...	6	.524	1	.974	1	-1.962	6
187		4	...	.032	8	.168	6	-.05	8	-.03	1	.428	6	1.589	6	-.646	9
188			...	.009	1	.128	1	-.176	7	-.428	6	.03	1	.646	9	-1.589	6
189		5	...	.033	8	.165	6	-.051	8	.454	1	-.21	6	1.21	6	-.16	9
190			...	.009	1	.125	1	-.175	7	.21	6	-.454	1	.16	9	-1.21	6
191	M20	1	...	.009	8	.044	6	-.014	8	.04	1	-.019	6	.107	6	-.014	9
192			...	.002	1	.033	1	-.047	7	.019	6	-.04	1	.014	9	-.107	6
193		2	...	.009	8	.043	6	-.014	8	.064	1	-.051	6	.087	6	.011	9
194			...	.002	1	.032	1	-.046	7	.051	6	-.064	1	-.011	9	-.087	6
195		3	...	.01	8	.041	6	-.015	8	.087	1	-.082	6	.066	6	.035	9
196			...	.002	1	.03	1	-.045	7	.082	6	-.087	1	-.035	9	-.066	6
197		4	...	.01	8	.039	6	-.016	8	.111	6	-.109	1	.048	8	.061	7
198			...	.002	1	.029	1	-.044	7	.109	1	-.111	6	-.061	7	-.048	8
199		5	...	.01	8	.038	6	-.017	8	.14	6	-.13	1	.036	8	.093	7
200			...	.002	1	.027	1	-.044	7	.13	1	-.14	6	-.093	7	-.036	8
201	M21	1	...	.019	8	.005	6	-.014	9	.14	6	-.13	1	.036	8	.093	7
202			...	-.004	7	-.006	1	-.046	6	.13	1	-.14	6	-.093	7	-.036	8

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 24, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[..	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
203		2	...	.019	8	.004	6	-.014	9	.143	6	-.125	1	.013	8	.112	7
204			...	-.004	7	-.007	1	-.047	6	.125	1	-.143	6	-.112	7	-.013	8
205		3	...	.019	8	.002	6	-.013	9	.145	6	-.12	1	-.01	8	.129	7
206			...	-.004	7	-.009	1	-.048	6	.12	1	-.145	6	-.129	7	.01	8
207		4	...	.02	8	0	6	-.012	9	.146	6	-.114	1	-.034	8	.146	7
208			...	-.005	7	-.01	1	-.048	6	.114	1	-.146	6	-.146	7	.034	8
209		5	...	.02	8	0	6	-.011	9	.146	6	-.106	1	-.058	8	.163	7
210			...	-.005	7	-.011	1	-.049	6	.106	1	-.146	6	-.163	7	.058	8
211	M22	1	...	.02	8	0	6	-.011	9	.146	6	-.106	1	-.058	8	.163	7
212			...	-.005	7	-.011	1	-.049	6	.106	1	-.146	6	-.163	7	.058	8
213		2	...	.021	8	-.006	6	-.009	9	.138	6	-.072	1	-.115	1	.227	6
214			...	-.006	7	-.017	1	-.052	6	.072	1	-.138	6	-.227	6	.115	1
215		3	...	.023	8	-.011	6	-.006	9	.117	6	-.026	1	-.158	9	.355	6
216			...	-.008	7	-.022	1	-.054	6	.026	1	-.117	6	-.355	6	.158	9
217		4	...	.024	8	-.016	6	-.004	9	.084	6	.033	1	-.169	9	.489	6
218			...	-.009	7	-.027	1	-.057	6	-.033	1	-.084	6	-.489	6	.169	9
219		5	...	.025	8	-.022	6	0	9	.038	6	.105	1	-.175	9	.63	6
220			...	-.01	7	-.032	1	-.06	6	-.105	1	-.038	6	-.63	6	.175	9
221	M23	1	...	.029	8	.022	8	-.01	1	-.072	1	.085	8	10.164	9	-.05	1
222			...	-.015	7	.021	1	-.797	9	-.085	8	.072	1	.05	1	-10.164	9
223		2	...	.031	8	.017	8	-.01	1	-.026	1	.038	8	8.245	9	-.025	1
224			...	-.016	7	.016	1	-.794	9	-.038	8	.026	1	.025	1	-8.245	9
225		3	...	.032	8	.012	8	-.01	1	.007	1	.003	8	6.349	6	0	1
226			...	-.017	7	.011	1	-.791	9	-.003	8	-.007	1	0	1	-6.349	6
227		4	...	.033	8	.007	8	-.01	1	.027	1	-.02	8	5.233	6	.026	1
228			...	-.018	7	.006	1	-.789	9	.02	8	-.027	1	-.026	1	-5.233	6
229		5	...	.035	8	.002	8	-.01	1	.035	1	-.03	8	4.11	6	.051	1
230			...	-.02	7	0	1	-.788	8	.03	8	-.035	1	-.051	1	-4.11	6
231	M24	1	...	0	8	0	1	0	1	0	1	0	1	0	1	0	1
232			...	0	7	0	1	0	1	0	1	0	1	0	1	0	1
233		2	...	0	8	0	1	0	1	0	1	0	1	0	1	0	1
234			...	0	7	0	1	0	1	0	1	0	1	0	1	0	1
235		3	...	0	8	0	1	0	1	0	1	0	1	0	1	0	1
236			...	0	7	0	1	0	1	0	1	0	1	0	1	0	1
237		4	...	0	8	0	1	0	1	0	1	0	1	0	1	0	1
238			...	0	7	0	1	0	1	0	1	0	1	0	1	0	1
239		5	...	0	8	0	1	0	1	0	1	0	1	0	1	0	1
240			...	0	7	0	1	0	1	0	1	0	1	0	1	0	1
241	M25	1	...	.035	8	0	8	-.01	1	.034	1	-.03	8	3.638	6	.061	1
242			...	-.02	7	-.002	1	-.789	8	.03	8	-.034	1	-.061	1	-3.638	6
243		2	...	.035	8	-.002	8	-.01	1	.033	1	-.029	8	3.411	6	.066	1
244			...	-.021	7	-.003	1	-.789	8	.029	8	-.033	1	-.066	1	-3.411	6
245		3	...	.036	8	-.003	8	-.01	1	.032	1	-.028	8	3.183	6	.072	1
246			...	-.021	7	-.004	1	-.79	8	.028	8	-.032	1	-.072	1	-3.183	6
247		4	...	.036	8	-.004	8	-.01	1	.03	1	-.027	8	2.955	6	.077	1
248			...	-.021	7	-.005	1	-.79	8	.027	8	-.03	1	-.077	1	-2.955	6
249		5	...	.036	8	-.005	8	-.01	1	.027	1	-.025	8	2.727	6	.082	1
250			...	-.021	7	-.006	1	-.791	8	.025	8	-.027	1	-.082	1	-2.727	6
251	M26	1	...	.098	8	-.005	8	-.01	1	.014	1	-.004	8	2.727	6	.082	1
252			...	.003	1	-.006	1	-.77	8	.004	8	-.014	1	-.082	1	-2.727	6
253		2	...	.098	8	-.005	8	-.01	1	.012	1	-.003	8	2.62	6	.084	1
254			...	.003	1	-.006	1	-.77	8	.003	8	-.012	1	-.084	1	-2.62	6
255		3	...	.098	8	-.006	8	-.01	1	.011	1	-.002	8	2.513	6	.138	9
256			...	.003	1	-.007	1	-.77	8	.002	8	-.011	1	-.138	9	-2.513	6
257		4	...	.098	8	-.006	8	-.01	1	.009	1	0	8	2.405	6	.311	9
258			...	.003	1	-.007	1	-.77	8	0	8	-.009	1	-.311	9	-2.405	6
259		5	...	.098	8	-.007	8	-.01	1	.008	1	.001	8	2.298	6	.485	9

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Jc	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
260			...	.003	1	-.008	1	-.771	8	-.001	8	-.008	1	-.485	9	-2.298	6
261	M27	1	...	.213	8	-.007	8	-.007	1	-.02	1	.042	8	2.298	6	.485	9
262			...	.004	1	-.008	1	-.672	8	-.042	8	.02	1	-.485	9	-2.298	6
263		2	...	.213	8	-.007	8	-.007	1	-.021	1	.044	8	2.198	6	.636	9
264			...	.004	1	-.008	1	-.672	8	-.044	8	.021	1	-.636	9	-2.198	6
265		3	...	.213	8	-.008	8	-.007	1	-.023	1	.045	8	2.098	6	.787	9
266			...	.004	1	-.009	1	-.672	8	-.045	8	.023	1	-.787	9	-2.098	6
267		4	...	.213	8	-.008	8	-.007	1	-.025	1	.047	8	1.999	7	.94	8
268			...	.004	1	-.009	1	-.673	8	-.047	8	.025	1	-.94	8	-1.999	7
269		5	...	.213	8	-.009	8	-.007	1	-.028	1	.049	8	1.901	7	1.093	8
270			...	.004	1	-.01	1	-.673	8	-.049	8	.028	1	-1.093	8	-1.901	7
271	M28	1	...	.307	8	-.009	8	-.004	1	-.052	1	.085	8	1.901	7	1.093	8
272			...	.005	1	-.01	1	-.508	8	-.085	8	.052	1	-1.093	8	-1.901	7
273		2	...	.307	8	-.009	8	-.004	1	-.055	1	.087	8	1.82	7	1.209	8
274			...	.005	1	-.01	1	-.508	8	-.087	8	.055	1	-1.209	8	-1.82	7
275		3	...	.307	8	-.01	8	-.004	1	-.057	1	.09	8	1.738	7	1.325	8
276			...	.005	1	-.011	1	-.508	8	-.09	8	.057	1	-1.325	8	-1.738	7
277		4	...	.307	8	-.01	8	-.004	1	-.06	1	.092	8	1.657	7	1.44	8
278			...	.005	1	-.011	1	-.508	8	-.092	8	.06	1	-1.44	8	-1.657	7
279		5	...	.307	8	-.011	8	-.004	1	-.062	1	.094	8	1.576	7	1.556	8
280			...	.005	1	-.012	1	-.508	8	-.094	8	.062	1	-1.556	8	-1.576	7
281	M29	1	...	.371	8	-.011	8	0	1	-.082	1	.122	8	1.576	7	1.556	8
282			...	.006	1	-.012	1	-.293	8	-.122	8	.082	1	-1.556	8	-1.576	7
283		2	...	.371	8	-.011	8	0	1	-.084	1	.124	8	1.519	7	1.623	8
284			...	.006	1	-.012	1	-.293	8	-.124	8	.084	1	-1.623	8	-1.519	7
285		3	...	.371	8	-.012	8	0	1	-.087	1	.127	8	1.462	7	1.69	8
286			...	.006	1	-.013	1	-.293	8	-.127	8	.087	1	-1.69	8	-1.462	7
287		4	...	.371	8	-.012	8	0	1	-.09	1	.13	8	1.405	7	1.756	8
288			...	.006	1	-.013	1	-.293	8	-.13	8	.09	1	-1.756	8	-1.405	7
289		5	...	.371	8	-.013	8	0	1	-.093	1	.132	8	1.349	7	1.823	8
290			...	.006	1	-.014	1	-.293	8	-.132	8	.093	1	-1.823	8	-1.349	7
291	M30	1	...	.399	8	-.013	8	.003	1	-.104	1	.147	8	1.349	7	1.823	8
292			...	.006	1	-.014	1	-.119	6	-.147	8	.104	1	-1.823	8	-1.349	7
293		2	...	.399	8	-.013	8	.003	1	-.107	1	.15	8	1.322	7	1.834	8
294			...	.006	1	-.014	1	-.12	6	-.15	8	.107	1	-1.834	8	-1.322	7
295		3	...	.399	8	-.014	8	.003	1	-.11	1	.154	8	1.295	7	1.845	8
296			...	.006	1	-.015	1	-.12	6	-.154	8	.11	1	-1.845	8	-1.295	7
297		4	...	.399	8	-.014	8	.003	1	-.114	1	.157	8	1.268	7	1.856	8
298			...	.006	1	-.015	1	-.12	6	-.157	8	.114	1	-1.856	8	-1.268	7
299		5	...	.399	8	-.015	8	.003	1	-.117	1	.16	8	1.241	7	1.867	8
300			...	.006	1	-.016	1	-.12	6	-.16	8	.117	1	-1.867	8	-1.241	7
301	M31	1	...	.398	8	.03	8	.077	8	-.119	1	.162	8	1.241	7	1.867	8
302			...	.005	1	.028	1	-.048	7	-.162	8	.119	1	-1.867	8	-1.241	7
303		2	...	.401	8	.019	8	.083	8	0	1	.032	8	.975	7	1.445	8
304			...	.005	1	.017	1	-.053	7	-.032	8	0	1	-1.445	8	-.975	7
305		3	...	.404	8	.008	8	.089	8	.06	1	-.038	8	.68	7	.993	8
306			...	.005	1	.006	1	-.059	7	.038	8	-.06	1	-.993	8	-.68	7
307		4	...	.406	8	-.004	8	.094	8	.06	1	-.049	8	.355	7	.512	8
308			...	.005	1	-.006	1	-.065	7	.049	8	-.06	1	-.512	8	-.355	7
309		5	...	.409	8	-.015	8	.1	8	0	1	0	1	0	1	0	1
310			...	.005	1	-.017	1	-.07	7	0	1	0	1	0	1	0	1
311	M32	1	...	.006	7	.143	8	.011	9	-1.9...	1	3.359	8	.158	6	.129	1
312			...	-.006	9	.092	1	-.013	6	-3.3...	8	1.958	1	-.129	1	-.158	6
313		2	...	.007	7	.141	8	.01	9	-1.7...	1	2.958	8	.123	6	.105	1
314			...	-.007	9	.09	1	-.012	6	-2.9...	8	1.701	1	-.105	1	-.123	6
315		3	...	.007	7	.139	8	.009	9	-1.45	1	2.563	8	.09	6	.08	1
316			...	-.007	9	.088	1	-.011	6	-2.5...	8	1.45	1	-.08	1	-.09	6

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
317		4	...	.008	7	.137	8	.009	1	-1.2...	1	2.173	8	.061	6	.056	1
318			...	-.008	9	.086	1	-.01	6	-2.1...	8	1.204	1	-.056	1	-.061	6
319		5	...	.008	7	.135	8	.009	1	-.964	1	1.789	8	.035	6	.032	1
320			...	-.008	9	.084	1	-.009	6	-1.7...	8	.964	1	-.032	1	-.035	6
321	M33	1	...	.139	8	.149	6	.033	7	2.4...	9	8.796	6	1.158	8	1.172	7
322			...	.044	1	-.149	8	-.033	8	-8.7...	6	-2.455	9	-1.172	7	-1.158	8
323		2	...	.132	8	.142	6	.026	7	.1	9	6.441	6	.681	8	.699	7
324			...	.037	1	-.142	8	-.026	8	-6.4...	6	-.1	9	-.699	7	-.681	8
325		3	...	.126	8	.136	6	.019	7	-.05	1	4.197	6	.315	8	.336	7
326			...	.03	1	-.136	8	-.019	8	-4.1...	6	.05	1	-.336	7	-.315	8
327		4	...	.119	8	.129	6	.012	7	-.05	1	4.278	8	.059	8	.084	7
328			...	.023	1	-.129	8	-.012	8	-4.2...	8	.05	1	-.084	7	-.059	8
329		5	...	.112	8	.122	6	.005	7	-.039	7	6.301	8	.059	7	.086	8
330			...	.016	1	-.122	8	-.006	8	-6.3...	8	.039	7	-.086	8	-.059	7
331	M34	1	...	.002	6	-.018	1	.004	6	-1.2...	1	2.009	8	.047	7	.063	8
332			...	-.002	9	-.045	8	-.003	1	-2.0...	8	1.293	1	-.063	8	-.047	7
333		2	...	.003	6	-.022	1	.006	6	-1.4...	1	2.305	8	.034	7	.075	1
334			...	-.003	9	-.049	8	-.004	9	-2.3...	8	1.417	1	-.075	1	-.034	7
335		3	...	.004	6	-.027	1	.009	6	-1.57	1	2.628	8	.021	6	.093	1
336			...	-.004	9	-.054	8	-.006	9	-2.6...	8	1.57	1	-.093	1	-.021	6
337		4	...	.005	6	-.031	1	.011	6	-1.75	1	2.98	8	.082	6	.111	1
338			...	-.005	9	-.058	8	-.008	9	-2.98	8	1.75	1	-.111	1	-.082	6
339		5	...	.006	6	-.035	1	.013	6	-1.9...	1	3.359	8	.158	6	.129	1
340			...	-.006	9	-.063	8	-.01	9	-3.3...	8	1.958	1	-.129	1	-.158	6
341	M35	1	...	0	1	-.01	1	.003	7	-1.1...	1	1.578	8	.042	9	.086	6
342			...	0	1	-.038	8	-.003	1	-1.5...	8	1.147	1	-.086	6	-.042	9
343		2	...	0	6	-.012	1	.002	7	-1.1...	1	1.679	8	.046	9	.083	6
344			...	0	8	-.04	8	-.003	1	-1.6...	8	1.176	1	-.083	6	-.046	9
345		3	...	0	6	-.014	1	.002	6	-1.21	1	1.784	8	.048	9	.078	6
346			...	0	8	-.041	8	-.003	1	-1.7...	8	1.21	1	-.078	6	-.048	9
347		4	...	.001	6	-.016	1	.003	6	-1.2...	1	1.894	8	.048	7	.071	8
348			...	-.001	8	-.043	8	-.003	1	-1.8...	8	1.249	1	-.071	8	-.048	7
349		5	...	.002	6	-.018	1	.004	6	-1.2...	1	2.009	8	.047	7	.063	8
350			...	-.002	8	-.045	8	-.003	1	-2.0...	8	1.293	1	-.063	8	-.047	7
351	M36	1	...	.004	8	.007	1	.012	7	-.855	8	1.109	1	.046	1	.143	7
352			...	-.004	6	-.02	8	-.009	8	-1.1...	1	.855	8	-.143	7	-.046	1
353		2	...	.003	8	.003	1	.009	7	-.994	8	1.077	1	.028	1	.077	7
354			...	-.003	6	-.024	8	-.007	8	-1.0...	1	.994	8	-.077	7	-.028	1
355		3	...	.002	8	-.002	1	.007	7	-1.0...	1	1.161	8	.01	1	.066	6
356			...	-.002	6	-.029	8	-.004	8	-1.1...	8	1.073	1	-.066	6	-.01	1
357		4	...	.001	8	-.006	1	.005	7	-1.0...	1	1.356	8	.022	9	.083	6
358			...	-.001	6	-.033	8	-.003	1	-1.3...	8	1.096	1	-.083	6	-.022	9
359		5	...	0	1	-.01	1	.003	7	-1.1...	1	1.578	8	.042	9	.086	6
360			...	0	1	-.038	8	-.003	1	-1.5...	8	1.147	1	-.086	6	-.042	9
361	M37	1	...	.031	9	.04	1	.024	9	3.9...	8	.218	1	.445	6	.453	9
362			...	-.031	6	-.014	8	-.024	6	-.218	1	-3.902	8	-.453	9	-.445	6
363		2	...	.03	9	.035	1	.022	9	3.78	8	-.073	1	.266	8	.275	7
364			...	-.03	6	-.018	8	-.022	6	.073	1	-3.78	8	-.275	7	-.266	8
365		3	...	.029	9	.031	1	.02	9	3.6...	9	-.33	1	.104	8	.114	7
366			...	-.029	6	-.022	8	-.02	6	.33	1	-3.624	9	-.114	7	-.104	8
367		4	...	.028	9	.027	1	.018	9	3.4...	9	-.555	1	.035	9	.045	6
368			...	-.028	6	-.027	8	-.018	6	.555	1	-3.435	9	-.045	6	-.035	9
369		5	...	.026	9	.023	1	.016	9	3.2...	9	-.746	1	.164	9	.175	6
370			...	-.026	6	-.031	8	-.016	6	.746	1	-3.213	9	-.175	6	-.164	9
371	M38	1	...	.033	9	.047	1	.028	9	3.9...	8	.608	1	.68	6	.687	9
372			...	-.033	6	-.006	8	-.028	6	-.608	1	-3.991	8	-.687	9	-.68	6
373		2	...	.032	9	.045	1	.027	9	3.9...	8	.504	1	.618	6	.625	9

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

Mar 24, 2006
4:32 PM
Checked By:_____

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[..	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
374			...	-.032	6	-.008	8	-.027	6	-.504	1	-3.975	8	-.625	9	-.618	6
375		3	...	.032	9	.043	1	.026	9	3.9...	8	.404	1	.558	6	.566	9
376			...	-.032	6	-.01	8	-.026	6	-.404	1	-3.955	8	-.566	9	-.558	6
377		4	...	.031	9	.042	1	.025	9	3.9...	8	.309	1	.501	6	.508	9
378			...	-.031	6	-.012	8	-.025	6	-.309	1	-3.931	8	-.508	9	-.501	6
379		5	...	.031	9	.04	1	.024	9	3.9...	8	.218	1	.445	6	.453	9
380			...	-.031	6	-.014	8	-.024	6	-.218	1	-3.902	8	-.453	9	-.445	6
381	M39	1	...	.035	8	.057	1	.033	9	4.0...	8	1.201	1	1.028	6	1.033	9
382			...	-.035	6	.003	8	-.033	6	-1.2...	1	-4.007	8	-1.033	9	-1.028	6
383		2	...	.034	8	.054	1	.032	9	4.0...	8	1.042	1	.936	6	.942	9
384			...	-.034	6	.001	8	-.032	6	-1.0...	1	-4.013	8	-.942	9	-.936	6
385		3	...	.034	8	.052	1	.03	9	4.0...	8	.891	1	.847	6	.853	9
386			...	-.034	6	-.001	8	-.03	6	-.891	1	-4.013	8	-.853	9	-.847	6
387		4	...	.033	8	.05	1	.029	9	4.0...	8	.746	1	.762	6	.769	9
388			...	-.033	6	-.004	8	-.029	6	-.746	1	-4.005	8	-.769	9	-.762	6
389		5	...	.033	8	.047	1	.028	9	3.9...	8	.608	1	.68	6	.687	9
390			...	-.033	6	-.006	8	-.028	6	-.608	1	-3.991	8	-.687	9	-.68	6
391	M40	1	...	.002	7	.054	8	.009	7	-.37	1	1.324	9	.047	6	.167	9
392			...	-.002	8	.022	1	-.014	8	-1.3...	9	.37	1	-.167	9	-.047	6
393		2	...	.003	7	.048	8	.006	7	-.228	1	.949	9	0	1	.133	9
394			...	-.003	8	.016	1	-.011	8	-.949	9	.228	1	-.133	9	0	1
395		3	...	.005	7	.042	8	.003	7	-.129	1	.616	9	0	1	.161	8
396			...	-.005	8	.011	1	-.008	8	-.616	9	.129	1	-.161	8	0	1
397		4	...	.006	7	.036	8	0	7	-.072	1	.327	9	0	1	.21	8
398			...	-.006	8	.005	1	-.005	8	-.327	9	.072	1	-.21	8	0	1
399		5	...	.008	7	.031	8	0	6	-.06	1	.081	9	0	1	.238	8
400			...	-.008	8	-.001	1	-.006	9	-.081	9	.06	1	-.238	8	0	1
401	M41	1	...	0	1	.062	8	.013	7	-.617	1	1.87	9	.168	6	.242	9
402			...	0	1	.03	1	-.018	8	-1.87	9	.617	1	-.242	9	-.168	6
403		2	...	0	6	.06	8	.012	7	-.549	1	1.727	9	.135	6	.22	9
404			...	0	8	.028	1	-.017	8	-1.7...	9	.549	1	-.22	9	-.135	6
405		3	...	0	6	.058	8	.011	7	-.485	1	1.588	9	.103	6	.2	9
406			...	0	8	.026	1	-.016	8	-1.5...	9	.485	1	-.2	9	-.103	6
407		4	...	.001	6	.056	8	.01	7	-.425	1	1.454	9	.074	6	.183	9
408			...	-.001	8	.024	1	-.015	8	-1.4...	9	.425	1	-.183	9	-.074	6
409		5	...	.002	6	.054	8	.009	7	-.37	1	1.324	9	.047	6	.167	9
410			...	-.002	8	.022	1	-.014	8	-1.3...	9	.37	1	-.167	9	-.047	6
411	M42	1	...	.002	8	.071	8	.018	7	-1.0...	1	2.669	8	.394	8	.411	7
412			...	-.002	6	.039	1	-.023	8	-2.6...	8	1.034	1	-.411	7	-.394	8
413		2	...	.002	8	.069	8	.017	7	-.919	1	2.458	8	.328	8	.359	7
414			...	-.002	6	.037	1	-.021	8	-2.4...	8	.919	1	-.359	7	-.328	8
415		3	...	.001	8	.066	8	.015	7	-.811	1	2.255	9	.265	8	.311	7
416			...	-.001	6	.035	1	-.02	8	-2.2...	9	.811	1	-.311	7	-.265	8
417		4	...	0	8	.064	8	.014	7	-.71	1	2.059	9	.214	6	.274	9
418			...	0	6	.032	1	-.019	8	-2.0...	9	.71	1	-.274	9	-.214	6
419		5	...	0	1	.062	8	.013	7	-.617	1	1.87	9	.168	6	.242	9
420			...	0	1	.03	1	-.018	8	-1.87	9	.617	1	-.242	9	-.168	6
421	M43	1	...	0	1	-.007	1	-.008	9	.147	6	.005	9	.101	7	.059	8
422			...	0	1	-.033	8	-.011	1	-.005	9	-.147	6	-.059	8	-.101	7
423		2	...	0	1	-.007	1	-.008	8	.129	6	.025	9	.095	7	.064	8
424			...	0	1	-.032	8	-.011	1	-.025	9	-.129	6	-.064	8	-.095	7
425		3	...	-.002	1	-.007	1	-.007	8	.11	6	.044	9	.089	7	.069	8
426			...	-.002	1	-.031	8	-.011	1	-.044	9	-.11	6	-.069	8	-.089	7
427		4	...	-.003	1	-.007	1	-.006	8	.091	6	.063	9	.082	7	.073	8
428			...	-.003	1	-.03	8	-.011	7	-.063	9	-.091	6	-.073	8	-.082	7
429		5	...	-.004	1	-.007	1	-.005	8	.071	7	.081	8	.074	9	.077	6
430			...	-.004	1	-.031	6	-.012	7	-.081	8	-.071	7	-.077	6	-.074	9

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

Mar 24, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[..	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
431	M44	1	...	0	1	.019	6	-.002	1	.034	7	.115	8	.098	7	.068	8
432			...	0	1	.013	1	-.007	7	-.115	8	-.034	7	-.068	8	-.098	7
433		2	...	0	1	.018	6	-.002	1	.046	7	.105	8	.093	7	.071	8
434			...	0	1	.013	1	-.008	7	-.105	8	-.046	7	-.071	8	-.093	7
435		3	...	-.002	1	.017	6	-.002	1	.058	7	.095	8	.087	7	.073	8
436			...	-.002	1	.013	1	-.009	7	-.095	8	-.058	7	-.073	8	-.087	7
437		4	...	-.003	1	.017	8	-.002	8	.068	7	.084	8	.081	7	.075	8
438			...	-.003	1	.013	1	-.01	7	-.084	8	-.068	7	-.075	8	-.081	7
439		5	...	-.004	1	.018	8	-.001	8	.078	6	.073	9	.074	9	.076	6
440			...	-.004	1	.013	1	-.011	7	-.073	9	-.078	6	-.076	6	-.074	9
441	M45	1	...	.017	1	.036	6	.011	9	-.176	9	.28	6	.104	6	-.034	1
442			...	.017	2	-.003	9	-.023	6	-.28	6	.176	9	.034	1	-.104	6
443		2	...	.013	1	.032	6	.006	9	-.145	1	.184	6	.107	7	-.027	1
444			...	.013	2	.001	9	-.019	6	-.184	6	.145	1	.027	1	-.107	7
445		3	...	.008	1	.027	6	.002	9	-.098	7	.171	8	.116	7	.014	8
446			...	.008	2	.005	9	-.015	6	-.171	8	.098	7	-.014	8	-.116	7
447		4	...	.004	1	.023	6	-.002	9	-.026	7	.149	8	.113	7	.047	8
448			...	.004	2	.01	9	-.01	6	-.149	8	.026	7	-.047	8	-.113	7
449		5	...	0	1	.019	6	-.002	1	.034	7	.115	8	.098	7	.068	8
450			...	0	1	.013	1	-.007	7	-.115	8	-.034	7	-.068	8	-.098	7
451	M46	1	...	.062	6	.068	1	.1	8	-.439	9	.511	1	3.805	7	.004	1
452			...	-.003	9	.067	8	-.131	7	-.511	1	.439	9	-.004	1	-3.805	7
453		2	...	.062	6	.067	1	.099	8	-.407	9	.479	1	3.743	7	.004	1
454			...	-.003	9	.067	8	-.131	7	-.479	1	.407	9	-.004	1	-3.743	7
455		3	...	.062	6	.067	1	.099	8	-.375	9	.447	1	3.681	7	.004	1
456			...	-.003	9	.067	8	-.131	7	-.447	1	.375	9	-.004	1	-3.681	7
457		4	...	.062	6	.067	1	.099	8	-.343	9	.415	1	3.619	7	.004	1
458			...	-.003	9	.066	8	-.131	7	-.415	1	.343	9	-.004	1	-3.619	7
459		5	...	.062	6	.066	1	.099	8	-.312	9	.384	1	3.557	7	.004	1
460			...	-.003	9	.066	8	-.13	7	-.384	1	.312	9	-.004	1	-3.557	7
461	M47	1	...	.073	6	.066	1	.058	8	-.404	9	.461	1	3.557	7	.004	1
462			...	-.03	9	.066	8	-.145	7	-.461	1	.404	9	-.004	1	-3.557	7
463		2	...	.073	6	.066	1	.058	8	-.373	9	.429	1	3.488	7	.004	1
464			...	-.03	9	.066	8	-.145	7	-.429	1	.373	9	-.004	1	-3.488	7
465		3	...	.073	6	.066	1	.058	8	-.342	9	.398	1	3.425	6	.004	1
466			...	-.03	9	.065	8	-.144	7	-.398	1	.342	9	-.004	1	-3.425	6
467		4	...	.073	6	.065	1	.058	8	-.311	9	.367	1	3.429	6	.004	1
468			...	-.03	9	.065	8	-.144	7	-.367	1	.311	9	-.004	1	-3.429	6
469		5	...	.073	6	.065	1	.058	8	-.28	9	.336	1	3.433	6	.004	1
470			...	-.03	9	.065	8	-.144	7	-.336	1	.28	9	-.004	1	-3.433	6
471	M48	1	...	.065	6	.065	1	.002	8	-.281	9	.306	1	3.433	6	.004	1
472			...	-.049	9	.065	8	-.12	7	-.306	1	.281	9	-.004	1	-3.433	6
473		2	...	.065	6	.065	1	.001	8	-.25	9	.275	1	3.401	6	.004	1
474			...	-.049	9	.064	8	-.119	7	-.275	1	.25	9	-.004	1	-3.401	6
475		3	...	.065	6	.064	1	.001	8	-.219	9	.245	1	3.37	6	.003	1
476			...	-.049	9	.064	8	-.119	7	-.245	1	.219	9	-.003	1	-3.37	6
477		4	...	.065	6	.064	1	.001	8	-.189	9	.214	1	3.339	6	.003	1
478			...	-.049	9	.064	8	-.119	7	-.214	1	.189	9	-.003	1	-3.339	6
479		5	...	.065	6	.064	1	0	8	-.158	9	.184	1	3.307	6	.003	1
480			...	-.049	9	.063	8	-.119	7	-.184	1	.158	9	-.003	1	-3.307	6
481	M49	1	...	.054	6	.064	1	0	1	-.133	7	.142	8	3.307	6	.003	1
482			...	-.054	7	.063	8	-.097	6	-.142	8	.133	7	-.003	1	-3.307	6
483		2	...	.053	6	.06	1	0	1	.174	7	-.164	8	2.831	6	.003	1
484			...	-.053	7	.06	8	-.095	6	.164	8	-.174	7	-.003	1	-2.831	6
485		3	...	.052	6	.057	1	0	1	.464	7	-.453	8	2.363	6	.003	1
486			...	-.052	7	.056	8	-.093	6	.453	8	-.464	7	-.003	1	-2.363	6
487		4	...	.051	6	.053	1	0	1	.736	7	-.724	8	2.196	8	.003	1

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 24, 2006
4:32 PM
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
488			...	-.051	7	.053	8	-.092	6	.724	8	-.736	7	-.003	1	-2.196	8
489		5	...	.051	6	.05	1	0	1	.992	7	-.978	8	2.027	8	.002	1
490			...	-.051	7	.049	8	-.09	6	.978	8	-.992	7	-.002	1	-2.027	8
491	M50	1	...	0	1	.015	8	.067	8	.04	8	.089	7	.047	8	.122	7
492			...	-.011	8	.011	7	0	1	-.089	7	-.04	8	-.122	7	-.047	8
493		2	...	0	1	.015	8	.067	8	.046	8	.084	7	.075	8	.101	7
494			...	-.011	8	.011	7	0	1	-.084	7	-.046	8	-.101	7	-.075	8
495		3	...	0	1	.015	8	.066	8	.052	8	.079	7	.102	8	.079	7
496			...	-.011	8	.011	7	0	1	-.079	7	-.052	8	-.079	7	-.102	8
497		4	...	0	1	.014	8	.066	8	.058	8	.075	7	.13	8	.057	7
498			...	-.011	8	.01	7	0	1	-.075	7	-.058	8	-.057	7	-.13	8
499		5	...	0	1	.014	8	.066	8	.064	8	.071	7	.158	8	.035	7
500			...	-.011	8	.01	7	0	1	-.071	7	-.064	8	-.035	7	-.158	8
501	M51	1	...	0	1	.014	8	.05	9	.024	8	.078	7	.158	8	.035	7
502			...	-.026	8	.01	7	0	1	-.078	7	-.024	8	-.035	7	-.158	8
503		2	...	0	1	.014	8	.05	9	.03	8	.074	7	.177	8	.018	7
504			...	-.026	8	.01	7	0	1	-.074	7	-.03	8	-.018	7	-.177	8
505		3	...	0	1	.013	8	.05	9	.036	8	.07	7	.196	8	0	7
506			...	-.026	8	.009	7	0	1	-.07	7	-.036	8	0	7	-.196	8
507		4	...	0	1	.013	8	.05	9	.041	8	.067	7	.215	8	0	1
508			...	-.026	8	.009	7	0	1	-.067	7	-.041	8	0	1	-.215	8
509		5	...	0	1	.013	8	.05	9	.046	8	.063	7	.234	8	0	1
510			...	-.026	8	.009	7	0	1	-.063	7	-.046	8	0	1	-.234	8
511	M52	1	...	.008	6	.003	1	.003	8	-.003	8	.058	1	.234	8	0	1
512			...	-.009	9	-.029	8	-.007	7	-.058	1	.003	8	0	1	-.234	8
513		2	...	.008	6	.002	1	.002	8	-.015	8	.06	7	.235	8	0	1
514			...	-.009	9	-.03	8	-.007	7	-.06	7	.015	8	0	1	-.235	8
515		3	...	.008	6	.002	1	.002	8	-.028	8	.07	7	.236	8	0	1
516			...	-.008	9	-.03	8	-.007	7	-.07	7	.028	8	0	1	-.236	8
517		4	...	.008	6	.002	1	.002	8	-.038	6	.081	9	.237	8	0	1
518			...	-.008	9	-.03	8	-.007	7	-.081	9	.038	6	0	1	-.237	8
519		5	...	.008	6	.001	1	.002	8	-.048	6	.093	9	.238	8	0	1
520			...	-.008	9	-.031	8	-.006	7	-.093	9	.048	6	0	1	-.238	8
521	M53	1	...	.124	8	.141	6	.005	7	-.039	7	6.301	8	.115	7	.14	8
522			...	.016	1	-.06	9	-.006	8	-6.3...	8	.039	7	-.14	8	-.115	7
523		2	...	.124	8	.141	6	.005	7	.016	7	6.325	8	.117	7	.142	8
524			...	.016	1	-.06	9	-.005	8	-6.3...	8	-.016	7	-.142	8	-.117	7
525		3	...	.124	8	.141	6	.005	7	.072	7	6.349	8	.119	7	.145	8
526			...	.015	1	-.06	9	-.005	8	-6.3...	8	-.072	7	-.145	8	-.119	7
527		4	...	.123	8	.14	6	.005	7	.127	7	6.372	8	.121	7	.147	8
528			...	.015	1	-.06	9	-.005	8	-6.3...	8	-.127	7	-.147	8	-.121	7
529		5	...	.123	8	.14	6	.005	7	.183	7	6.396	8	.123	7	.149	8
530			...	.015	1	-.06	9	-.005	8	-6.3...	8	-.183	7	-.149	8	-.123	7
531	M54	1	...	.122	8	.148	6	.005	7	.183	7	6.396	8	.209	7	.224	8
532			...	-.012	7	.022	1	-.005	8	-6.3...	8	-.183	7	-.224	8	-.209	7
533		2	...	.121	8	.148	6	.005	7	.242	7	6.368	8	.211	7	.226	8
534			...	-.012	7	.022	1	-.005	8	-6.3...	8	-.242	7	-.226	8	-.211	7
535		3	...	.121	8	.148	6	.004	7	.3	7	6.339	8	.213	7	.228	8
536			...	-.012	7	.022	1	-.005	8	-6.3...	8	-.3	7	-.228	8	-.213	7
537		4	...	.121	8	.147	6	.004	7	.358	7	6.311	8	.214	7	.229	8
538			...	-.012	7	.021	1	-.004	8	-6.3...	8	-.358	7	-.229	8	-.214	7
539		5	...	.121	8	.147	6	.004	7	.417	7	6.283	8	.216	7	.231	8
540			...	-.012	7	.021	1	-.004	8	-6.2...	8	-.417	7	-.231	8	-.216	7
541	M55	1	...	.087	8	.182	8	.004	7	.417	7	6.283	8	.245	7	.245	8
542			...	-.047	7	.029	1	-.004	8	-6.2...	8	-.417	7	-.245	8	-.245	7
543		2	...	.087	8	.182	8	.004	7	.462	7	6.211	8	.246	7	.247	8
544			...	-.047	7	.029	1	-.004	8	-6.2...	8	-.462	7	-.247	8	-.246	7

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

Mar 24, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	lc	y Shear[...	lc	z Shear[k...	lc	y-T...	lc	y-Bot[ksi]	lc	z-Top[ksi]	lc	z-Bot[ksi]	lc
545		3	...	.087	8	.182	8	.004	7	.508	7	6.139	8	.248	7	.249	8
546			...	-.047	7	.028	1	-.004	8	-6.1...	8	-.508	7	-.249	8	-.248	7
547		4	...	.087	8	.182	8	.004	7	.553	7	6.067	8	.249	7	.25	8
548			...	-.047	7	.028	1	-.004	8	-6.0...	8	-.553	7	-.25	8	-.249	7
549		5	...	.086	8	.181	8	.003	7	.598	7	5.996	8	.25	7	.252	8
550			...	-.047	7	.028	1	-.004	8	-5.9...	8	-.598	7	-.252	8	-.25	7
551	M56	1	...	-.021	8	-.052	1	.079	7	-.756	1	1.493	6	2.146	6	.412	1
552			...	-.092	1	-.07	8	.06	8	-1.4...	6	.756	1	-.412	1	-2.146	6
553		2	...	-.021	8	-.053	1	.079	7	-.775	1	1.519	6	2.173	6	.389	1
554			...	-.092	1	-.07	8	.06	8	-1.5...	6	.775	1	-.389	1	-2.173	6
555		3	...	-.021	8	-.053	1	.079	7	-.795	1	1.545	6	2.199	6	.366	1
556			...	-.092	1	-.071	8	.06	8	-1.5...	6	.795	1	-.366	1	-2.199	6
557		4	...	-.021	8	-.053	1	.079	7	-.815	1	1.571	6	2.225	6	.343	1
558			...	-.092	1	-.071	8	.06	8	-1.5...	6	.815	1	-.343	1	-2.225	6
559		5	...	-.021	8	-.053	1	.078	7	-.834	1	1.597	6	2.251	6	.32	1
560			...	-.092	1	-.071	8	.06	8	-1.5...	6	.834	1	-.32	1	-2.251	6
561	M57	1	...	0	8	-.082	9	.125	1	-.552	1	1.784	6	1.938	6	.429	1
562			...	-.062	1	-.097	1	.052	8	-1.7...	6	.552	1	-.429	1	-1.938	6
563		2	...	0	8	-.082	9	.125	1	-.589	1	1.819	6	1.971	7	.382	1
564			...	-.062	1	-.097	1	.052	8	-1.8...	6	.589	1	-.382	1	-1.971	7
565		3	...	0	8	-.083	9	.125	1	-.625	1	1.854	6	2.009	7	.335	1
566			...	-.062	1	-.097	1	.052	8	-1.8...	6	.625	1	-.335	1	-2.009	7
567		4	...	0	8	-.083	9	.125	1	-.662	1	1.889	6	2.047	7	.288	1
568			...	-.062	1	-.098	1	.052	8	-1.8...	6	.662	1	-.288	1	-2.047	7
569		5	...	0	8	-.083	9	.125	1	-.699	1	1.925	6	2.086	7	.24	1
570			...	-.062	1	-.098	1	.052	8	-1.9...	6	.699	1	-.24	1	-2.086	7
571	M58	1	...	.02	8	-.089	8	.15	1	-.327	1	1.648	6	2.111	7	.137	1
572			...	-.016	1	-.131	1	.032	8	-1.6...	6	.327	1	-.137	1	-2.111	7
573		2	...	.02	8	-.089	8	.15	1	-.377	1	1.686	6	2.148	7	.081	1
574			...	-.016	1	-.132	1	.032	8	-1.6...	6	.377	1	-.081	1	-2.148	7
575		3	...	.02	8	-.089	8	.15	1	-.427	1	1.724	6	2.186	7	.024	1
576			...	-.017	1	-.132	1	.032	8	-1.7...	6	.427	1	-.024	1	-2.186	7
577		4	...	.02	8	-.09	8	.15	1	-.477	1	1.762	6	2.223	7	-.033	1
578			...	-.017	1	-.132	1	.032	8	-1.7...	6	.477	1	.033	1	-2.223	7
579		5	...	.02	8	-.09	8	.15	1	-.528	1	1.8	6	2.26	7	-.09	1
580			...	-.017	1	-.132	1	.032	8	-1.8	6	.528	1	.09	1	-2.26	7
581	M59	1	...	-.018	9	-.022	8	-.027	9	-.363	1	1.121	6	-1.073	1	2.607	6
582			...	-.052	6	-.071	1	-.142	1	-1.1...	6	.363	1	-2.607	6	1.073	1
583		2	...	-.018	9	-.022	8	-.027	9	-.39	1	1.131	6	-1.127	1	2.627	6
584			...	-.052	6	-.072	1	-.142	1	-1.1...	6	.39	1	-2.627	6	1.127	1
585		3	...	-.018	9	-.022	8	-.028	9	-.417	1	1.141	6	-1.18	1	2.647	6
586			...	-.052	6	-.072	1	-.142	1	-1.1...	6	.417	1	-2.647	6	1.18	1
587		4	...	-.018	9	-.023	8	-.028	9	-.444	1	1.151	6	-1.234	1	2.667	6
588			...	-.052	6	-.072	1	-.142	1	-1.1...	6	.444	1	-2.667	6	1.234	1
589		5	...	-.018	9	-.023	8	-.028	9	-.472	1	1.162	6	-1.288	1	2.687	6
590			...	-.052	6	-.072	1	-.142	1	-1.1...	6	.472	1	-2.687	6	1.288	1
591	M60	1	...	-.025	9	.001	6	.008	7	.092	9	.468	6	-1.427	1	2.952	6
592			...	-.066	1	-.037	1	-.102	1	-.468	6	-.092	9	-2.952	6	1.427	1
593		2	...	-.026	9	0	6	.008	7	.086	9	.467	6	-1.465	1	2.952	6
594			...	-.066	1	-.037	1	-.102	1	-.467	6	-.086	9	-2.952	6	1.465	1
595		3	...	-.026	9	0	6	.007	7	.079	9	.467	6	-1.504	1	2.952	6
596			...	-.066	1	-.037	1	-.102	1	-.467	6	-.079	9	-2.952	6	1.504	1
597		4	...	-.026	9	0	6	.007	7	.073	9	.467	6	-1.542	1	2.953	6
598			...	-.066	1	-.038	1	-.102	1	-.467	6	-.073	9	-2.953	6	1.542	1
599		5	...	-.026	9	0	6	.007	7	.066	9	.467	6	-1.581	1	2.953	6
600			...	-.066	1	-.038	1	-.102	1	-.467	6	-.066	9	-2.953	6	1.581	1
601	M61	1	...	-.026	9	.009	6	.06	7	.73	8	-.358	1	-1.591	1	3.015	6

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 24, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
602			...	-.084	1	-.011	9	-.028	1	.358	1	-.73	8	-3.015	6	1.591	1
603		2	...	-.026	9	.008	6	.06	7	.73	8	-.358	1	-1.595	9	2.993	6
604			...	-.084	1	-.011	9	-.028	1	.358	1	-.73	8	-2.993	6	1.595	9
605		3	...	-.027	9	.008	6	.059	7	.729	8	-.357	1	-1.59	9	2.971	6
606			...	-.084	1	-.011	9	-.028	1	.357	1	-.729	8	-2.971	6	1.59	9
607		4	...	-.027	9	.008	6	.059	7	.729	8	-.356	1	-1.584	9	2.949	6
608			...	-.084	1	-.011	9	-.028	1	.356	1	-.729	8	-2.949	6	1.584	9
609		5	...	-.027	9	.007	6	.059	7	.728	8	-.355	1	-1.578	9	2.927	6
610			...	-.085	1	-.011	9	-.028	1	.355	1	-.728	8	-2.927	6	1.578	9
611	M62	1	...	.002	6	-.026	7	.078	8	-.377	8	.432	7	1.359	9	.001	1
612			...	-.002	7	-.03	8	0	1	-.432	7	.377	8	-.001	1	-1.359	9
613		2	...	.003	6	-.03	7	.079	8	-.519	6	.556	9	1.702	8	.001	1
614			...	-.003	7	-.034	8	0	1	-.556	9	.519	6	-.001	1	-1.702	8
615		3	...	.004	6	-.033	7	.081	8	-.677	6	.697	9	2.059	8	.001	1
616			...	-.004	7	-.037	8	0	1	-.697	9	.677	6	-.001	1	-2.059	8
617		4	...	.005	6	-.037	7	.083	8	-.845	1	.853	9	2.423	8	.002	1
618			...	-.005	7	-.041	8	0	1	-.853	9	.845	1	-.002	1	-2.423	8
619		5	...	.005	6	-.04	7	.085	8	-1.0...	1	1.041	8	2.795	8	.002	1
620			...	-.005	7	-.044	8	0	1	-1.0...	8	1.023	1	-.002	1	-2.795	8

Envelope Member Section Torsion

	Member	Sec		Torque[l]...	Ic	Torsion Shear[ksi]	Ic	y-y Warp...	Ic	z-z Warp Shear[ksi]	Ic	z-Top W...	Ic	z-Bot Wa...	Ic
1	M1	1	max	9.788	8	.051	8	NC		NC		NC		NC	
2			min	-7.047	7	-.036	7	NC		NC		NC		NC	
3		2	max	9.788	8	.051	8	NC		NC		NC		NC	
4			min	-7.047	7	-.036	7	NC		NC		NC		NC	
5		3	max	9.788	8	.051	8	NC		NC		NC		NC	
6			min	-7.047	7	-.036	7	NC		NC		NC		NC	
7		4	max	9.788	8	.051	8	NC		NC		NC		NC	
8			min	-7.047	7	-.036	7	NC		NC		NC		NC	
9		5	max	9.788	8	.051	8	NC		NC		NC		NC	
10			min	-7.047	7	-.036	7	NC		NC		NC		NC	
11	M2	1	max	9.788	8	.041	8	NC		NC		NC		NC	
12			min	-7.047	7	-.029	7	NC		NC		NC		NC	
13		2	max	9.788	8	.041	8	NC		NC		NC		NC	
14			min	-7.047	7	-.029	7	NC		NC		NC		NC	
15		3	max	9.788	8	.041	8	NC		NC		NC		NC	
16			min	-7.047	7	-.029	7	NC		NC		NC		NC	
17		4	max	9.788	8	.041	8	NC		NC		NC		NC	
18			min	-7.047	7	-.029	7	NC		NC		NC		NC	
19		5	max	9.788	8	.041	8	NC		NC		NC		NC	
20			min	-7.047	7	-.029	7	NC		NC		NC		NC	
21	M3	1	max	9.713	1	.04	1	NC		NC		NC		NC	
22			min	5.892	9	.024	9	NC		NC		NC		NC	
23		2	max	9.713	1	.04	1	NC		NC		NC		NC	
24			min	5.892	9	.024	9	NC		NC		NC		NC	
25		3	max	9.713	1	.04	1	NC		NC		NC		NC	
26			min	5.892	9	.024	9	NC		NC		NC		NC	
27		4	max	9.713	1	.04	1	NC		NC		NC		NC	
28			min	5.892	9	.024	9	NC		NC		NC		NC	
29		5	max	9.713	1	.04	1	NC		NC		NC		NC	
30			min	5.892	9	.024	9	NC		NC		NC		NC	
31	M4	1	max	9.713	1	.04	1	NC		NC		NC		NC	
32			min	5.892	9	.024	9	NC		NC		NC		NC	
33		2	max	9.713	1	.04	1	NC		NC		NC		NC	
34			min	5.892	9	.024	9	NC		NC		NC		NC	

Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
35		3	max	9.713	1	.04	1	NC		NC		NC		NC	
36			min	5.892	9	.024	9	NC		NC		NC		NC	
37		4	max	9.713	1	.04	1	NC		NC		NC		NC	
38			min	5.892	9	.024	9	NC		NC		NC		NC	
39		5	max	9.713	1	.04	1	NC		NC		NC		NC	
40			min	5.892	9	.024	9	NC		NC		NC		NC	
41	M5	1	max	65.102	7	.057	7	NC		NC		NC		NC	
42			min	.863	1	0	1	NC		NC		NC		NC	
43		2	max	65.102	7	.057	7	NC		NC		NC		NC	
44			min	.863	1	0	1	NC		NC		NC		NC	
45		3	max	65.102	7	.057	7	NC		NC		NC		NC	
46			min	.863	1	0	1	NC		NC		NC		NC	
47		4	max	65.102	7	.057	7	NC		NC		NC		NC	
48			min	.863	1	0	1	NC		NC		NC		NC	
49		5	max	65.102	7	.057	7	NC		NC		NC		NC	
50			min	.863	1	0	1	NC		NC		NC		NC	
51	M6	1	max	65.102	7	.057	7	NC		NC		NC		NC	
52			min	.863	1	0	1	NC		NC		NC		NC	
53		2	max	65.102	7	.057	7	NC		NC		NC		NC	
54			min	.863	1	0	1	NC		NC		NC		NC	
55		3	max	65.102	7	.057	7	NC		NC		NC		NC	
56			min	.863	1	0	1	NC		NC		NC		NC	
57		4	max	65.102	7	.057	7	NC		NC		NC		NC	
58			min	.863	1	0	1	NC		NC		NC		NC	
59		5	max	65.102	7	.057	7	NC		NC		NC		NC	
60			min	.863	1	0	1	NC		NC		NC		NC	
61	M7	1	max	-19.661	7	-.186	7	NC		NC		NC		NC	
62			min	-20.094	1	-.19	1	NC		NC		NC		NC	
63		2	max	-19.661	7	-.186	7	NC		NC		NC		NC	
64			min	-20.094	1	-.19	1	NC		NC		NC		NC	
65		3	max	-19.661	7	-.186	7	NC		NC		NC		NC	
66			min	-20.094	1	-.19	1	NC		NC		NC		NC	
67		4	max	.207	1	.002	1	NC		NC		NC		NC	
68			min	.041	7	0	7	NC		NC		NC		NC	
69		5	max	.207	1	.002	1	NC		NC		NC		NC	
70			min	.041	7	0	7	NC		NC		NC		NC	
71	M8	1	max	.207	1	.002	1	NC		NC		NC		NC	
72			min	.041	7	0	7	NC		NC		NC		NC	
73		2	max	.207	1	.002	1	NC		NC		NC		NC	
74			min	.041	7	0	7	NC		NC		NC		NC	
75		3	max	.207	1	.002	1	NC		NC		NC		NC	
76			min	.041	7	0	7	NC		NC		NC		NC	
77		4	max	.207	1	.002	1	NC		NC		NC		NC	
78			min	.041	7	0	7	NC		NC		NC		NC	
79		5	max	.207	1	.002	1	NC		NC		NC		NC	
80			min	.041	7	0	7	NC		NC		NC		NC	
81	M9	1	max	25.554	7	.022	7	NC		NC		NC		NC	
82			min	-159.847	1	-.14	1	NC		NC		NC		NC	
83		2	max	25.554	7	.022	7	NC		NC		NC		NC	
84			min	-159.847	1	-.14	1	NC		NC		NC		NC	
85		3	max	25.554	7	.022	7	NC		NC		NC		NC	
86			min	-159.847	1	-.14	1	NC		NC		NC		NC	
87		4	max	25.554	7	.022	7	NC		NC		NC		NC	
88			min	-159.847	1	-.14	1	NC		NC		NC		NC	
89		5	max	25.554	7	.022	7	NC		NC		NC		NC	
90			min	-159.847	1	-.14	1	NC		NC		NC		NC	
91	M10	1	max	25.554	7	.022	7	NC		NC		NC		NC	

Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
92			min	-159.847	1	-.14	1	NC		NC		NC		NC	
93		2	max	25.554	7	.022	7	NC		NC		NC		NC	
94			min	-159.847	1	-.14	1	NC		NC		NC		NC	
95		3	max	25.554	7	.022	7	NC		NC		NC		NC	
96			min	-159.847	1	-.14	1	NC		NC		NC		NC	
97		4	max	25.554	7	.022	7	NC		NC		NC		NC	
98			min	-159.847	1	-.14	1	NC		NC		NC		NC	
99		5	max	25.554	7	.022	7	NC		NC		NC		NC	
100			min	-159.847	1	-.14	1	NC		NC		NC		NC	
101	M11	1	max	77.526	8	.065	8	NC		NC		NC		NC	
102			min	50.057	1	.042	1	NC		NC		NC		NC	
103		2	max	77.526	8	.065	8	NC		NC		NC		NC	
104			min	50.057	1	.042	1	NC		NC		NC		NC	
105		3	max	77.526	8	.065	8	NC		NC		NC		NC	
106			min	50.057	1	.042	1	NC		NC		NC		NC	
107		4	max	77.526	8	.065	8	NC		NC		NC		NC	
108			min	50.057	1	.042	1	NC		NC		NC		NC	
109		5	max	77.526	8	.065	8	NC		NC		NC		NC	
110			min	50.057	1	.042	1	NC		NC		NC		NC	
111	M12	1	max	9.713	1	.04	1	NC		NC		NC		NC	
112			min	5.892	9	.024	9	NC		NC		NC		NC	
113		2	max	9.713	1	.04	1	NC		NC		NC		NC	
114			min	5.892	9	.024	9	NC		NC		NC		NC	
115		3	max	9.713	1	.04	1	NC		NC		NC		NC	
116			min	5.892	9	.024	9	NC		NC		NC		NC	
117		4	max	9.713	1	.04	1	NC		NC		NC		NC	
118			min	5.892	9	.024	9	NC		NC		NC		NC	
119		5	max	9.713	1	.04	1	NC		NC		NC		NC	
120			min	5.892	9	.024	9	NC		NC		NC		NC	
121	M13	1	max	65.102	7	.057	7	NC		NC		NC		NC	
122			min	.863	1	0	1	NC		NC		NC		NC	
123		2	max	65.102	7	.057	7	NC		NC		NC		NC	
124			min	.863	1	0	1	NC		NC		NC		NC	
125		3	max	65.102	7	.057	7	NC		NC		NC		NC	
126			min	.863	1	0	1	NC		NC		NC		NC	
127		4	max	65.102	7	.057	7	NC		NC		NC		NC	
128			min	.863	1	0	1	NC		NC		NC		NC	
129		5	max	65.102	7	.057	7	NC		NC		NC		NC	
130			min	.863	1	0	1	NC		NC		NC		NC	
131	M14	1	max	25.554	7	.022	7	NC		NC		NC		NC	
132			min	-159.847	1	-.14	1	NC		NC		NC		NC	
133		2	max	25.554	7	.022	7	NC		NC		NC		NC	
134			min	-159.847	1	-.14	1	NC		NC		NC		NC	
135		3	max	25.554	7	.022	7	NC		NC		NC		NC	
136			min	-159.847	1	-.14	1	NC		NC		NC		NC	
137		4	max	25.554	7	.022	7	NC		NC		NC		NC	
138			min	-159.847	1	-.14	1	NC		NC		NC		NC	
139		5	max	25.554	7	.022	7	NC		NC		NC		NC	
140			min	-159.847	1	-.14	1	NC		NC		NC		NC	
141	M15	1	max	25.554	7	.022	7	NC		NC		NC		NC	
142			min	-159.847	1	-.14	1	NC		NC		NC		NC	
143		2	max	25.554	7	.022	7	NC		NC		NC		NC	
144			min	-159.847	1	-.14	1	NC		NC		NC		NC	
145		3	max	25.554	7	.022	7	NC		NC		NC		NC	
146			min	-159.847	1	-.14	1	NC		NC		NC		NC	
147		4	max	25.554	7	.022	7	NC		NC		NC		NC	
148			min	-159.847	1	-.14	1	NC		NC		NC		NC	

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

Mar 24, 2006
4:32 PM
Checked By:_____

Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
149		5	max	25.554	7	.022	7	NC		NC		NC		NC	
150			min	-159.847	1	-.14	1	NC		NC		NC		NC	
151	M16	1	max	53.44	8	.506	8	NC		NC		NC		NC	
152			min	31.057	1	.294	1	NC		NC		NC		NC	
153		2	max	53.44	8	.506	8	NC		NC		NC		NC	
154			min	31.057	1	.294	1	NC		NC		NC		NC	
155		3	max	53.44	8	.506	8	NC		NC		NC		NC	
156			min	31.057	1	.294	1	NC		NC		NC		NC	
157		4	max	53.44	8	.506	8	NC		NC		NC		NC	
158			min	31.057	1	.294	1	NC		NC		NC		NC	
159		5	max	53.44	8	.506	8	NC		NC		NC		NC	
160			min	31.057	1	.294	1	NC		NC		NC		NC	
161	M17	1	max	77.526	8	.734	8	NC		NC		NC		NC	
162			min	50.057	1	.474	1	NC		NC		NC		NC	
163		2	max	77.526	8	.734	8	NC		NC		NC		NC	
164			min	50.057	1	.474	1	NC		NC		NC		NC	
165		3	max	77.526	8	.734	8	NC		NC		NC		NC	
166			min	50.057	1	.474	1	NC		NC		NC		NC	
167		4	max	77.526	8	.734	8	NC		NC		NC		NC	
168			min	50.057	1	.474	1	NC		NC		NC		NC	
169		5	max	77.526	8	.734	8	NC		NC		NC		NC	
170			min	50.057	1	.474	1	NC		NC		NC		NC	
171	M18	1	max	1.88	9	.018	9	NC		NC		NC		NC	
172			min	-3.051	1	-.029	1	NC		NC		NC		NC	
173		2	max	1.88	9	.018	9	NC		NC		NC		NC	
174			min	-3.051	1	-.029	1	NC		NC		NC		NC	
175		3	max	1.88	9	.018	9	NC		NC		NC		NC	
176			min	-3.051	1	-.029	1	NC		NC		NC		NC	
177		4	max	1.88	9	.018	9	NC		NC		NC		NC	
178			min	-3.051	1	-.029	1	NC		NC		NC		NC	
179		5	max	1.88	9	.018	9	NC		NC		NC		NC	
180			min	-3.051	1	-.029	1	NC		NC		NC		NC	
181	M19	1	max	77.526	8	.734	8	NC		NC		NC		NC	
182			min	50.057	1	.474	1	NC		NC		NC		NC	
183		2	max	77.526	8	.734	8	NC		NC		NC		NC	
184			min	50.057	1	.474	1	NC		NC		NC		NC	
185		3	max	77.526	8	.734	8	NC		NC		NC		NC	
186			min	50.057	1	.474	1	NC		NC		NC		NC	
187		4	max	77.526	8	.734	8	NC		NC		NC		NC	
188			min	50.057	1	.474	1	NC		NC		NC		NC	
189		5	max	77.526	8	.734	8	NC		NC		NC		NC	
190			min	50.057	1	.474	1	NC		NC		NC		NC	
191	M20	1	max	77.526	8	.065	8	NC		NC		NC		NC	
192			min	50.057	1	.042	1	NC		NC		NC		NC	
193		2	max	77.526	8	.065	8	NC		NC		NC		NC	
194			min	50.057	1	.042	1	NC		NC		NC		NC	
195		3	max	77.526	8	.065	8	NC		NC		NC		NC	
196			min	50.057	1	.042	1	NC		NC		NC		NC	
197		4	max	77.526	8	.065	8	NC		NC		NC		NC	
198			min	50.057	1	.042	1	NC		NC		NC		NC	
199		5	max	77.526	8	.065	8	NC		NC		NC		NC	
200			min	50.057	1	.042	1	NC		NC		NC		NC	
201	M21	1	max	77.526	8	.065	8	NC		NC		NC		NC	
202			min	50.057	1	.042	1	NC		NC		NC		NC	
203		2	max	77.526	8	.065	8	NC		NC		NC		NC	
204			min	50.057	1	.042	1	NC		NC		NC		NC	
205		3	max	77.526	8	.065	8	NC		NC		NC		NC	

Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[L...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
206			min	50.057	1	.042	1	NC		NC		NC		NC	
207		4	max	77.526	8	.065	8	NC		NC		NC		NC	
208			min	50.057	1	.042	1	NC		NC		NC		NC	
209		5	max	77.526	8	.065	8	NC		NC		NC		NC	
210			min	50.057	1	.042	1	NC		NC		NC		NC	
211	M22	1	max	77.526	8	.065	8	NC		NC		NC		NC	
212			min	50.057	1	.042	1	NC		NC		NC		NC	
213		2	max	77.526	8	.065	8	NC		NC		NC		NC	
214			min	50.057	1	.042	1	NC		NC		NC		NC	
215		3	max	77.526	8	.065	8	NC		NC		NC		NC	
216			min	50.057	1	.042	1	NC		NC		NC		NC	
217		4	max	77.526	8	.065	8	NC		NC		NC		NC	
218			min	50.057	1	.042	1	NC		NC		NC		NC	
219		5	max	77.526	8	.065	8	NC		NC		NC		NC	
220			min	50.057	1	.042	1	NC		NC		NC		NC	
221	M23	1	max	77.526	8	.065	8	NC		NC		NC		NC	
222			min	50.057	1	.042	1	NC		NC		NC		NC	
223		2	max	77.526	8	.065	8	NC		NC		NC		NC	
224			min	50.057	1	.042	1	NC		NC		NC		NC	
225		3	max	77.526	8	.065	8	NC		NC		NC		NC	
226			min	50.057	1	.042	1	NC		NC		NC		NC	
227		4	max	77.526	8	.065	8	NC		NC		NC		NC	
228			min	50.057	1	.042	1	NC		NC		NC		NC	
229		5	max	77.526	8	.065	8	NC		NC		NC		NC	
230			min	50.057	1	.042	1	NC		NC		NC		NC	
231	M24	1	max	77.526	8	0	1	NC		NC		NC		NC	
232			min	50.057	1	0	1	NC		NC		NC		NC	
233		2	max	77.526	8	0	1	NC		NC		NC		NC	
234			min	50.057	1	0	1	NC		NC		NC		NC	
235		3	max	77.526	8	0	1	NC		NC		NC		NC	
236			min	50.057	1	0	1	NC		NC		NC		NC	
237		4	max	77.526	8	0	1	NC		NC		NC		NC	
238			min	50.057	1	0	1	NC		NC		NC		NC	
239		5	max	77.526	8	0	1	NC		NC		NC		NC	
240			min	50.057	1	0	1	NC		NC		NC		NC	
241	M25	1	max	77.526	8	.065	8	NC		NC		NC		NC	
242			min	50.057	1	.042	1	NC		NC		NC		NC	
243		2	max	77.526	8	.065	8	NC		NC		NC		NC	
244			min	50.057	1	.042	1	NC		NC		NC		NC	
245		3	max	77.526	8	.065	8	NC		NC		NC		NC	
246			min	50.057	1	.042	1	NC		NC		NC		NC	
247		4	max	77.526	8	.065	8	NC		NC		NC		NC	
248			min	50.057	1	.042	1	NC		NC		NC		NC	
249		5	max	77.526	8	.065	8	NC		NC		NC		NC	
250			min	50.057	1	.042	1	NC		NC		NC		NC	
251	M26	1	max	78.875	8	.066	8	NC		NC		NC		NC	
252			min	51.989	1	.044	1	NC		NC		NC		NC	
253		2	max	78.875	8	.066	8	NC		NC		NC		NC	
254			min	51.989	1	.044	1	NC		NC		NC		NC	
255		3	max	78.875	8	.066	8	NC		NC		NC		NC	
256			min	51.989	1	.044	1	NC		NC		NC		NC	
257		4	max	78.875	8	.066	8	NC		NC		NC		NC	
258			min	51.989	1	.044	1	NC		NC		NC		NC	
259		5	max	78.875	8	.066	8	NC		NC		NC		NC	
260			min	51.989	1	.044	1	NC		NC		NC		NC	
261	M27	1	max	74.78	8	.063	8	NC		NC		NC		NC	
262			min	50.861	1	.043	1	NC		NC		NC		NC	

Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
263		2	max	74.78	8	.063	8	NC		NC		NC		NC	
264			min	50.861	1	.043	1	NC		NC		NC		NC	
265		3	max	74.78	8	.063	8	NC		NC		NC		NC	
266			min	50.861	1	.043	1	NC		NC		NC		NC	
267		4	max	74.78	8	.063	8	NC		NC		NC		NC	
268			min	50.861	1	.043	1	NC		NC		NC		NC	
269		5	max	74.78	8	.063	8	NC		NC		NC		NC	
270			min	50.861	1	.043	1	NC		NC		NC		NC	
271	M28	1	max	62.057	8	.052	8	NC		NC		NC		NC	
272			min	43.297	1	.036	1	NC		NC		NC		NC	
273		2	max	62.057	8	.052	8	NC		NC		NC		NC	
274			min	43.297	1	.036	1	NC		NC		NC		NC	
275		3	max	62.057	8	.052	8	NC		NC		NC		NC	
276			min	43.297	1	.036	1	NC		NC		NC		NC	
277		4	max	62.057	8	.052	8	NC		NC		NC		NC	
278			min	43.297	1	.036	1	NC		NC		NC		NC	
279		5	max	62.057	8	.052	8	NC		NC		NC		NC	
280			min	43.297	1	.036	1	NC		NC		NC		NC	
281	M29	1	max	41.631	8	.035	8	NC		NC		NC		NC	
282			min	29.712	1	.025	1	NC		NC		NC		NC	
283		2	max	41.631	8	.035	8	NC		NC		NC		NC	
284			min	29.712	1	.025	1	NC		NC		NC		NC	
285		3	max	41.631	8	.035	8	NC		NC		NC		NC	
286			min	29.712	1	.025	1	NC		NC		NC		NC	
287		4	max	41.631	8	.035	8	NC		NC		NC		NC	
288			min	29.712	1	.025	1	NC		NC		NC		NC	
289		5	max	41.631	8	.035	8	NC		NC		NC		NC	
290			min	29.712	1	.025	1	NC		NC		NC		NC	
291	M30	1	max	15.118	8	.013	8	NC		NC		NC		NC	
292			min	11.068	1	.009	1	NC		NC		NC		NC	
293		2	max	15.118	8	.013	8	NC		NC		NC		NC	
294			min	11.068	1	.009	1	NC		NC		NC		NC	
295		3	max	15.118	8	.013	8	NC		NC		NC		NC	
296			min	11.068	1	.009	1	NC		NC		NC		NC	
297		4	max	15.118	8	.013	8	NC		NC		NC		NC	
298			min	11.068	1	.009	1	NC		NC		NC		NC	
299		5	max	15.118	8	.013	8	NC		NC		NC		NC	
300			min	11.068	1	.009	1	NC		NC		NC		NC	
301	M31	1	max	0	1	0	1	NC		NC		NC		NC	
302			min	0	1	0	1	NC		NC		NC		NC	
303		2	max	0	1	0	1	NC		NC		NC		NC	
304			min	0	1	0	1	NC		NC		NC		NC	
305		3	max	0	1	0	1	NC		NC		NC		NC	
306			min	0	1	0	1	NC		NC		NC		NC	
307		4	max	0	1	0	1	NC		NC		NC		NC	
308			min	0	1	0	1	NC		NC		NC		NC	
309		5	max	0	1	0	1	NC		NC		NC		NC	
310			min	0	1	0	1	NC		NC		NC		NC	
311	M32	1	max	.207	1	.002	1	NC		NC		NC		NC	
312			min	.041	7	0	7	NC		NC		NC		NC	
313		2	max	.207	1	.002	1	NC		NC		NC		NC	
314			min	.041	7	0	7	NC		NC		NC		NC	
315		3	max	.207	1	.002	1	NC		NC		NC		NC	
316			min	.041	7	0	7	NC		NC		NC		NC	
317		4	max	.207	1	.002	1	NC		NC		NC		NC	
318			min	.041	7	0	7	NC		NC		NC		NC	
319		5	max	.207	1	.002	1	NC		NC		NC		NC	

Company : **DMJM H&N**
Designer : **Kevin M. Jones**
Job Number : **145579-V-CA-005** **DBVS Off-Gas Treatment Duct Analysis**

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
320			min	.041	7	0	7	NC		NC		NC		NC	
321	M33	1	max	22.002	7	.114	7	NC		NC		NC		NC	
322			min	-21.324	8	-.11	8	NC		NC		NC		NC	
323		2	max	22.002	7	.114	7	NC		NC		NC		NC	
324			min	-21.324	8	-.11	8	NC		NC		NC		NC	
325		3	max	22.002	7	.114	7	NC		NC		NC		NC	
326			min	-21.324	8	-.11	8	NC		NC		NC		NC	
327		4	max	22.002	7	.114	7	NC		NC		NC		NC	
328			min	-21.324	8	-.11	8	NC		NC		NC		NC	
329		5	max	22.002	7	.114	7	NC		NC		NC		NC	
330			min	-21.324	8	-.11	8	NC		NC		NC		NC	
331	M34	1	max	.207	1	.002	1	NC		NC		NC		NC	
332			min	.041	7	0	7	NC		NC		NC		NC	
333		2	max	.207	1	.002	1	NC		NC		NC		NC	
334			min	.041	7	0	7	NC		NC		NC		NC	
335		3	max	.207	1	.002	1	NC		NC		NC		NC	
336			min	.041	7	0	7	NC		NC		NC		NC	
337		4	max	.207	1	.002	1	NC		NC		NC		NC	
338			min	.041	7	0	7	NC		NC		NC		NC	
339		5	max	.207	1	.002	1	NC		NC		NC		NC	
340			min	.041	7	0	7	NC		NC		NC		NC	
341	M35	1	max	.207	1	.002	1	NC		NC		NC		NC	
342			min	.041	7	0	7	NC		NC		NC		NC	
343		2	max	.207	1	.002	1	NC		NC		NC		NC	
344			min	.041	7	0	7	NC		NC		NC		NC	
345		3	max	.207	1	.002	1	NC		NC		NC		NC	
346			min	.041	7	0	7	NC		NC		NC		NC	
347		4	max	.207	1	.002	1	NC		NC		NC		NC	
348			min	.041	7	0	7	NC		NC		NC		NC	
349		5	max	.207	1	.002	1	NC		NC		NC		NC	
350			min	.041	7	0	7	NC		NC		NC		NC	
351	M36	1	max	.207	1	.002	1	NC		NC		NC		NC	
352			min	.041	7	0	7	NC		NC		NC		NC	
353		2	max	.207	1	.002	1	NC		NC		NC		NC	
354			min	.041	7	0	7	NC		NC		NC		NC	
355		3	max	.207	1	.002	1	NC		NC		NC		NC	
356			min	.041	7	0	7	NC		NC		NC		NC	
357		4	max	.207	1	.002	1	NC		NC		NC		NC	
358			min	.041	7	0	7	NC		NC		NC		NC	
359		5	max	.207	1	.002	1	NC		NC		NC		NC	
360			min	.041	7	0	7	NC		NC		NC		NC	
361	M37	1	max	9.788	8	.051	8	NC		NC		NC		NC	
362			min	-7.047	7	-.036	7	NC		NC		NC		NC	
363		2	max	9.788	8	.051	8	NC		NC		NC		NC	
364			min	-7.047	7	-.036	7	NC		NC		NC		NC	
365		3	max	9.788	8	.051	8	NC		NC		NC		NC	
366			min	-7.047	7	-.036	7	NC		NC		NC		NC	
367		4	max	9.788	8	.051	8	NC		NC		NC		NC	
368			min	-7.047	7	-.036	7	NC		NC		NC		NC	
369		5	max	9.788	8	.051	8	NC		NC		NC		NC	
370			min	-7.047	7	-.036	7	NC		NC		NC		NC	
371	M38	1	max	9.788	8	.051	8	NC		NC		NC		NC	
372			min	-7.047	7	-.036	7	NC		NC		NC		NC	
373		2	max	9.788	8	.051	8	NC		NC		NC		NC	
374			min	-7.047	7	-.036	7	NC		NC		NC		NC	
375		3	max	9.788	8	.051	8	NC		NC		NC		NC	
376			min	-7.047	7	-.036	7	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
377		4	max	9.788	8	.051	8	NC		NC		NC		NC	
378			min	-7.047	7	-.036	7	NC		NC		NC		NC	
379		5	max	9.788	8	.051	8	NC		NC		NC		NC	
380			min	-7.047	7	-.036	7	NC		NC		NC		NC	
381	M39	1	max	9.788	8	.051	8	NC		NC		NC		NC	
382			min	-7.047	7	-.036	7	NC		NC		NC		NC	
383		2	max	9.788	8	.051	8	NC		NC		NC		NC	
384			min	-7.047	7	-.036	7	NC		NC		NC		NC	
385		3	max	9.788	8	.051	8	NC		NC		NC		NC	
386			min	-7.047	7	-.036	7	NC		NC		NC		NC	
387		4	max	9.788	8	.051	8	NC		NC		NC		NC	
388			min	-7.047	7	-.036	7	NC		NC		NC		NC	
389		5	max	9.788	8	.051	8	NC		NC		NC		NC	
390			min	-7.047	7	-.036	7	NC		NC		NC		NC	
391	M40	1	max	9.788	8	.041	8	NC		NC		NC		NC	
392			min	-7.047	7	-.029	7	NC		NC		NC		NC	
393		2	max	9.788	8	.041	8	NC		NC		NC		NC	
394			min	-7.047	7	-.029	7	NC		NC		NC		NC	
395		3	max	9.788	8	.041	8	NC		NC		NC		NC	
396			min	-7.047	7	-.029	7	NC		NC		NC		NC	
397		4	max	9.788	8	.041	8	NC		NC		NC		NC	
398			min	-7.047	7	-.029	7	NC		NC		NC		NC	
399		5	max	9.788	8	.041	8	NC		NC		NC		NC	
400			min	-7.047	7	-.029	7	NC		NC		NC		NC	
401	M41	1	max	9.788	8	.041	8	NC		NC		NC		NC	
402			min	-7.047	7	-.029	7	NC		NC		NC		NC	
403		2	max	9.788	8	.041	8	NC		NC		NC		NC	
404			min	-7.047	7	-.029	7	NC		NC		NC		NC	
405		3	max	9.788	8	.041	8	NC		NC		NC		NC	
406			min	-7.047	7	-.029	7	NC		NC		NC		NC	
407		4	max	9.788	8	.041	8	NC		NC		NC		NC	
408			min	-7.047	7	-.029	7	NC		NC		NC		NC	
409		5	max	9.788	8	.041	8	NC		NC		NC		NC	
410			min	-7.047	7	-.029	7	NC		NC		NC		NC	
411	M42	1	max	9.788	8	.041	8	NC		NC		NC		NC	
412			min	-7.047	7	-.029	7	NC		NC		NC		NC	
413		2	max	9.788	8	.041	8	NC		NC		NC		NC	
414			min	-7.047	7	-.029	7	NC		NC		NC		NC	
415		3	max	9.788	8	.041	8	NC		NC		NC		NC	
416			min	-7.047	7	-.029	7	NC		NC		NC		NC	
417		4	max	9.788	8	.041	8	NC		NC		NC		NC	
418			min	-7.047	7	-.029	7	NC		NC		NC		NC	
419		5	max	9.788	8	.041	8	NC		NC		NC		NC	
420			min	-7.047	7	-.029	7	NC		NC		NC		NC	
421	M43	1	max	25.554	7	.022	7	NC		NC		NC		NC	
422			min	-159.847	1	-.14	1	NC		NC		NC		NC	
423		2	max	25.554	7	.022	7	NC		NC		NC		NC	
424			min	-159.847	1	-.14	1	NC		NC		NC		NC	
425		3	max	25.554	7	.022	7	NC		NC		NC		NC	
426			min	-159.847	1	-.14	1	NC		NC		NC		NC	
427		4	max	25.554	7	.022	7	NC		NC		NC		NC	
428			min	-159.847	1	-.14	1	NC		NC		NC		NC	
429		5	max	25.554	7	.022	7	NC		NC		NC		NC	
430			min	-159.847	1	-.14	1	NC		NC		NC		NC	
431	M44	1	max	65.102	7	.057	7	NC		NC		NC		NC	
432			min	.863	1	0	1	NC		NC		NC		NC	
433		2	max	65.102	7	.057	7	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
434			min	.863	1	0	1	NC		NC		NC		NC	
435		3	max	65.102	7	.057	7	NC		NC		NC		NC	
436			min	.863	1	0	1	NC		NC		NC		NC	
437		4	max	65.102	7	.057	7	NC		NC		NC		NC	
438			min	.863	1	0	1	NC		NC		NC		NC	
439		5	max	65.102	7	.057	7	NC		NC		NC		NC	
440			min	.863	1	0	1	NC		NC		NC		NC	
441	M45	1	max	65.102	7	.057	7	NC		NC		NC		NC	
442			min	.863	1	0	1	NC		NC		NC		NC	
443		2	max	65.102	7	.057	7	NC		NC		NC		NC	
444			min	.863	1	0	1	NC		NC		NC		NC	
445		3	max	65.102	7	.057	7	NC		NC		NC		NC	
446			min	.863	1	0	1	NC		NC		NC		NC	
447		4	max	65.102	7	.057	7	NC		NC		NC		NC	
448			min	.863	1	0	1	NC		NC		NC		NC	
449		5	max	65.102	7	.057	7	NC		NC		NC		NC	
450			min	.863	1	0	1	NC		NC		NC		NC	
451	M46	1	max	-13.576	1	-.129	1	NC		NC		NC		NC	
452			min	-14.513	8	-.137	8	NC		NC		NC		NC	
453		2	max	-13.576	1	-.129	1	NC		NC		NC		NC	
454			min	-14.513	8	-.137	8	NC		NC		NC		NC	
455		3	max	-13.576	1	-.129	1	NC		NC		NC		NC	
456			min	-14.513	8	-.137	8	NC		NC		NC		NC	
457		4	max	-13.576	1	-.129	1	NC		NC		NC		NC	
458			min	-14.513	8	-.137	8	NC		NC		NC		NC	
459		5	max	-13.576	1	-.129	1	NC		NC		NC		NC	
460			min	-14.513	8	-.137	8	NC		NC		NC		NC	
461	M47	1	max	-1.625	1	-.015	1	NC		NC		NC		NC	
462			min	-4.21	8	-.04	8	NC		NC		NC		NC	
463		2	max	-1.625	1	-.015	1	NC		NC		NC		NC	
464			min	-4.21	8	-.04	8	NC		NC		NC		NC	
465		3	max	-1.625	1	-.015	1	NC		NC		NC		NC	
466			min	-4.21	8	-.04	8	NC		NC		NC		NC	
467		4	max	-1.625	1	-.015	1	NC		NC		NC		NC	
468			min	-4.21	8	-.04	8	NC		NC		NC		NC	
469		5	max	-1.625	1	-.015	1	NC		NC		NC		NC	
470			min	-4.21	8	-.04	8	NC		NC		NC		NC	
471	M48	1	max	7.459	1	.071	1	NC		NC		NC		NC	
472			min	3.863	9	.037	9	NC		NC		NC		NC	
473		2	max	7.459	1	.071	1	NC		NC		NC		NC	
474			min	3.863	9	.037	9	NC		NC		NC		NC	
475		3	max	7.459	1	.071	1	NC		NC		NC		NC	
476			min	3.863	9	.037	9	NC		NC		NC		NC	
477		4	max	7.459	1	.071	1	NC		NC		NC		NC	
478			min	3.863	9	.037	9	NC		NC		NC		NC	
479		5	max	7.459	1	.071	1	NC		NC		NC		NC	
480			min	3.863	9	.037	9	NC		NC		NC		NC	
481	M49	1	max	9.713	1	.092	1	NC		NC		NC		NC	
482			min	5.892	9	.056	9	NC		NC		NC		NC	
483		2	max	9.713	1	.092	1	NC		NC		NC		NC	
484			min	5.892	9	.056	9	NC		NC		NC		NC	
485		3	max	9.713	1	.092	1	NC		NC		NC		NC	
486			min	5.892	9	.056	9	NC		NC		NC		NC	
487		4	max	9.713	1	.092	1	NC		NC		NC		NC	
488			min	5.892	9	.056	9	NC		NC		NC		NC	
489		5	max	9.713	1	.092	1	NC		NC		NC		NC	
490			min	5.892	9	.056	9	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
491	M50	1	max	8.693	1	.036	1	NC		NC		NC		NC	
492			min	3.408	9	.014	9	NC		NC		NC		NC	
493		2	max	8.693	1	.036	1	NC		NC		NC		NC	
494			min	3.408	9	.014	9	NC		NC		NC		NC	
495		3	max	8.693	1	.036	1	NC		NC		NC		NC	
496			min	3.408	9	.014	9	NC		NC		NC		NC	
497		4	max	8.693	1	.036	1	NC		NC		NC		NC	
498			min	3.408	9	.014	9	NC		NC		NC		NC	
499		5	max	8.693	1	.036	1	NC		NC		NC		NC	
500			min	3.408	9	.014	9	NC		NC		NC		NC	
501	M51	1	max	10.699	6	.044	6	NC		NC		NC		NC	
502			min	-1	9	-.004	9	NC		NC		NC		NC	
503		2	max	10.699	6	.044	6	NC		NC		NC		NC	
504			min	-1	9	-.004	9	NC		NC		NC		NC	
505		3	max	10.699	6	.044	6	NC		NC		NC		NC	
506			min	-1	9	-.004	9	NC		NC		NC		NC	
507		4	max	10.699	6	.044	6	NC		NC		NC		NC	
508			min	-1	9	-.004	9	NC		NC		NC		NC	
509		5	max	10.699	6	.044	6	NC		NC		NC		NC	
510			min	-1	9	-.004	9	NC		NC		NC		NC	
511	M52	1	max	11.845	8	.049	8	NC		NC		NC		NC	
512			min	-4.445	7	-.018	7	NC		NC		NC		NC	
513		2	max	11.845	8	.049	8	NC		NC		NC		NC	
514			min	-4.445	7	-.018	7	NC		NC		NC		NC	
515		3	max	11.845	8	.049	8	NC		NC		NC		NC	
516			min	-4.445	7	-.018	7	NC		NC		NC		NC	
517		4	max	11.845	8	.049	8	NC		NC		NC		NC	
518			min	-4.445	7	-.018	7	NC		NC		NC		NC	
519		5	max	11.845	8	.049	8	NC		NC		NC		NC	
520			min	-4.445	7	-.018	7	NC		NC		NC		NC	
521	M53	1	max	19.786	7	.102	7	NC		NC		NC		NC	
522			min	-18.438	8	-.095	8	NC		NC		NC		NC	
523		2	max	19.786	7	.102	7	NC		NC		NC		NC	
524			min	-18.438	8	-.095	8	NC		NC		NC		NC	
525		3	max	19.786	7	.102	7	NC		NC		NC		NC	
526			min	-18.438	8	-.095	8	NC		NC		NC		NC	
527		4	max	19.786	7	.102	7	NC		NC		NC		NC	
528			min	-18.438	8	-.095	8	NC		NC		NC		NC	
529		5	max	19.786	7	.102	7	NC		NC		NC		NC	
530			min	-18.438	8	-.095	8	NC		NC		NC		NC	
531	M54	1	max	11.167	9	.058	9	NC		NC		NC		NC	
532			min	-8.776	6	-.045	6	NC		NC		NC		NC	
533		2	max	11.167	9	.058	9	NC		NC		NC		NC	
534			min	-8.776	6	-.045	6	NC		NC		NC		NC	
535		3	max	11.167	9	.058	9	NC		NC		NC		NC	
536			min	-8.776	6	-.045	6	NC		NC		NC		NC	
537		4	max	11.167	9	.058	9	NC		NC		NC		NC	
538			min	-8.776	6	-.045	6	NC		NC		NC		NC	
539		5	max	11.167	9	.058	9	NC		NC		NC		NC	
540			min	-8.776	6	-.045	6	NC		NC		NC		NC	
541	M55	1	max	3.607	8	.019	8	NC		NC		NC		NC	
542			min	-.799	7	-.004	7	NC		NC		NC		NC	
543		2	max	3.607	8	.019	8	NC		NC		NC		NC	
544			min	-.799	7	-.004	7	NC		NC		NC		NC	
545		3	max	3.607	8	.019	8	NC		NC		NC		NC	
546			min	-.799	7	-.004	7	NC		NC		NC		NC	
547		4	max	3.607	8	.019	8	NC		NC		NC		NC	

Company : DMJM H&N
Designer : Kevin M. Jones
Job Number : 145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis

Mar 24, 2006
4:32 PM
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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
548			min	-.799	7	-.004	7	NC		NC		NC		NC	
549		5	max	3.607	8	.019	8	NC		NC		NC		NC	
550			min	-.799	7	-.004	7	NC		NC		NC		NC	
551	M56	1	max	17.438	9	.165	9	NC		NC		NC		NC	
552			min	8.566	1	.081	1	NC		NC		NC		NC	
553		2	max	17.438	9	.165	9	NC		NC		NC		NC	
554			min	8.566	1	.081	1	NC		NC		NC		NC	
555		3	max	17.438	9	.165	9	NC		NC		NC		NC	
556			min	8.566	1	.081	1	NC		NC		NC		NC	
557		4	max	17.438	9	.165	9	NC		NC		NC		NC	
558			min	8.566	1	.081	1	NC		NC		NC		NC	
559		5	max	17.438	9	.165	9	NC		NC		NC		NC	
560			min	8.566	1	.081	1	NC		NC		NC		NC	
561	M57	1	max	49.979	8	.473	8	NC		NC		NC		NC	
562			min	30.609	1	.29	1	NC		NC		NC		NC	
563		2	max	49.979	8	.473	8	NC		NC		NC		NC	
564			min	30.609	1	.29	1	NC		NC		NC		NC	
565		3	max	49.979	8	.473	8	NC		NC		NC		NC	
566			min	30.609	1	.29	1	NC		NC		NC		NC	
567		4	max	49.979	8	.473	8	NC		NC		NC		NC	
568			min	30.609	1	.29	1	NC		NC		NC		NC	
569		5	max	49.979	8	.473	8	NC		NC		NC		NC	
570			min	30.609	1	.29	1	NC		NC		NC		NC	
571	M58	1	max	72.103	8	.683	8	NC		NC		NC		NC	
572			min	45.895	1	.435	1	NC		NC		NC		NC	
573		2	max	72.103	8	.683	8	NC		NC		NC		NC	
574			min	45.895	1	.435	1	NC		NC		NC		NC	
575		3	max	72.103	8	.683	8	NC		NC		NC		NC	
576			min	45.895	1	.435	1	NC		NC		NC		NC	
577		4	max	72.103	8	.683	8	NC		NC		NC		NC	
578			min	45.895	1	.435	1	NC		NC		NC		NC	
579		5	max	72.103	8	.683	8	NC		NC		NC		NC	
580			min	45.895	1	.435	1	NC		NC		NC		NC	
581	M59	1	max	51.499	8	.488	8	NC		NC		NC		NC	
582			min	29.524	1	.28	1	NC		NC		NC		NC	
583		2	max	51.499	8	.488	8	NC		NC		NC		NC	
584			min	29.524	1	.28	1	NC		NC		NC		NC	
585		3	max	51.499	8	.488	8	NC		NC		NC		NC	
586			min	29.524	1	.28	1	NC		NC		NC		NC	
587		4	max	51.499	8	.488	8	NC		NC		NC		NC	
588			min	29.524	1	.28	1	NC		NC		NC		NC	
589		5	max	51.499	8	.488	8	NC		NC		NC		NC	
590			min	29.524	1	.28	1	NC		NC		NC		NC	
591	M60	1	max	38.325	9	.363	9	NC		NC		NC		NC	
592			min	20.588	1	.195	1	NC		NC		NC		NC	
593		2	max	38.325	9	.363	9	NC		NC		NC		NC	
594			min	20.588	1	.195	1	NC		NC		NC		NC	
595		3	max	38.325	9	.363	9	NC		NC		NC		NC	
596			min	20.588	1	.195	1	NC		NC		NC		NC	
597		4	max	38.325	9	.363	9	NC		NC		NC		NC	
598			min	20.588	1	.195	1	NC		NC		NC		NC	
599		5	max	38.325	9	.363	9	NC		NC		NC		NC	
600			min	20.588	1	.195	1	NC		NC		NC		NC	
601	M61	1	max	15.572	9	.147	9	NC		NC		NC		NC	
602			min	5.789	1	.055	1	NC		NC		NC		NC	
603		2	max	15.572	9	.147	9	NC		NC		NC		NC	
604			min	5.789	1	.055	1	NC		NC		NC		NC	

Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[l...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
605		3	max	15.572	9	.147	9	NC		NC		NC		NC	
606			min	5.789	1	.055	1	NC		NC		NC		NC	
607		4	max	15.572	9	.147	9	NC		NC		NC		NC	
608			min	5.789	1	.055	1	NC		NC		NC		NC	
609		5	max	15.572	9	.147	9	NC		NC		NC		NC	
610			min	5.789	1	.055	1	NC		NC		NC		NC	
611	M62	1	max	9.713	1	.04	1	NC		NC		NC		NC	
612			min	5.892	9	.024	9	NC		NC		NC		NC	
613		2	max	9.713	1	.04	1	NC		NC		NC		NC	
614			min	5.892	9	.024	9	NC		NC		NC		NC	
615		3	max	9.713	1	.04	1	NC		NC		NC		NC	
616			min	5.892	9	.024	9	NC		NC		NC		NC	
617		4	max	9.713	1	.04	1	NC		NC		NC		NC	
618			min	5.892	9	.024	9	NC		NC		NC		NC	
619		5	max	9.713	1	.04	1	NC		NC		NC		NC	
620			min	5.892	9	.024	9	NC		NC		NC		NC	

amec

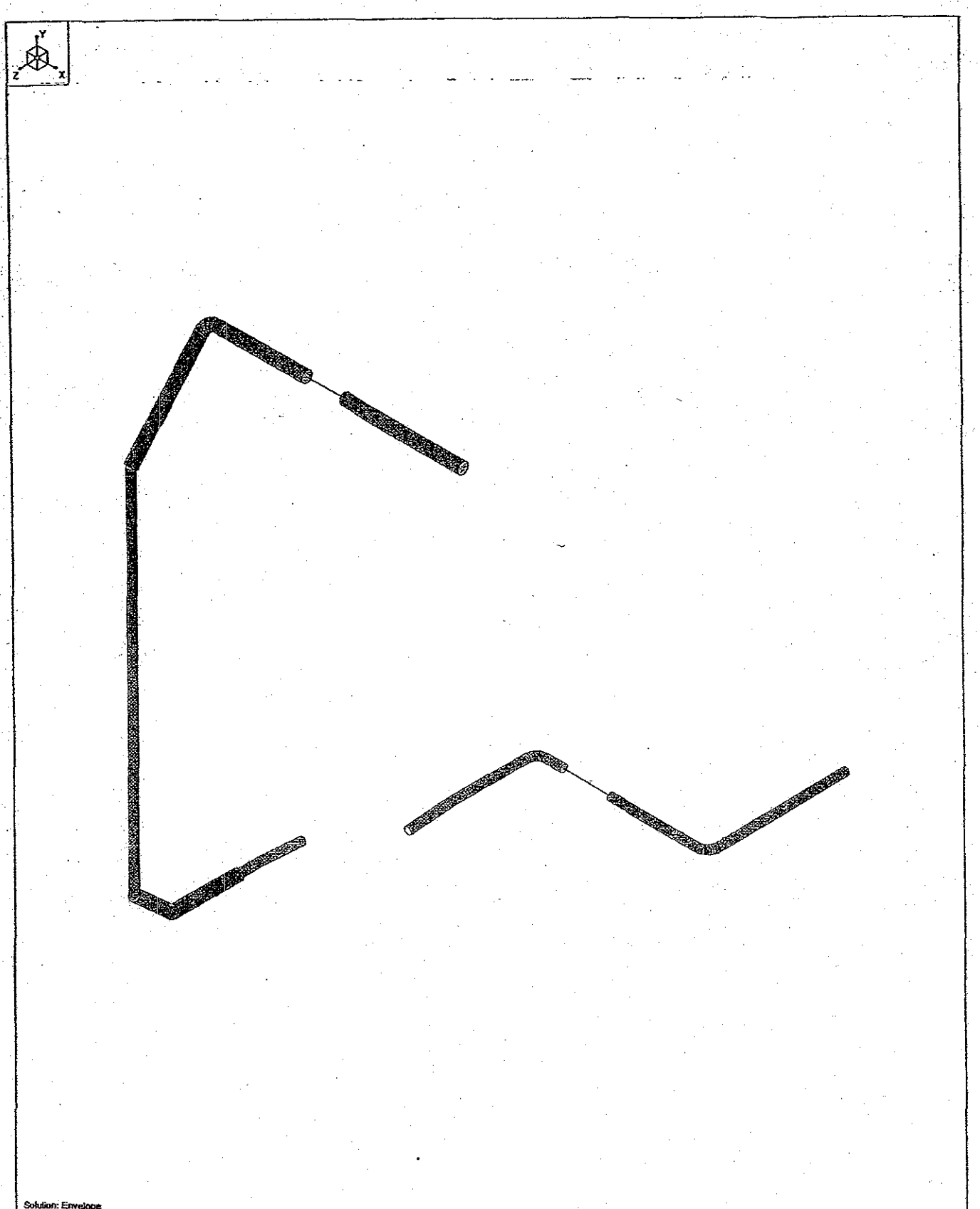
CALCULATION SHEET

CALC. NO.:	145579-V-CA-005	REV:	1	DATE:	March 26, 2006
CALC. TITLE:	Off-Gas Treatment System Pipe Stress Analysis				
PROJECT NO.:	145579	PROJECT TITLE:	Final DBVS Design		

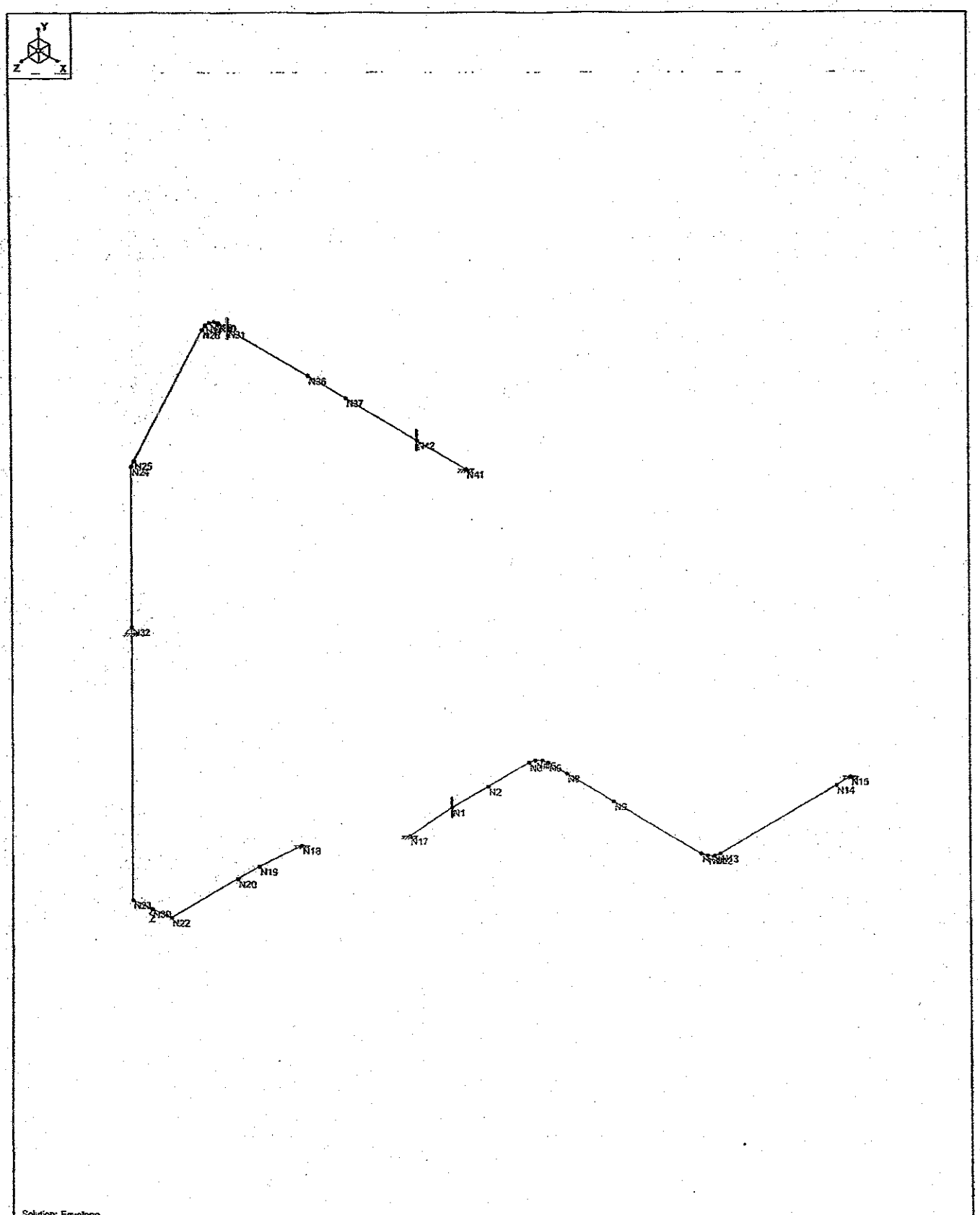
Attachment 6: Model 3 RISA 3D Analysis Input and Output Data

NOTE: This cover sheet represents the approval signatures of the originator and checker for all pages of this attachment

ORIGINATOR:	DATE:	CHECKER:	DATE:
Kevin M. Jones KMJ	3/26/06	J. Van Corbach JVC	3/26/06

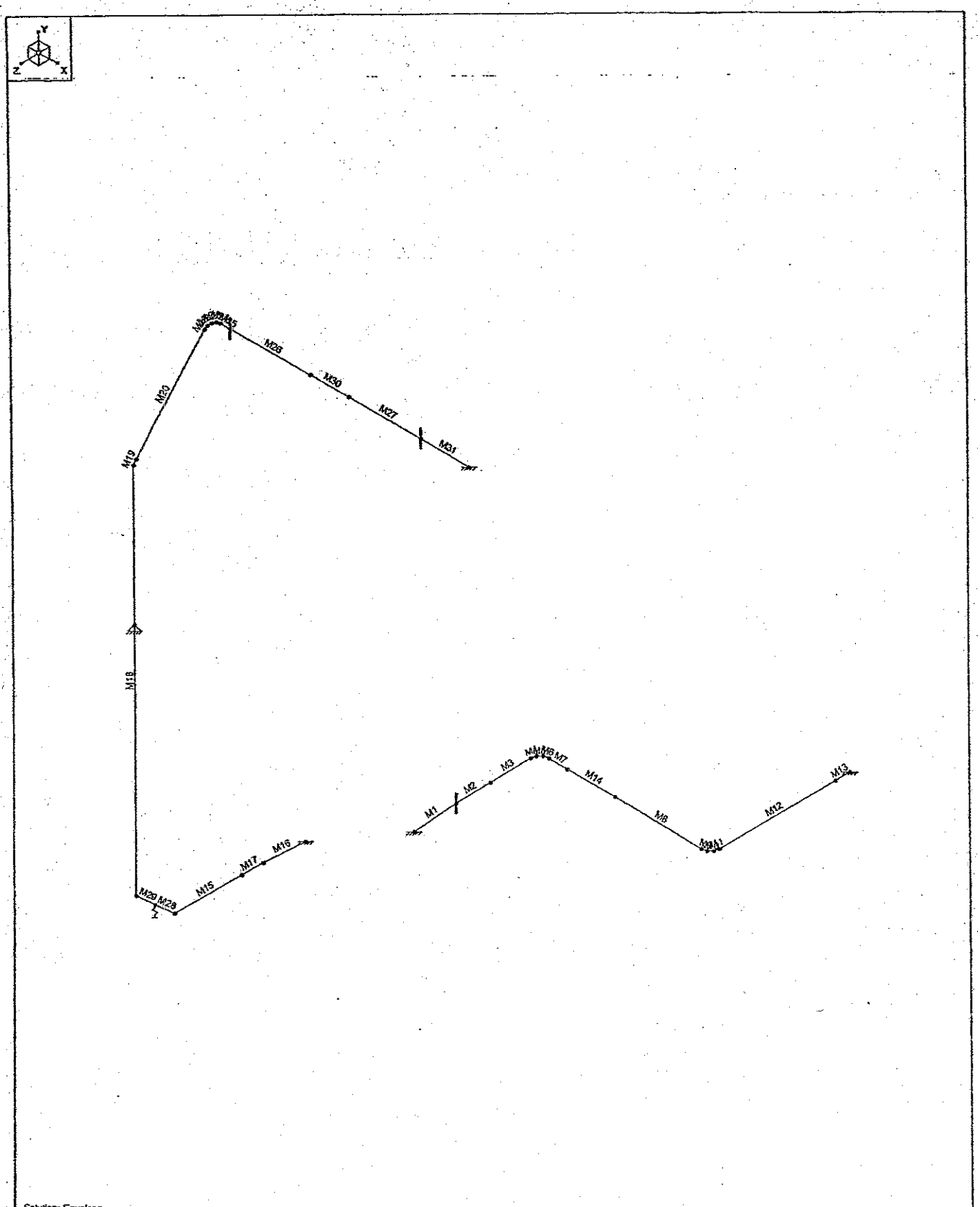


DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones - DMJMH&N		Feb 13, 2006 at 4:57 PM
145579-V-CA-005	Rendered Model Geometry	145579-V-CA-005 Model 3.r3d



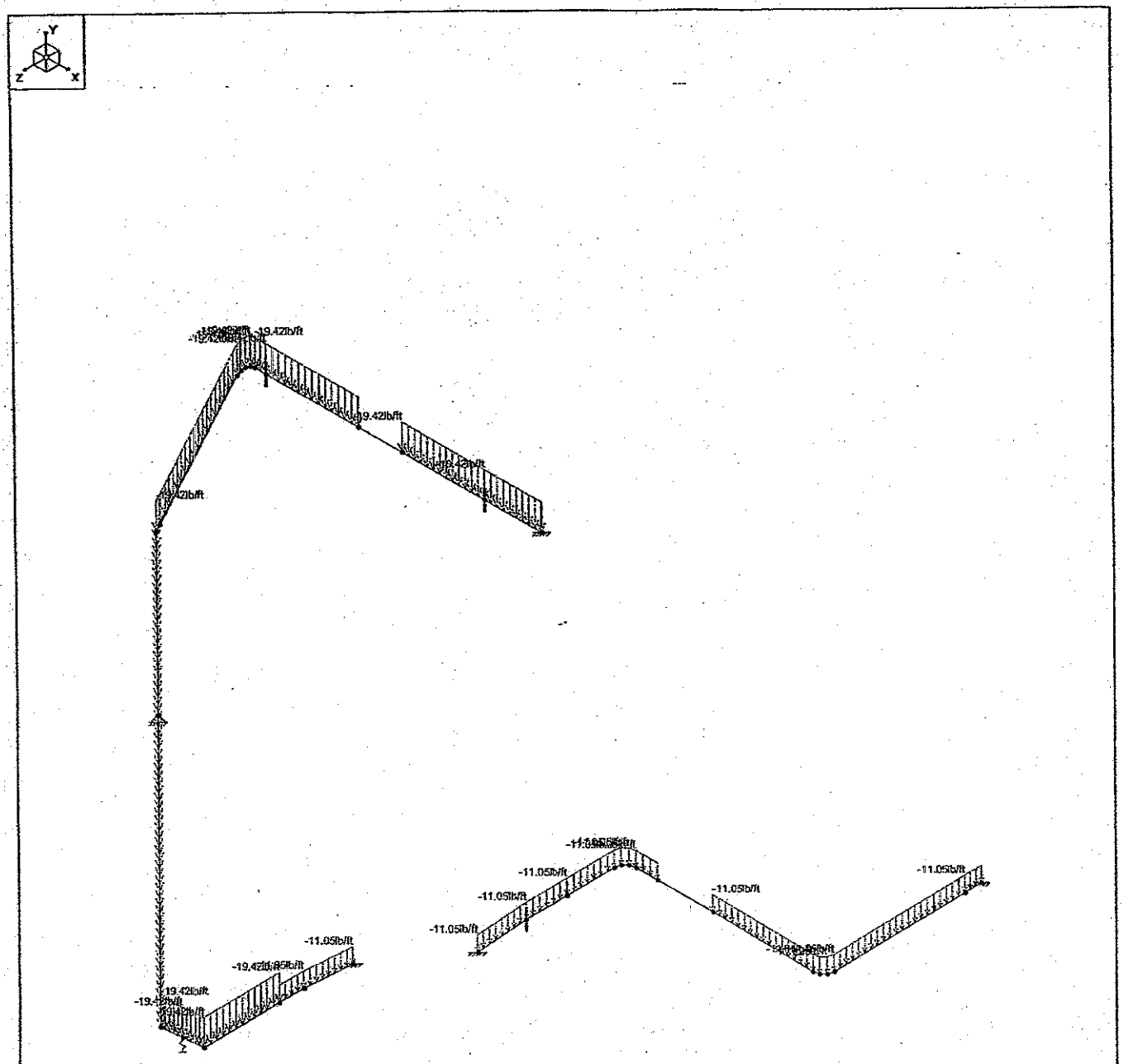
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones - DMJMH&N		Feb 13, 2006 at 4:58 PM
145579-V-CA-005	Nodes and Supports	145579-V-CA-005 Model 3.r3d



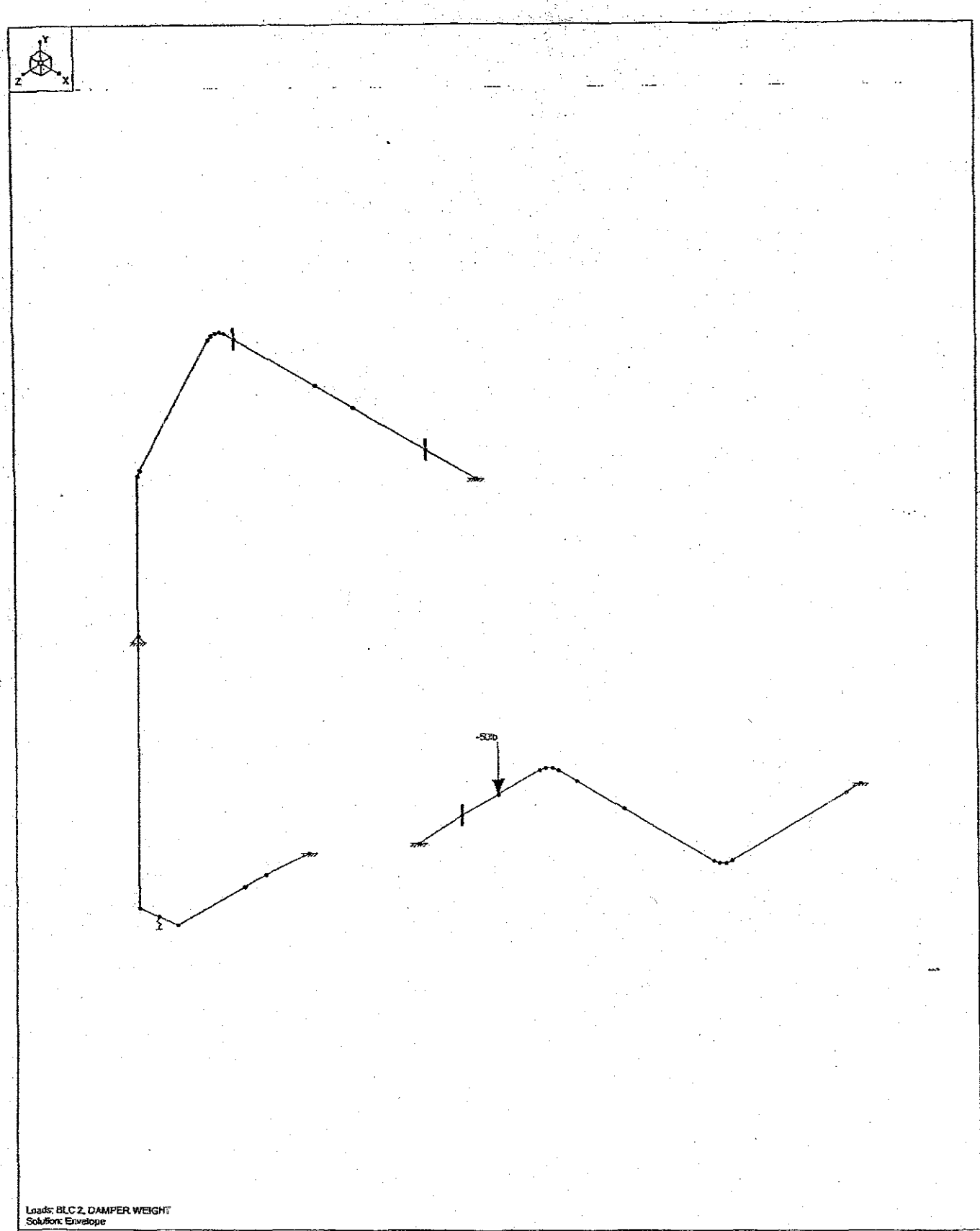
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones - DMJMH&N		Feb 13, 2006 at 4:58 PM
145579-V-CA-005	Members	145579-V-CA-005 Model 3.r3d



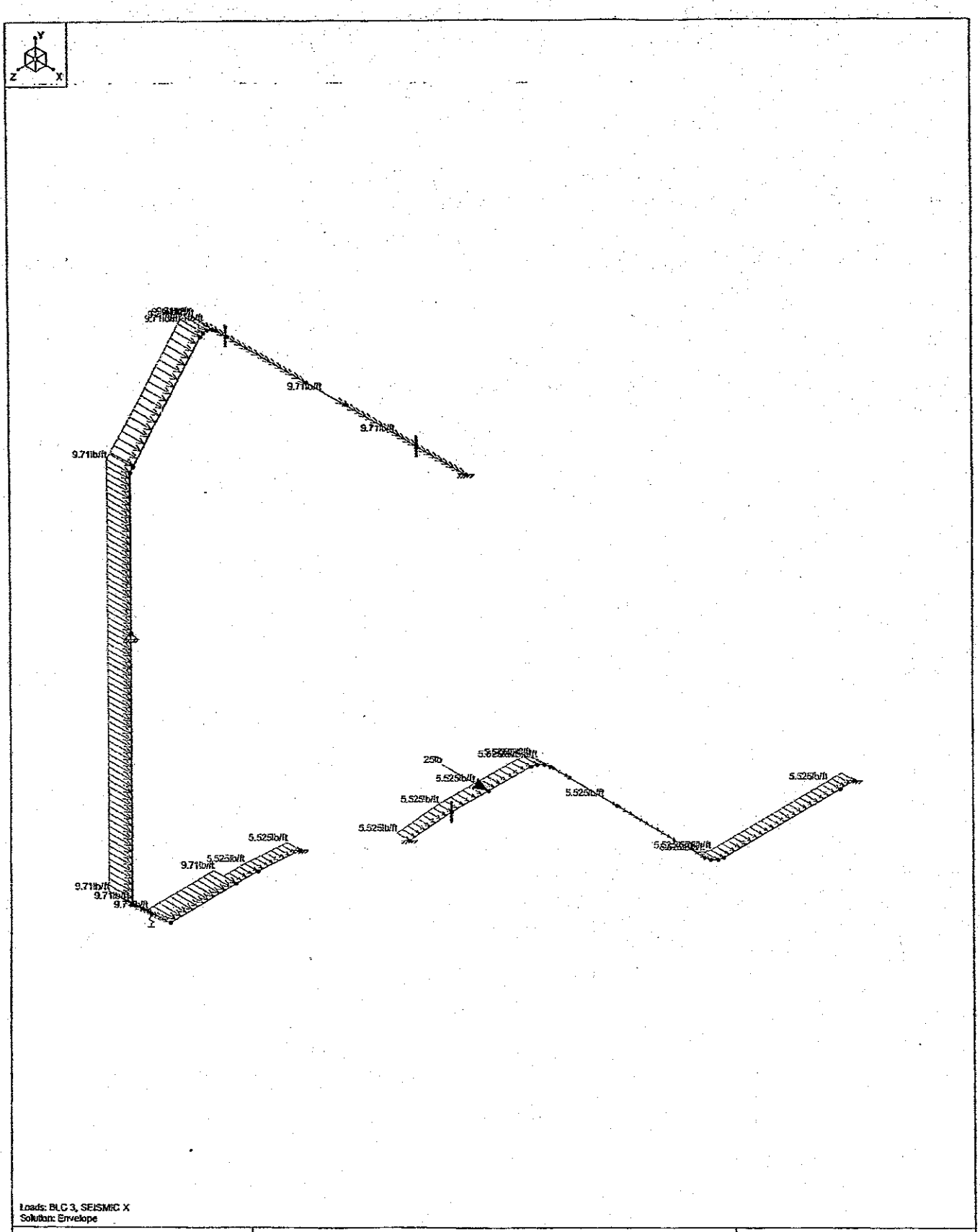
Loads: BLC 1, SELFWEIGHT
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones - DMJMH&N		Feb 13, 2006 at 4:59 PM
145579-V-CA-005	Basic Load Case - Selfweight	145579-V-CA-005 Model 3.r3d



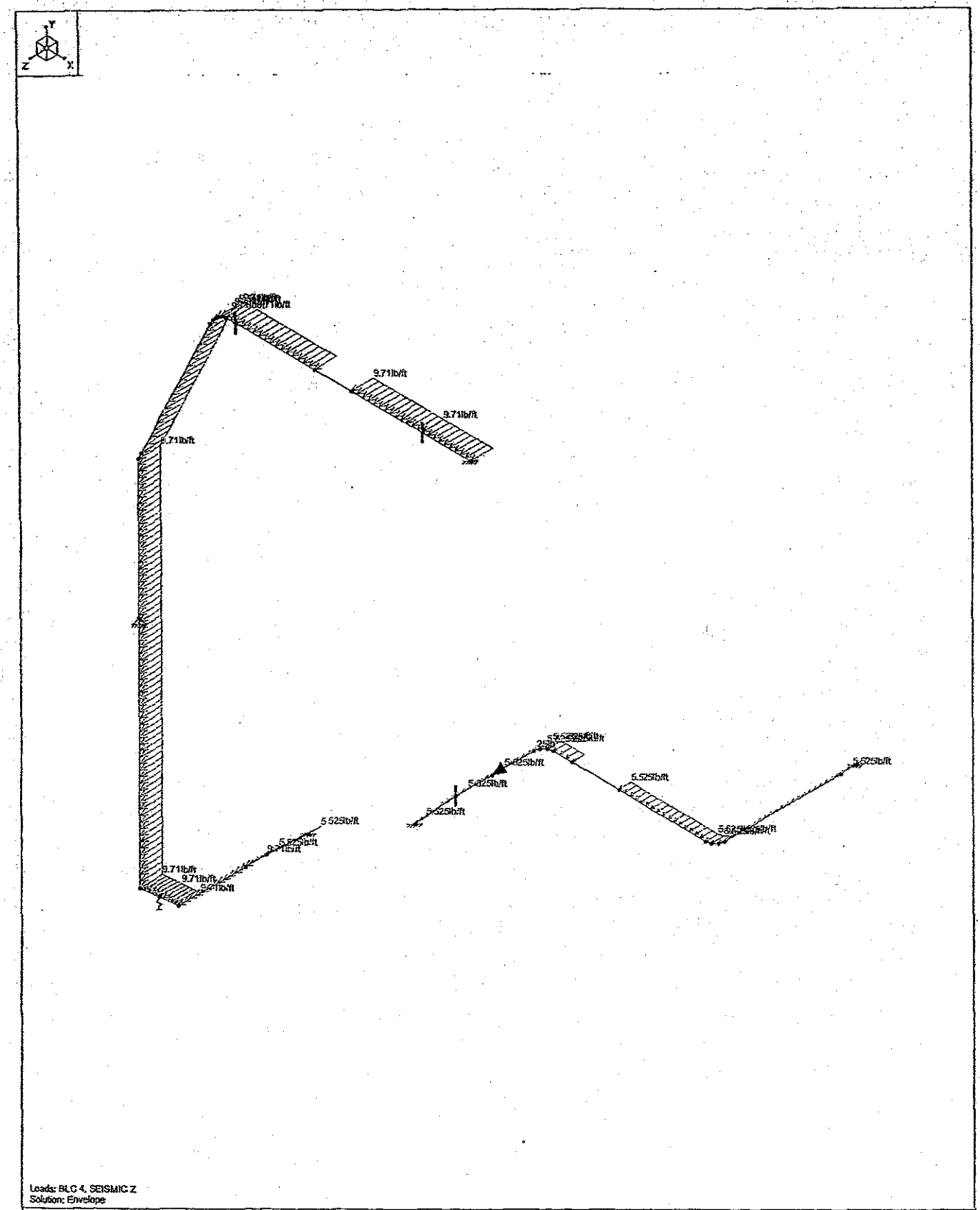
Loads: BLC 2, DAMPER WEIGHT
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones - DMJMH&N		Feb 13, 2006 at 4:59 PM
145579-V-CA-005	Basic Load Case - Dampers	145579-V-CA-005 Model 3.r3d



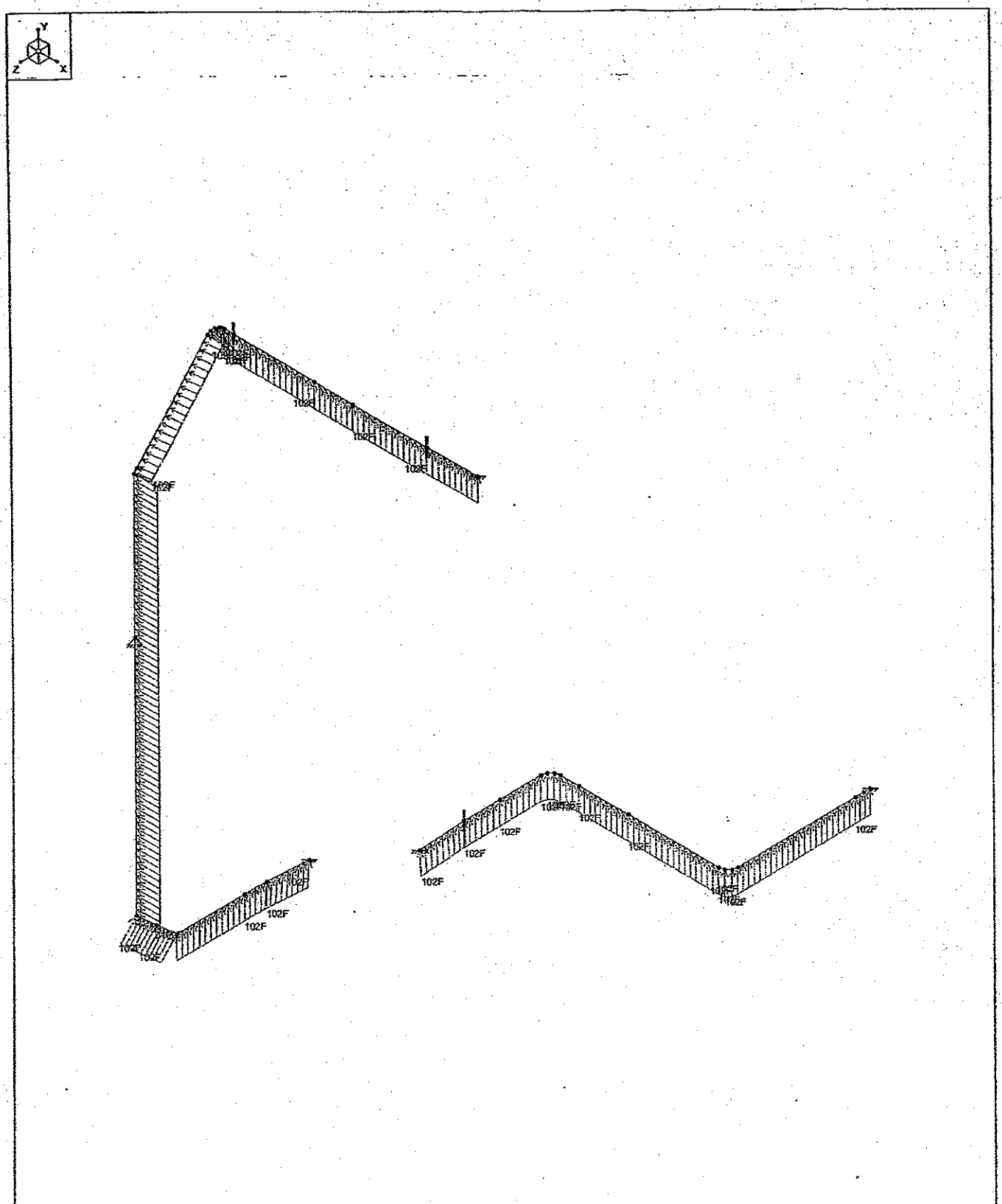
Loads: BLC 3, SEISMIC X
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones - DMJMH&N		Feb 13, 2006 at 4:59 PM
145579-V-CA-005	Basic Load Case - Seismic X	145579-V-CA-005 Model 3.r3d



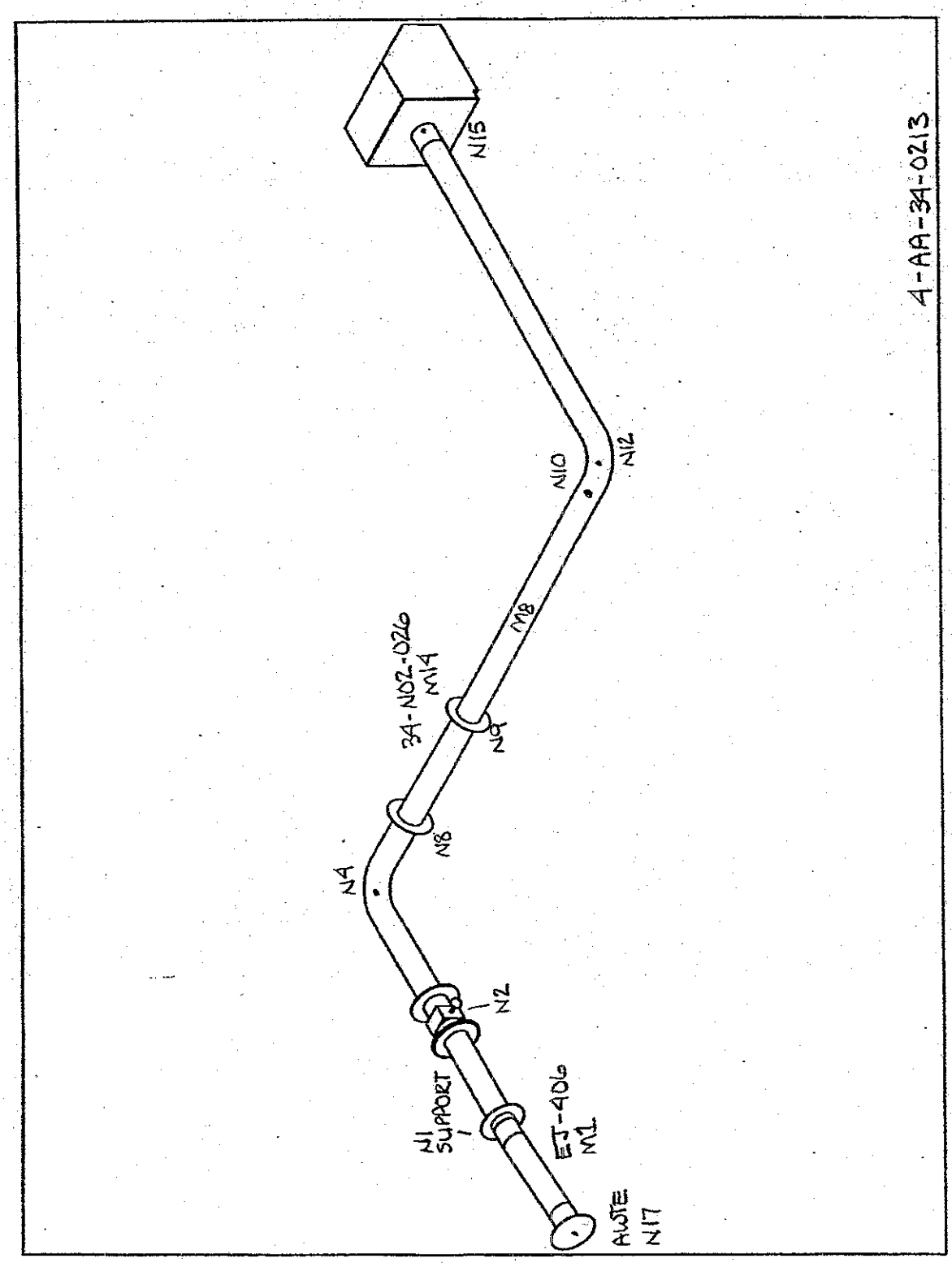
Loads: BLC 4, SEISMIC Z
Solution: Envelope

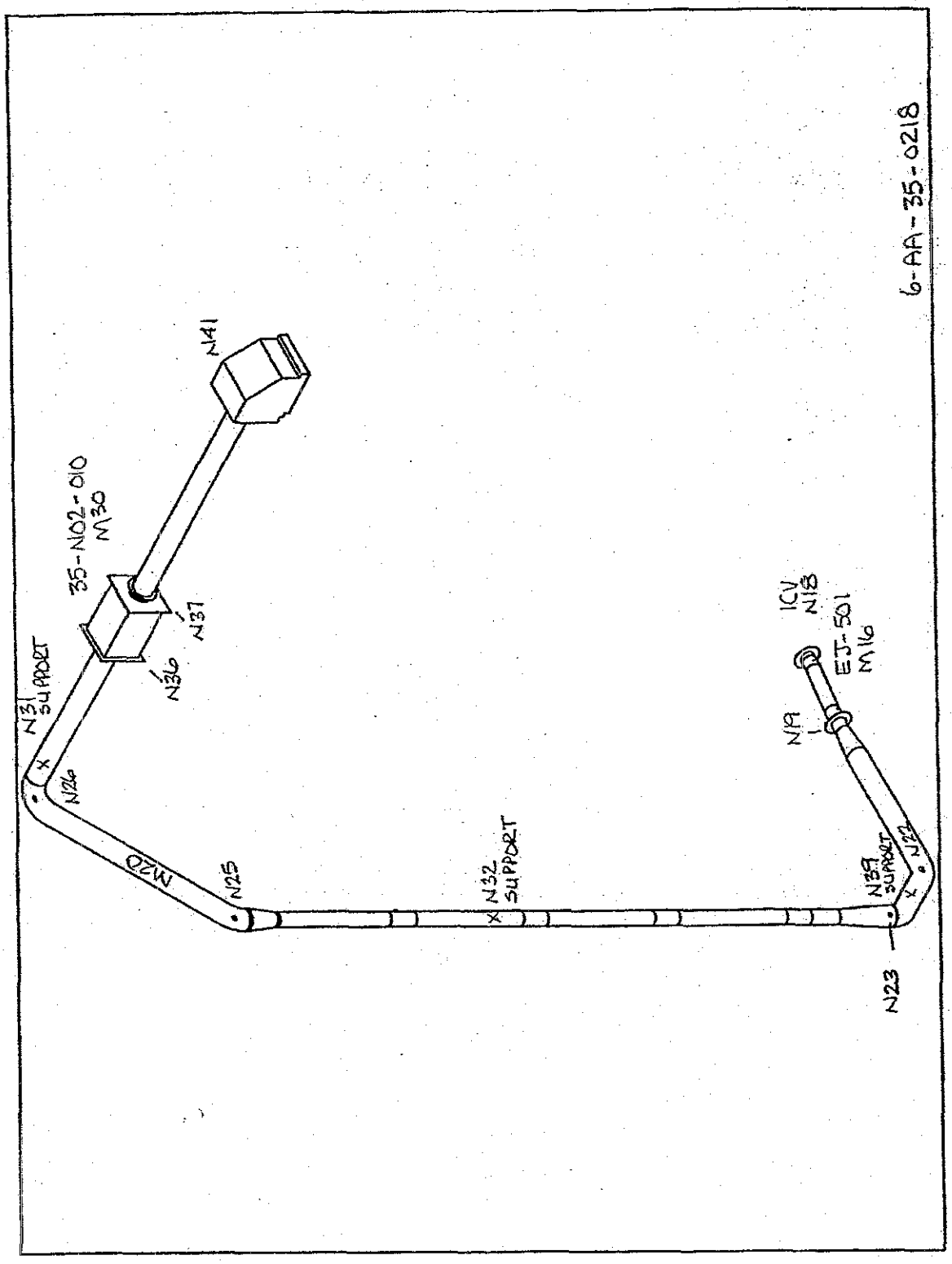
DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones - DMJMH&N		Feb 13, 2006 at 4:59 PM
145579-V-CA-005	Basic Load Case - Seismic Z	145579-V-CA-005 Model 3.r3d



Loads: BLC 5, THERMAL
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones - DMJMH&N		Feb 13, 2006 at 5:00 PM
145579-V-CA-005	Basic Load Case - Thermal	145579-V-CA-005 Model 3.r3d


N15
N10
N12
N8
34-N02-0216
N14
N9
N6
N4
N2
N1
SUPPORT
ET-406
N1
AUSTE
N17
4-AA-34-0213


6-AA-35-0218
N41
35-N02-010
M30
N37
N36
N31
SUPPORT
N26
M20
N25
N32
SUPPORT
N23
N39
SUPPORT
N22
N19
ICV
N18
EJ-501
M16

Global

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation	Yes
Include Warping	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Vertical Axis	Y

Hot Rolled Steel Code	AISC: ASD 9th
Cold Formed Steel Code	AISI 99: ASD
NDS Wood Code	NDS 91: ASD
NDS Temperature	≤ 100F
Concrete Code	ACI 1999

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	PCA Load Contour
Parme Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections	Yes
Bad Framing Warnings	No
Unused Force Warnings	Yes

Joint Coordinates and Temperatures

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diaphragm
1	N1	28.875	0	-66.25	0	
2	N2	28.875	0	-88.875	0	
3	N3	28.875	0	-115.125	0	
4	N4	29.678848	0	-118.125	0	
5	N5	31.875001	0	-120.321152	0	
6	N6	34.875001	0	-121.125	0	
7	N8	46.625	0	-121.125	0	
8	N9	71.000001	0	-121.124999	0	
9	N10	133.250001	0	-121.124999	0	
10	N11	136.250001	0	-121.928846	0	
11	N12	138.446153	0	-124.124999	0	
12	N13	139.250001	0	-127.124999	0	
13	N14	139.250002	0	-191.874999	0	
14	N15	139.250002	0	-201.124999	0	
15	N17	28.875	-2	-39.5	0	
16	N18	0	-2	0	0	
17	N19	0	0	26.75	0	
18	N20	0	0	40.25	0	
19	N22	0	0	82.5625	0	
20	N23	0	21.6875	106.625	0	
21	N24	0	255.875	106.625	0	
22	N25	0	258.142767	104.857233	0	
23	N26	0	306.137359	60.987641	0	
24	N27	0.456723	307.760948	59.364052	0	
25	N28	1.757359	309.137359	57.987641	0	
26	N29	3.703899	310.057048	57.067952	0	
27	N30	6	310.38	56.745	0	
28	N31	12	310.38	56.745	0	
29	N32	0	169.25	106.625	0	
30	N36	62.125	310.38	56.745	0	
31	N37	85.875	310.38	56.745	0	

Company : DMJM H&N
Designer : Kevin M. Jones - DMJMH&N
Job Number : 145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis

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Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diaphragm
32	N41	162	310.38	56.745	0	
33	N42	131.125	310.38	56.745	0	
34	N39	0	10.844	94.594	0	

Joint Boundary Conditions

	Joint Label	X [lb/in]	Y [lb/in]	Z [lb/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N1		Reaction				
2	N17	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N18	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
4	N19						
5	N20						
6	N22						
7	N23						
8	N24						
9	N25						
10	N26						
11	N27						
12	N28						
13	N29						
14	N30						
15	N31		Reaction				
16	N36						
17	N37						
18	N42		Reaction				
19	N15	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
20	N32	Reaction	Reaction	Reaction			
21	N41	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
22	N39		S23				

General Material Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E5 F)	Density[lb/in^3]
1	gen_Conc3NW	3155	1372	.15	.6	.084
2	gen_Conc4NW	3644	1584	.15	.6	.084
3	gen_Conc3LW	2085	906	.15	.6	.064
4	gen_Conc4LW	2408	1047	.15	.6	.064
5	gen_Alum	10600	4077	.3	1.29	.1
6	gen_Steel	29000	11154	.3	.65	.284
7	RIGID	1e+7		0	0	0

General Section Sets

	Label	Shape	Type	Material	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	GEN1A	RE4X4	Beam	gen_Conc3NW	16	21.333	21.333	36.053
2	RIGID		None	RIGID	1e+6	1e+8	1e+8	1e+6

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E5 F)	Density[lb/in^3]	Yield[ksi]
1	A36	29000	11154	.3	.779	.283	36
2	A312TP316L	29000	11154	.3	1.013	.29	25
3	A312TP316	29000	11154	.3	1.013	.29	30

Company : DMJM H&N
Designer : Kevin M. Jones - DMJMH&N
Job Number : 145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis

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9:33 AM
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Hot Rolled Steel Section Sets

	Label	Shape	Design List	Type	Material	Design Rules	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	3DIADUCT	3 in Sch 40...	Pipe	Beam	A312TP316L	Typical	1.86	2.572	2.572	5.145
2	4DIADUCT	4 in Sch 40...	Pipe	Beam	A312TP316L	Typical	2.644	6.136	6.136	12.272
3	6DIADUCT	6 in Sch 40...	Pipe	Beam	A312TP316L	Typical	4.64	23.744	23.744	47.488

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(de...	Section/Shape	Design List	Type	Material	Design Rules
1	M1	N17	N1			4DIADUCT	Pipe	Beam	A312TP3...	Typical
2	M2	N1	N2			4DIADUCT	Pipe	Beam	A312TP3...	Typical
3	M3	N2	N3			4DIADUCT	Pipe	Beam	A312TP3...	Typical
4	M4	N3	N4			4DIADUCT	Pipe	Beam	A312TP3...	Typical
5	M5	N4	N5			4DIADUCT	Pipe	Beam	A312TP3...	Typical
6	M6	N5	N6			4DIADUCT	Pipe	Beam	A312TP3...	Typical
7	M7	N6	N8			4DIADUCT	Pipe	Beam	A312TP3...	Typical
8	M8	N9	N10			4DIADUCT	Pipe	Beam	A312TP3...	Typical
9	M9	N10	N11			4DIADUCT	Pipe	Beam	A312TP3...	Typical
10	M10	N11	N12			4DIADUCT	Pipe	Beam	A312TP3...	Typical
11	M11	N12	N13			4DIADUCT	Pipe	Beam	A312TP3...	Typical
12	M12	N13	N14			4DIADUCT	Pipe	Beam	A312TP3...	Typical
13	M13	N14	N15			4DIADUCT	Pipe	Beam	A312TP3...	Typical
14	M14	N8	N9			RIGID	None	None	RIGID	Typical
15	M15	N20	N22			6DIADUCT	Pipe	Beam	A312TP3...	Typical
16	M16	N18	N19			4DIADUCT	Pipe	Beam	A312TP3...	Typical
17	M17	N19	N20			4DIADUCT	Pipe	Beam	A312TP3...	Typical
18	M18	N23	N24			4DIADUCT	Pipe	Beam	A312TP3...	Typical
19	M19	N24	N25			6DIADUCT	Pipe	Beam	A312TP3...	Typical
20	M20	N24	N26			6DIADUCT	Pipe	Beam	A312TP3...	Typical
21	M21	N26	N27			6DIADUCT	Pipe	Beam	A312TP3...	Typical
22	M22	N27	N28			6DIADUCT	Pipe	Beam	A312TP3...	Typical
23	M23	N28	N29			6DIADUCT	Pipe	Beam	A312TP3...	Typical
24	M24	N29	N30			6DIADUCT	Pipe	Beam	A312TP3...	Typical
25	M25	N30	N31			6DIADUCT	Pipe	Beam	A312TP3...	Typical
26	M26	N31	N36			6DIADUCT	Pipe	Beam	A312TP3...	Typical
27	M27	N37	N42			6DIADUCT	Pipe	Beam	A312TP3...	Typical
28	M28	N22	N39			6DIADUCT	Pipe	Beam	A312TP3...	Typical
29	M29	N39	N23			6DIADUCT	Pipe	Beam	A312TP3...	Typical
30	M30	N36	N37			RIGID	None	None	RIGID	Typical
31	M31	N42	N41			6DIADUCT	Pipe	Beam	A312TP3...	Typical

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area (Me...	Surface (...
1	SELFWEIGHT	DL						29		
2	DAMPER WEIGHT	DL				1				
3	SEISMIC X	ELX				1		29		
4	SEISMIC Z	ELZ				1		29		
5	THERMAL	None						31		
6	WIND X	WLX								
7	WIND Z	WLZ								

Joint Loads and Enforced Displacements (BLC 2 : DAMPER WEIGHT)

	Joint Label	L,D,M	Direction	Magnitude[lb,k-ft in,rad lb*s^2/in]
1	N2	L	Y	-50

Joint Loads and Enforced Displacements (BLC 3 : SEISMIC X)

	Joint Label	L,D,M	Direction	Magnitude[lb,k-ft in,rad lb*s^2/in]
1	N2	L	X	25

Joint Loads and Enforced Displacements (BLC 4 : SEISMIC Z)

	Joint Label	L,D,M	Direction	Magnitude[lb,k-ft in,rad lb*s^2/in]
1	N2	L	Z	25

Member Distributed Loads (BLC 1 : SELFWEIGHT)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
1	M1	Y	-11.05	-11.05	0	0
2	M2	Y	-11.05	-11.05	0	0
3	M3	Y	-11.05	-11.05	0	0
4	M4	Y	-11.05	-11.05	0	0
5	M5	Y	-11.05	-11.05	0	0
6	M6	Y	-11.05	-11.05	0	0
7	M7	Y	-11.05	-11.05	0	0
8	M8	Y	-11.05	-11.05	0	0
9	M9	Y	-11.05	-11.05	0	0
10	M10	Y	-11.05	-11.05	0	0
11	M11	Y	-11.05	-11.05	0	0
12	M12	Y	-11.05	-11.05	0	0
13	M13	Y	-11.05	-11.05	0	0
14	M16	Y	-11.05	-11.05	0	0
15	M17	Y	-11.05	-11.05	0	0
16	M15	Y	-19.42	-19.42	0	0
17	M18	Y	-19.42	-19.42	0	0
18	M19	Y	-19.42	-19.42	0	0
19	M20	Y	-19.42	-19.42	0	0
20	M21	Y	-19.42	-19.42	0	0
21	M22	Y	-19.42	-19.42	0	0
22	M23	Y	-19.42	-19.42	0	0
23	M24	Y	-19.42	-19.42	0	0
24	M25	Y	-19.42	-19.42	0	0
25	M26	Y	-19.42	-19.42	0	0
26	M27	Y	-19.42	-19.42	0	0
27	M31	Y	-19.42	-19.42	0	0
28	M28	Y	-19.42	-19.42	0	0
29	M29	Y	-19.42	-19.42	0	16.197

Member Distributed Loads (BLC 3 : SEISMIC X)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
1	M1	X	5.525	5.525	0	0
2	M2	X	5.525	5.525	0	0
3	M3	X	5.525	5.525	0	0
4	M4	X	5.525	5.525	0	0
5	M5	X	5.525	5.525	0	0
6	M6	X	5.525	5.525	0	0
7	M7	X	5.525	5.525	0	0
8	M8	X	5.525	5.525	0	0
9	M9	X	5.525	5.525	0	0
10	M10	X	5.525	5.525	0	0
11	M11	X	5.525	5.525	0	0
12	M12	X	5.525	5.525	0	0
13	M13	X	5.525	5.525	0	0
14	M16	X	5.525	5.525	0	0
15	M17	X	5.525	5.525	0	0

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Member Distributed Loads (BLC 3 : SEISMIC X) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
16	M15	X	9.71	9.71	0	0
17	M18	X	9.71	9.71	0	0
18	M19	X	9.71	9.71	0	0
19	M20	X	9.71	9.71	0	0
20	M21	X	9.71	9.71	0	0
21	M22	X	9.71	9.71	0	0
22	M23	X	9.71	9.71	0	0
23	M24	X	9.71	9.71	0	0
24	M25	X	9.71	9.71	0	0
25	M26	X	9.71	9.71	0	0
26	M27	X	9.71	9.71	0	0
27	M31	X	9.71	9.71	0	0
28	M28	X	9.71	9.71	0	0
29	M29	X	9.71	9.71	0	16.197

Member Distributed Loads (BLC 4 : SEISMIC Z)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
1	M1	Z	5.525	5.525	0	0
2	M2	Z	5.525	5.525	0	0
3	M3	Z	5.525	5.525	0	0
4	M4	Z	5.525	5.525	0	0
5	M5	Z	5.525	5.525	0	0
6	M6	Z	5.525	5.525	0	0
7	M7	Z	5.525	5.525	0	0
8	M8	Z	5.525	5.525	0	0
9	M9	Z	5.525	5.525	0	0
10	M10	Z	5.525	5.525	0	0
11	M11	Z	5.525	5.525	0	0
12	M12	Z	5.525	5.525	0	0
13	M13	Z	5.525	5.525	0	0
14	M16	Z	5.525	5.525	0	0
15	M17	Z	5.525	5.525	0	0
16	M15	Z	9.71	9.71	0	0
17	M18	Z	9.71	9.71	0	0
18	M19	Z	9.71	9.71	0	0
19	M20	Z	9.71	9.71	0	0
20	M21	Z	9.71	9.71	0	0
21	M22	Z	9.71	9.71	0	0
22	M23	Z	9.71	9.71	0	0
23	M24	Z	9.71	9.71	0	0
24	M25	Z	9.71	9.71	0	0
25	M26	Z	9.71	9.71	0	0
26	M27	Z	9.71	9.71	0	0
27	M31	Z	9.71	9.71	0	0
28	M28	Z	9.71	9.71	0	0
29	M29	Z	9.71	9.71	0	16.197

Member Distributed Loads (BLC 5 : THERMAL)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
1	M1	T	102	102	0	0
2	M2	T	102	102	0	0
3	M3	T	102	102	0	0
4	M4	T	102	102	0	0
5	M5	T	102	102	0	0
6	M6	T	102	102	0	0
7	M7	T	102	102	0	0
8	M8	T	102	102	0	0

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Member Distributed Loads (BLC 5 : THERMAL) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,deg]	End Magnitude[lb/ft,deg]	Start Location[i...	End Location[i...
9	M9	T	102	102	0	0
10	M10	T	102	102	0	0
11	M11	T	102	102	0	0
12	M12	T	102	102	0	0
13	M13	T	102	102	0	0
14	M14	T	102	102	0	0
15	M15	T	102	102	0	0
16	M18	T	102	102	0	0
17	M19	T	102	102	0	0
18	M20	T	102	102	0	0
19	M21	T	102	102	0	0
20	M22	T	102	102	0	0
21	M23	T	102	102	0	0
22	M24	T	102	102	0	0
23	M25	T	102	102	0	0
24	M26	T	102	102	0	0
25	M27	T	102	102	0	0
26	M16	T	102	102	0	0
27	M17	T	102	102	0	0
28	M30	T	102	102	0	0
29	M31	T	102	102	0	0
30	M28	T	102	102	0	0
31	M29	T	102	102	0	16.197

Member Point Loads

Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
No Data to Print ...			

Load Combinations

	Description	Sol..	PD..	SR..	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	Normal Load	Yes			DL	1														
2	Normal + Wind (+X) + Thermal	Yes			DL	1	WLX	1	5	1										
3	Normal + Wind (-X) + Thermal	Yes			DL	1	WLX	-1	5	1										
4	Normal + Wind (+Z) + Thermal	Yes			DL	1	WLZ	1	5	1										
5	Normal + Wind (-Z) + Thermal	Yes			DL	1	WLZ	-1	5	1										
6	Normal + Seismic (+X)(+Z) + ...	Yes			DL	1	ELX	1	ELZ	1	5	1								
7	Normal + Seismic (+X)(-Z) + ...	Yes			DL	1	ELX	1	ELZ	-1	5	1								
8	Normal + Seismic (-X)(+Z) + ...	Yes			DL	1	ELX	-1	ELZ	1	5	1								
9	Normal + Seismic (-X)(-Z) + ...	Yes			DL	1	ELX	-1	ELZ	-1	5	1								

Envelope Joint Reactions

	Joint		X [lb]	lc	Y [lb]	lc	Z [lb]	lc	MX [k-ft]	lc	MY [k-ft]	lc	MZ [k-ft]	lc
1	N1	max	0	1	909.145	8	0	1	0	1	0	1	0	1
2		min	0	1	292.636	1	0	1	0	1	0	1	0	1
3	N17	max	230.098	9	-131.145	1	-9.805	1	-.058	1	-.007	6	.1	6
4		min	-54.406	6	-735.78	8	-55.012	8	-1.29	8	-.774	9	.027	9
5	N18	max	72.667	9	288.331	8	-.4	7	-.104	1	.378	9	.099	8
6		min	-135.752	6	5.347	7	-21.557	8	-1.175	8	-.789	6	0	1
7	N31	max	0	1	151.731	1	0	1	0	1	0	1	0	1
8		min	0	1	-706.465	6	0	1	0	1	0	1	0	1
9	N42	max	0	1	147.077	1	0	1	0	1	0	1	0	1
10		min	0	1	20.062	9	0	1	0	1	0	1	0	1
11	N15	max	41.28	8	111.657	1	166.598	9	-.376	8	-.024	1	.055	8

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Envelope Joint Reactions (Continued)

	Joint		X [lb]	lc	Y [lb]	lc	Z [lb]	lc	MX [k-ft]	lc	MY [k-ft]	lc	MZ [k-ft]	lc
12		min	-216.972	7	99.785	8	-81.812	6	-.386	1	-.762	7	.002	1
13	N32	max	343.962	8	1194.508	6	215.004	9	0	1	0	1	0	1
14		min	-41.839	7	530.005	1	-532.917	6	0	1	0	1	0	1
15	N41	max	38.626	9	53.481	9	239.246	7	.924	6	1.843	9	.021	1
16		min	-277.657	6	-18.582	1	-1.264	1	-.009	1	-.017	1	-.031	9
17	N39	max	0	1	3.327	6	0	1	0	1	0	1	0	1
18		min	0	1	.027	1	0	1	0	1	0	1	0	1
19	Totals:	max	576.943	8	1153.877	8	576.937	9						
20		min	-576.934	7	1153.875	1	-576.942	6						

Envelope Joint Displacements

	Joint		X [in]	lc	Y [in]	lc	Z [in]	lc	X Rotation ...	lc	Y Rotation ...	lc	Z Rotation ...	lc
1	N1	max	0	1	0	1	.257	8	8.253e-4	8	9.477e-4	9	-8.545e-5	1
2		min	-.015	9	0	8	-.011	1	-1.768e-4	1	1.856e-5	1	-2.281e-4	6
3	N2	max	0	1	.013	8	.233	8	4.399e-4	8	1.059e-3	9	-1.59e-4	1
4		min	-.039	9	-.007	1	-.011	1	-3.915e-4	1	1.58e-6	1	-4.109e-4	6
5	N3	max	0	1	.023	8	.206	8	3.528e-4	8	1.129e-3	8	-2.442e-4	1
6		min	-.061	9	-.017	1	-.011	1	-3.233e-4	1	-5.415e-5	1	-6.23e-4	6
7	N4	max	0	1	.024	8	.202	8	3.596e-4	8	1.136e-3	8	-2.553e-4	1
8		min	-.062	9	-.018	1	-.011	1	-3.018e-4	1	-6.323e-5	1	-6.476e-4	6
9	N5	max	0	1	.023	8	.197	8	3.71e-4	8	1.141e-3	8	-2.661e-4	1
10		min	-.06	9	-.02	1	-.011	1	-2.751e-4	1	-1.205e-4	7	-6.69e-4	6
11	N6	max	0	1	.021	8	.194	6	3.834e-4	8	1.146e-3	8	-2.728e-4	1
12		min	-.058	8	-.021	1	-.011	1	-2.45e-4	1	-2.034e-4	7	-6.855e-4	6
13	N8	max	0	1	.013	8	.184	6	4.282e-4	8	1.155e-3	8	-2.762e-4	1
14		min	-.046	8	-.024	1	-.009	1	-1.293e-4	1	-4.745e-4	7	-7.234e-4	6
15	N9	max	0	1	-.005	8	.161	6	4.282e-4	8	1.155e-3	8	-2.762e-4	1
16		min	-.046	8	-.031	1	-.007	1	-1.293e-4	1	-4.745e-4	7	-7.234e-4	6
17	N10	max	.059	7	-.039	1	.09	6	6.671e-4	6	1.24e-3	6	-1.444e-5	1
18		min	0	1	-.04	6	0	1	4.836e-4	1	-1.238e-4	9	-3.952e-4	8
19	N11	max	.062	7	-.039	1	.086	6	6.777e-4	6	1.235e-3	6	-1.259e-5	1
20		min	0	1	-.041	6	0	1	5.131e-4	1	-5.113e-5	1	-3.821e-4	8
21	N12	max	.063	7	-.037	1	.081	6	6.854e-4	6	1.228e-3	6	-1.384e-5	1
22		min	0	1	-.04	6	0	1	5.384e-4	1	-4.283e-5	1	-3.69e-4	8
23	N13	max	.062	7	-.036	1	.077	6	6.917e-4	6	1.217e-3	6	-1.44e-5	1
24		min	0	1	-.038	6	0	1	5.592e-4	1	-3.473e-5	1	-3.546e-4	8
25	N14	max	.002	7	-.001	8	.01	6	2.148e-4	1	4.234e-4	7	-1.8e-6	1
26		min	0	1	-.001	1	0	1	2.112e-4	8	1.248e-5	1	-4.433e-5	8
27	N15	max	0	7	0	8	0	6	0	1	0	7	0	1
28		min	0	8	0	1	0	9	0	8	0	1	0	8
29	N17	max	0	6	0	8	0	8	0	8	0	9	0	9
30		min	0	9	0	1	0	1	0	1	0	6	0	6
31	N18	max	0	6	0	7	0	8	0	8	0	6	0	1
32		min	0	9	0	8	0	7	0	1	0	9	0	8
33	N19	max	.017	6	-.002	1	-.007	1	1.559e-3	8	1.163e-3	6	5.661e-7	1
34		min	-.008	9	-.062	7	-.695	7	6.174e-5	1	-5.511e-4	9	-2.573e-4	8
35	N20	max	.036	6	-.003	1	-.007	1	1.934e-3	8	1.556e-3	6	8.363e-7	1
36		min	-.017	9	-.075	7	-.681	7	1.63e-5	1	-7.307e-4	9	-3.871e-4	8
37	N22	max	.105	6	-.002	1	-.002	8	1.835e-3	8	1.687e-3	6	1.055e-6	1
38		min	-.049	9	-.135	6	-.637	7	-4.972e-5	1	-7.974e-4	9	-4.923e-4	8
39	N23	max	.148	6	0	1	.059	8	2.006e-3	9	1.651e-3	6	1.245e-6	1
40		min	-.058	9	-.153	7	-.574	7	-6.091e-5	1	-8.226e-4	9	-5.721e-4	8
41	N24	max	0	1	.089	9	.02	7	-1.392e-5	1	2.082e-5	1	1.409e-3	8
42		min	-.17	8	0	1	-.006	8	-2.737e-3	9	-1.419e-3	8	-1.035e-5	1
43	N25	max	0	1	.086	6	.012	7	-1.393e-5	1	2.082e-5	1	1.409e-3	8
44		min	-.171	8	0	1	-.014	8	-2.737e-3	9	-1.419e-3	8	-1.035e-5	1

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Envelope Joint Displacements (Continued)

	Joint		X [in]	lc	Y [in]	lc	Z [in]	lc	X Rotation ...	lc	Y Rotation ...	lc	Z Rotation ...	lc
45	N26	max	0	1	.007	6	.002	1	2.773e-5	1	2.183e-5	1	4.133e-4	9
46		min	-.149	8	0	1	-.201	8	-2.931e-3	6	-1.64e-3	8	-1.507e-5	1
47	N27	max	0	1	.004	6	.002	1	2.802e-5	1	2.185e-5	1	3.702e-4	9
48		min	-.146	8	0	1	-.206	8	-2.899e-3	6	-1.654e-3	8	-1.532e-5	1
49	N28	max	0	1	.001	6	.002	1	2.807e-5	1	2.187e-5	1	3.272e-4	9
50		min	-.143	8	0	9	-.209	8	-2.861e-3	6	-1.668e-3	8	-1.573e-5	1
51	N29	max	0	1	0	1	.002	1	2.788e-5	1	2.185e-5	1	2.878e-4	9
52		min	-.139	8	-.001	9	-.21	8	-2.816e-3	6	-1.682e-3	8	-1.645e-5	1
53	N30	max	0	1	0	1	.002	1	2.749e-5	1	2.181e-5	1	2.547e-4	9
54		min	-.137	9	-.001	9	-.207	8	-2.768e-3	6	-1.697e-3	8	-1.76e-5	1
55	N31	max	0	1	0	6	.002	1	2.624e-5	1	2.166e-5	1	1.915e-4	9
56		min	-.13	9	0	1	-.197	8	-2.642e-3	6	-1.733e-3	8	-2.302e-5	1
57	N32	max	0	7	0	1	0	6	2.917e-3	7	8.014e-5	7	2.01e-3	6
58		min	0	8	0	6	0	9	7.115e-5	1	-1.191e-3	8	-6.475e-7	1
59	N36	max	0	1	.002	9	.001	1	1.582e-5	1	1.788e-5	1	4.769e-6	1
60		min	-.079	9	-.001	1	-.109	8	-1.593e-3	6	-1.644e-3	8	-4.054e-5	9
61	N37	max	0	1	.001	9	0	1	1.582e-5	1	1.788e-5	1	4.769e-6	1
62		min	-.079	9	0	1	-.071	9	-1.593e-3	6	-1.644e-3	8	-4.054e-5	9
63	N41	max	0	6	0	1	0	1	0	1	0	1	0	9
64		min	0	9	0	9	0	7	0	6	0	9	0	1
65	N42	max	0	1	0	9	0	1	6.417e-6	1	8.534e-6	1	1.322e-5	1
66		min	-.032	9	0	1	-.014	9	-6.462e-4	6	-8.411e-4	9	-8.646e-6	9
67	N39	max	.127	6	-.001	1	.029	8	1.788e-3	9	1.679e-3	6	1.157e-6	1
68		min	-.054	9	-.145	6	-.607	7	-6.332e-5	1	-8.11e-4	9	-5.316e-4	8

Envelope Member Section Stresses

	Member	Sec		Axial[...	lc	y Shear[..	lc	z Shear[k...	lc	y-T...	lc	y-Bot[ksi]	lc	z-Top[ksi]	lc	z-Bot[ksi]	lc
1	M1	1	...	0	1	-.099	1	.174	9	5.6...	8	-.257	1	0	6	3.387	9
2			...	0	1	-.558	8	-.041	6	.257	1	-5.675	8	-3.387	9	0	6
3		2	...	0	7	-.104	1	.172	9	3.8...	8	.074	1	-.054	1	2.825	9
4			...	-.001	8	-.563	8	-.039	6	-.074	1	-3.853	8	-2.825	9	.054	1
5		3	...	.002	7	-.109	1	.169	9	2.0...	8	.42	1	-.03	1	2.27	9
6			...	-.003	8	-.567	8	-.036	6	-.42	1	-2.017	8	-2.27	9	.03	1
7		4	...	.003	7	-.113	1	.167	9	.166	8	.781	1	-.005	1	1.723	9
8			...	-.004	8	-.572	8	-.034	6	-.781	1	-.166	8	-1.723	9	.005	1
9		5	...	.004	7	-.118	1	.165	9	-1.1...	1	1.699	8	.02	1	1.184	9
10			...	-.005	8	-.576	8	-.032	6	-1.6...	8	1.158	1	-1.184	9	-.02	1
11	M2	1	...	.016	8	.112	8	.165	9	-1.1...	1	1.699	8	.008	1	1.213	8
12			...	.004	1	.103	1	.032	6	-1.6...	8	1.158	1	-1.213	8	-.008	1
13		2	...	.017	9	.109	8	.163	9	-.879	1	1.396	8	.028	1	1.043	8
14			...	.004	1	.1	1	-.03	6	-1.3...	8	.879	1	-1.043	8	-.028	1
15		3	...	.018	9	.105	8	.161	9	-.612	1	1.104	8	.049	1	.879	8
16			...	.004	1	.096	1	-.028	6	-1.1...	8	.612	1	-.879	8	-.049	1
17		4	...	.019	9	.101	8	.159	9	-.355	1	.823	8	.122	9	.743	6
18			...	.004	1	.092	1	-.026	6	-.823	8	.355	1	-.743	6	-.122	9
19		5	...	.02	9	.097	8	.157	9	-.109	1	.552	8	.555	9	.811	6
20			...	.004	1	.088	1	-.024	6	-.552	8	.109	1	-.811	6	-.555	9
21	M3	1	...	.029	9	.059	8	.138	9	-.109	1	.552	8	.555	9	.811	6
22			...	.003	6	.05	1	-.005	6	-.552	8	.109	1	-.811	6	-.555	9
23		2	...	.031	9	.054	8	.136	9	.042	1	.372	8	.99	9	.824	6
24			...	.002	6	.045	1	-.003	6	-.372	8	.042	1	-.824	6	-.99	9
25		3	...	.032	9	.05	8	.133	9	.179	1	.207	8	1.418	9	.829	6
26			...	0	6	.041	1	0	6	-.207	8	.179	1	-.829	6	-1.418	9
27		4	...	.033	9	.045	8	.131	9	.302	1	.056	8	1.838	9	.826	6
28			...	0	6	.036	1	.002	6	-.056	8	.302	1	-.826	6	-1.838	9
29		5	...	.034	9	.041	8	.129	9	.409	1	-.081	8	2.252	9	.817	6

Company : **DMJM H&N**
Designer : **Kevin M. Jones - DMJMH&N**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

Mar 22, 2006
9:33 AM
Checked By:_____

Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	lc	y Shear[...	lc	z Shear[k...	lc	y-T...	lc	y-Bot[ksi]	lc	z-Top[ksi]	lc	z-Bot[ksi]	lc
30			...	-.002	6	.032	1	.004	6	.081	8	-.409	1	-.817	6	-2.252	9
31	M4	1	...	.05	9	.041	8	.107	9	.353	1	.029	8	2.252	9	.817	6
32			...	-.001	6	-.032	1	-.005	6	-.029	8	-.353	1	-.817	6	-2.252	9
33		2	...	.05	9	.04	8	.106	9	.365	1	.014	8	2.292	9	.815	6
34			...	-.001	6	-.031	1	-.005	6	-.014	8	-.365	1	-.815	6	-2.292	9
35		3	...	.05	9	.04	8	.106	9	.377	1	-.001	8	2.332	9	.813	6
36			...	-.002	6	-.031	1	-.005	1	.001	8	-.377	1	-.813	6	-2.332	9
37		4	...	.05	9	.039	8	.106	9	.388	1	-.016	8	2.372	9	.811	6
38			...	-.002	6	.03	1	-.005	1	.016	8	-.388	1	-.811	6	-2.372	9
39		5	...	.05	9	.038	8	.105	9	.399	1	-.031	8	2.411	9	.809	6
40			...	-.002	6	-.029	1	-.005	1	.031	8	-.399	1	-.809	6	-2.411	9
41	M5	1	...	.07	9	.038	8	.041	9	.214	1	.183	8	2.411	9	.809	6
42			...	0	6	-.029	1	0	1	.183	8	-.214	1	-.809	6	-2.411	9
43		2	...	.07	9	.038	8	.041	9	.225	1	.169	8	2.427	9	.806	6
44			...	0	6	-.029	1	0	1	.169	8	-.225	1	-.806	6	-2.427	9
45		3	...	.07	9	.037	8	.041	9	.236	1	.155	8	2.442	9	.803	6
46			...	0	6	-.028	1	0	1	.155	8	-.236	1	-.803	6	-2.442	9
47		4	...	.07	9	.037	8	.04	9	.246	1	.141	8	2.457	9	.8	6
48			...	0	6	-.028	1	0	1	.141	8	-.246	1	-.8	6	-2.457	9
49		5	...	.07	9	.036	8	.04	9	.257	1	.127	8	2.473	9	.797	6
50			...	0	6	-.027	1	0	1	.127	8	-.257	1	-.797	6	-2.473	9
51	M6	1	...	.07	9	.036	8	.012	8	.008	1	.299	8	2.473	9	.797	6
52			...	.002	6	-.027	1	-.04	7	-.299	8	-.008	1	-.797	6	-2.473	9
53		2	...	.07	9	.036	8	.012	8	.019	1	.286	8	2.459	9	.794	6
54			...	.002	6	-.027	1	-.04	7	-.286	8	-.019	1	-.794	6	-2.459	9
55		3	...	.07	9	.035	8	.012	8	.029	1	.273	8	2.446	9	.791	6
56			...	.002	6	-.026	1	-.04	7	-.273	8	-.029	1	-.791	6	-2.446	9
57		4	...	.07	9	.035	8	.013	8	.038	1	.259	8	2.433	9	.788	6
58			...	.003	6	-.026	1	-.04	7	-.259	8	-.038	1	-.788	6	-2.433	9
59		5	...	.07	9	.034	8	.013	8	.048	1	.246	8	2.419	9	.784	6
60			...	.003	6	-.025	1	-.04	7	-.246	8	-.048	1	-.784	6	-2.419	9
61	M7	1	...	.063	9	.034	8	.007	6	-.083	1	.306	8	2.419	9	.784	6
62			...	.004	6	-.025	1	-.071	9	-.306	8	.083	1	-.784	6	-2.419	9
63		2	...	.062	9	.032	8	.008	6	-.049	1	.259	8	2.317	9	.774	6
64			...	.004	1	-.023	1	-.072	9	-.259	8	.049	1	-.774	6	-2.317	9
65		3	...	.062	9	.03	8	.009	6	-.017	1	.215	8	2.213	9	.761	6
66			...	.004	1	-.021	1	-.073	9	-.215	8	.017	1	-.761	6	-2.213	9
67		4	...	.061	9	.028	8	.01	6	.011	1	.174	8	2.108	9	.748	6
68			...	.004	1	-.019	1	-.074	9	-.174	8	-.011	1	-.748	6	-2.108	9
69		5	...	.061	9	.026	8	.011	6	.037	1	.136	8	2.002	9	.732	6
70			...	.004	1	-.017	1	-.075	9	-.136	8	-.037	1	-.732	6	-2.002	9
71	M8	1	...	.061	9	.026	8	.011	6	.237	1	-.171	8	1.111	9	.6	6
72			...	.004	1	-.017	1	-.075	9	-.171	8	-.237	1	-.6	6	-1.111	9
73		2	...	.059	7	.015	8	.017	6	.328	6	-.32	9	.523	9	.495	6
74			...	.004	1	-.006	1	-.081	9	-.32	9	-.328	6	-.495	6	-.523	9
75		3	...	.062	7	.004	8	.022	6	.4	6	-.329	1	.351	8	.808	7
76			...	.004	1	-.005	1	-.086	9	-.329	1	-.4	6	-.808	7	-.351	8
77		4	...	.065	7	-.007	8	.027	6	.39	6	-.252	1	.537	8	1.477	7
78			...	.002	8	-.016	1	-.092	9	-.252	1	-.39	6	-1.477	7	-.537	8
79		5	...	.068	7	-.017	8	.033	6	.298	8	-.094	1	.763	8	2.187	7
80			...	-.001	8	-.026	1	-.097	9	-.094	1	-.298	8	-2.187	7	-.763	8
81	M9	1	...	.078	7	-.017	8	.04	6	.338	6	-.218	1	.763	8	2.187	7
82			...	-.005	8	-.026	1	-.068	9	-.218	1	-.338	6	-2.187	7	-.763	8
83		2	...	.078	7	-.018	8	.041	6	.331	6	-.208	1	.774	8	2.209	7
84			...	-.005	8	-.027	1	-.068	9	-.208	1	-.331	6	-2.209	7	-.774	8
85		3	...	.078	7	-.019	8	.041	6	.324	8	-.198	1	.786	8	2.231	7
86			...	-.006	8	-.028	1	-.069	9	-.198	1	-.324	8	-2.231	7	-.786	8

Company : **DMJM H&N**
Designer : **Kevin M. Jones - DMJMH&N**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

Mar 22, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[..	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
87		4	...	.078	7	-.019	8	.041	6	.317	8	-.188	1	.798	8	2.253	7
88			...	-.006	8	-.028	1	-.069	9	.188	1	-.317	8	-2.253	7	-.798	8
89		5	...	.078	7	-.02	8	.042	6	.31	8	-.177	1	.81	8	2.275	7
90			...	-.006	8	-.029	1	-.069	9	.177	1	-.31	8	-2.275	7	-.81	8
91	M10	1	...	.083	7	-.02	8	.048	6	.38	1	-.322	8	.81	8	2.275	7
92			...	-.013	8	-.029	1	0	1	.322	8	-.38	1	-2.275	7	-.81	8
93		2	...	.083	7	-.02	8	.049	6	.369	1	-.315	8	.818	8	2.265	7
94			...	-.013	8	-.029	1	0	9	.315	8	-.369	1	-2.265	7	-.818	8
95		3	...	.083	7	-.021	8	.049	6	.358	1	-.307	8	.826	8	2.255	7
96			...	-.013	8	-.03	1	0	9	.307	8	-.358	1	-2.255	7	-.826	8
97		4	...	.083	7	-.021	8	.049	6	.347	1	-.299	8	.834	8	2.245	7
98			...	-.014	8	-.03	1	0	9	.299	8	-.347	1	-2.245	7	-.834	8
99		5	...	.084	7	-.022	8	.05	6	.335	1	-.291	8	.842	8	2.235	7
100			...	-.014	8	-.031	1	-.001	9	.291	8	-.335	1	-2.235	7	-.842	8
101	M11	1	...	.066	7	-.022	8	.107	7	.442	1	-.221	8	.842	8	2.235	7
102			...	-.017	8	-.031	1	.005	8	.221	8	-.442	1	-2.235	7	.842	8
103		2	...	.066	7	-.022	8	.107	7	.43	1	-.213	8	.844	8	2.194	7
104			...	-.018	8	-.031	1	.005	8	.213	8	-.43	1	-2.194	7	-.844	8
105		3	...	.066	7	-.023	8	.107	7	.419	1	-.205	8	.846	8	2.154	7
106			...	-.018	8	-.032	1	.004	8	.205	8	-.419	1	-2.154	7	-.846	8
107		4	...	.066	7	-.023	8	.108	7	.407	1	-.196	8	.847	8	2.114	7
108			...	-.018	8	-.032	1	.004	8	.196	8	-.407	1	-2.114	7	-.847	8
109		5	...	.066	7	-.024	8	.108	7	.394	1	-.187	8	.849	8	2.073	7
110			...	-.018	8	-.033	1	.004	8	.187	8	-.394	1	-2.073	7	-.849	8
111	M12	1	...	.05	9	-.024	8	.138	7	.406	1	-.129	8	.849	8	2.073	7
112			...	-.018	6	-.033	1	-.005	8	.129	8	-.406	1	-2.073	7	-.849	8
113		2	...	.053	9	-.035	8	.144	7	.103	1	.103	8	.784	8	.965	7
114			...	-.021	6	-.044	1	-.011	8	.103	8	-.103	1	-.965	7	-.784	8
115		3	...	.056	9	-.046	8	.15	7	-.288	1	.425	6	.926	6	.064	9
116			...	-.024	6	-.055	1	-.017	8	.425	6	.288	1	-.064	9	-.926	6
117		4	...	.059	9	-.058	8	.155	7	-.768	1	.835	6	1.383	7	-.012	1
118			...	-.027	6	-.067	1	-.022	8	.835	6	.768	1	.012	1	-1.383	7
119		5	...	.061	9	-.069	8	.161	7	-1.3...	9	1.336	1	2.624	7	-.071	1
120			...	-.029	6	-.078	1	-.028	8	1.3...	1	1.328	9	.071	1	-2.624	7
121	M13	1	...	.061	9	-.069	8	.161	7	-1.3...	9	1.336	1	2.624	7	-.071	1
122			...	-.029	6	-.078	1	-.028	8	1.3...	1	1.328	9	.071	1	-2.624	7
123		2	...	.062	9	-.071	8	.162	7	-1.4...	8	1.424	1	2.804	7	-.08	1
124			...	-.03	6	-.08	1	-.029	8	1.4...	1	1.408	8	.08	1	-2.804	7
125		3	...	.062	9	-.072	8	.163	7	-1.4...	8	1.514	1	2.986	7	-.088	1
126			...	-.03	6	-.081	1	-.03	8	1.5...	1	1.489	8	.088	1	-2.986	7
127		4	...	.063	9	-.074	8	.163	7	-1.57	8	1.606	1	3.169	7	-.097	1
128			...	-.031	6	-.083	1	-.03	8	1.6...	1	1.57	8	.097	1	-3.169	7
129		5	...	.063	9	-.075	8	.164	7	-1.6...	8	1.7	1	3.352	7	-.105	1
130			...	-.031	6	-.084	1	-.031	8	1.7	1	1.654	8	.105	1	-3.352	7
131	M14	1	...	0	9	0	1	0	1	0	1	0	1	0	1	0	1
132			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
133		2	...	0	9	0	1	0	1	0	1	0	1	0	1	0	1
134			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
135		3	...	0	9	0	1	0	1	0	1	0	1	0	1	0	1
136			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
137		4	...	0	9	0	1	0	1	0	1	0	1	0	1	0	1
138			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
139		5	...	0	9	0	1	0	1	0	1	0	1	0	1	0	1
140			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
141	M15	1	...	0	6	.108	8	.051	6	.119	1	.772	7	.277	9	.611	6
142			...	-.004	9	-.014	7	-.023	9	.772	7	.119	1	.611	6	.277	9
143		2	...	.001	6	.101	8	.047	6	.155	1	.832	7	.204	9	.444	6

Company : **DMJM H&N**
Designer : **Kevin M. Jones - DMJMH&N**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

Mar 22, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
144				-.006	9	-.021	7	.02	9	-.832	7	-.155	1	-.444	6	-.204	9
145		3	...	.003	6	.094	8	.043	6	.242	8	.917	7	.143	9	.29	6
146				-.008	9	-.028	7	-.016	9	-.917	7	-.242	8	-.29	6	-.143	9
147		4	...	.005	6	.086	8	.039	6	.55	8	1.027	7	.097	8	.151	7
148				-.01	9	-.036	7	-.012	9	-1.0...	7	-.55	8	-.151	7	-.097	8
149		5	...	.007	6	.079	8	.036	6	.832	8	1.162	7	.065	8	.026	7
150				-.012	9	-.043	7	-.009	9	-1.1...	7	-.832	8	-.026	7	-.065	8
151	M16	1	...	0	1	.219	8	.103	6	-.457	1	5.173	8	1.629	9	3.476	6
152				0	1	.004	7	-.055	9	-5.1...	8	.457	1	-3.476	6	-1.629	9
153		2	...	0	8	.214	8	.1	6	-.291	1	4.47	8	1.455	9	3.146	6
154				-.001	9	0	7	-.053	9	-4.47	8	.291	1	-3.146	6	-1.455	9
155		3	...	.002	8	.209	8	.098	6	-.14	1	3.782	8	1.287	9	2.824	6
156				-.003	9	-.005	7	-.05	9	-3.7...	8	.14	1	-2.824	6	-1.287	9
157		4	...	.003	8	.204	8	.096	6	-.004	1	3.11	8	1.128	9	2.509	6
158				-.004	9	-.009	7	-.048	9	-3.11	8	.004	1	-2.509	6	-1.128	9
159		5	...	.004	8	.199	8	.093	6	.117	1	2.454	8	.975	9	2.202	6
160				-.005	9	-.014	7	-.046	9	-2.4...	8	-.117	1	-2.202	6	-.975	9
161	M17	1	...	-.002	1	.199	8	.093	6	-.117	1	2.454	8	1.013	9	2.201	6
162				-.005	9	-.015	7	-.046	9	-2.4...	8	-.117	1	-2.201	6	-1.013	9
163		2	...	-.002	1	.197	8	.092	6	.171	1	2.13	8	.939	9	2.049	6
164				-.006	9	-.017	7	-.044	9	-2.13	8	-.171	1	-2.049	6	-.939	9
165		3	...	-.002	1	.195	8	.091	6	.222	1	1.966	9	.867	9	1.899	6
166				-.006	9	-.019	7	-.043	9	-1.9...	9	-.222	1	-1.899	6	-.867	9
167		4	...	-.002	6	.192	8	.09	6	.269	1	1.995	9	.797	9	1.751	6
168				-.007	9	-.022	7	-.042	9	-1.9...	9	-.269	1	-1.751	6	-.797	9
169		5	...	-.001	6	.19	8	.089	6	.312	1	2.03	7	.729	9	1.605	6
170				-.007	9	-.024	7	-.041	9	-2.03	7	-.312	1	-1.605	6	-.729	9
171	M18	1	...	.051	8	.043	6	.044	6	.465	7	.517	8	3.629	7	3.229	8
172				-.057	7	0	1	-.06	9	-.517	8	-.465	7	-3.229	8	-3.629	7
173		2	...	.015	8	.042	8	.079	6	1.1...	6	0	1	1.415	7	1.487	8
174				-.092	7	0	1	.096	9	0	1	-1.171	6	-1.487	8	-1.415	7
175		3	...	-.021	8	.078	8	.115	6	1.8...	8	.002	1	1.363	6	1.907	9
176				-.128	7	-.031	7	-.132	9	-.002	1	-1.895	8	-1.907	9	-1.363	6
177		4	...	.394	6	0	1	0	1	1.0...	8	.184	7	-.071	1	3.988	7
178				.06	1	-.146	8	-.252	6	-.184	7	-1.085	8	-3.988	7	.071	1
179		5	...	.358	6	0	1	0	1	-.012	1	2.551	8	-.044	1	6.985	6
180				.024	1	-.11	8	-.216	6	-2.5...	8	.012	1	-6.985	6	.044	1
181	M19	1	...	.001	6	.002	9	.001	8	0	6	0	7	0	7	0	8
182				0	7	0	8	.001	6	0	7	0	6	0	8	0	7
183		2	...	0	6	.002	9	0	8	0	6	0	7	0	7	0	8
184				0	7	0	8	0	6	0	7	0	6	0	8	0	7
185		3	...	0	6	.001	9	0	8	0	6	0	7	0	7	0	8
186				0	7	0	8	0	6	0	7	0	6	0	8	0	7
187		4	...	0	6	0	9	0	8	0	6	0	7	0	7	0	9
188				0	7	0	8	0	6	0	7	0	6	0	9	0	7
189		5	...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
190				0	1	0	1	0	1	0	1	0	1	0	1	0	1
191	M20	1	...	.191	6	.182	6	.062	8	-.016	1	2.657	6	.753	8	-.002	1
192				.009	1	.017	1	0	1	-2.6...	6	.016	1	-.002	1	-.753	8
193		2	...	.185	6	.179	6	.056	8	.058	1	1.666	6	1.076	8	-.003	1
194				.005	1	.009	1	0	1	-1.6...	6	-.058	1	.003	1	-1.076	8
195		3	...	.178	6	.175	6	.058	6	.088	1	.694	6	1.367	8	-.004	1
196				0	1	.002	1	0	1	-.694	6	-.088	1	.004	1	-1.367	8
197		4	...	.172	6	.172	6	.064	6	.614	9	-.075	1	1.625	8	-.005	1
198				.004	1	.006	1	0	1	.075	1	-.614	9	.005	1	-1.625	8
199		5	...	.166	6	.168	6	.07	6	1.2...	9	-.017	1	1.976	6	-.005	1
200				.008	1	.014	1	0	1	.017	1	1.266	9	.005	1	-1.976	6

Company : **DMJM H&N**
Designer : **Kevin M. Jones - DMJMH&N**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

Mar 22, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	Ic	y Shear[...	Ic	z Shear[k...	Ic	y-T...	Ic	y-Bot[ksi]	Ic	z-Top[ksi]	Ic	z-Bot[ksi]	Ic
201	M21	1	...	.165	6	.179	6	.048	7	.804	7	-.015	1	2.129	6	-.008	1
202			...	-.008	1	-.016	1	0	1	.015	1	-.804	7	.008	1	-2.129	6
203		2	...	.165	6	.179	6	.048	7	.827	7	-.012	1	2.137	6	-.008	1
204			...	-.008	1	-.016	1	0	1	.012	1	-.827	7	.008	1	-2.137	6
205		3	...	.165	6	.179	6	.048	7	.85	7	-.009	1	2.145	6	-.008	1
206			...	-.008	1	-.016	1	0	1	.009	1	-.85	7	.008	1	-2.145	6
207		4	...	.165	6	.179	6	.048	7	.872	7	-.006	1	2.153	6	-.008	1
208			...	-.008	1	-.016	1	0	1	.006	1	-.872	7	.008	1	-2.153	6
209		5	...	.164	6	.178	6	.049	7	.895	7	-.003	1	2.16	6	-.008	1
210			...	-.008	1	-.017	1	0	1	.003	1	-.895	7	.008	1	-2.16	6
211	M22	1	...	.153	6	.223	8	.01	7	-.003	1	.236	8	2.142	6	-.007	1
212			...	-.007	1	-.019	1	-.036	8	-.236	8	.003	1	.007	1	-2.142	6
213		2	...	.153	6	.223	8	.01	7	-.007	1	.194	8	2.139	6	-.007	1
214			...	-.007	1	-.019	1	-.036	8	-.194	8	.007	1	.007	1	-2.139	6
215		3	...	.153	6	.222	8	.01	7	.004	7	.152	8	2.136	6	-.007	1
216			...	-.007	1	-.02	1	-.036	8	-.152	8	-.004	7	.007	1	-2.136	6
217		4	...	.153	6	.222	8	.01	7	.03	7	.11	8	2.134	6	-.008	1
218			...	-.007	1	-.02	1	-.036	8	-.11	8	-.03	7	.008	1	-2.134	6
219		5	...	.153	6	.222	8	.01	7	.055	7	.068	8	2.131	6	-.008	1
220			...	-.008	1	-.02	1	-.036	8	-.068	8	-.055	7	.008	1	-2.131	6
221	M23	1	...	.119	6	.285	8	0	1	-.021	1	.853	8	1.777	6	-.003	1
222			...	-.005	1	-.023	1	-.067	8	-.853	8	.021	1	.003	1	-1.777	6
223		2	...	.119	6	.285	8	0	1	-.025	1	.799	8	1.767	6	-.003	1
224			...	-.005	1	-.024	1	.067	8	-.799	8	.025	1	.003	1	-1.767	6
225		3	...	.119	6	.285	8	0	1	-.03	1	.745	8	1.756	6	-.003	1
226			...	-.005	1	-.024	1	-.067	8	-.745	8	.03	1	.003	1	-1.756	6
227		4	...	.119	6	.284	8	0	1	-.034	1	.691	8	1.745	6	-.003	1
228			...	-.005	1	-.024	1	-.067	8	-.691	8	.034	1	.003	1	-1.745	6
229		5	...	.119	6	.284	8	0	1	-.039	1	.638	8	1.735	6	-.003	1
230			...	-.005	1	-.025	1	-.066	8	-.638	8	.039	1	.003	1	-1.735	6
231	M24	1	...	.067	6	.338	6	0	1	-.039	1	1.197	8	1.275	6	0	1
232			...	.002	1	-.027	1	-.085	6	-1.1	8	.039	1	0	1	-1.275	6
233		2	...	.067	6	.338	6	0	1	-.044	1	1.134	8	1.259	6	0	1
234			...	.002	1	-.027	1	-.085	6	-1.1	8	.044	1	0	1	-1.259	6
235		3	...	.067	6	.337	6	0	1	-.049	1	1.076	9	1.243	6	0	1
236			...	.002	1	-.027	1	-.084	6	-1.0	9	.049	1	0	1	-1.243	6
237		4	...	.067	6	.337	6	0	1	-.054	1	1.037	9	1.227	6	0	1
238			...	-.002	1	-.028	1	-.084	6	-1.0	9	.054	1	0	1	-1.227	6
239		5	...	.067	6	.337	6	0	1	-.059	1	.998	9	1.211	6	0	1
240			...	-.002	1	-.028	1	-.084	6	-.998	9	.059	1	0	1	-1.211	6
241	M25	1	...	.037	6	.352	6	0	1	-.058	1	1.218	9	.988	6	-.002	1
242			...	0	1	-.029	1	-.095	6	-1.2	9	.058	1	.002	1	-.988	6
243		2	...	.037	6	.351	6	0	1	-.072	1	1.115	9	.942	6	-.002	1
244			...	0	1	.03	1	-.095	6	-1.1	9	.072	1	.002	1	-.942	6
245		3	...	.037	6	.35	6	0	1	-.087	1	1.012	9	.911	7	-.002	1
246			...	0	1	-.031	1	-.094	6	-1.0	9	.087	1	.002	1	-.911	7
247		4	...	.038	6	.349	6	0	1	-.102	1	.909	9	.883	7	-.003	1
248			...	0	1	-.032	1	-.094	6	-.909	9	.102	1	.003	1	-.883	7
249		5	...	.038	6	.348	6	0	1	-.117	1	.807	9	.854	7	-.003	1
250			...	0	1	-.033	1	-.093	6	-.807	9	.117	1	.003	1	-.854	7
251	M26	1	...	.038	6	.056	9	0	1	-.117	1	.807	9	.854	7	-.003	1
252			...	0	1	-.033	1	-.093	6	-.807	9	.117	1	.003	1	-.854	7
253		2	...	.04	6	.048	9	0	1	-.002	1	.596	9	.606	7	-.005	1
254			...	0	1	-.024	1	-.089	6	-.596	9	.002	1	.005	1	-.606	7
255		3	...	.042	6	.039	9	0	1	.077	1	.421	9	.339	7	.182	8
256			...	0	1	-.015	1	-.084	6	-.421	9	-.077	1	-.182	8	-.339	7
257		4	...	.044	6	.03	9	0	1	.121	1	.281	9	.055	7	.493	8

Company : **DMJM H&N**
Designer : **Kevin M. Jones - DMJMH&N**
Job Number : **145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis**

Mar 22, 2006
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Envelope Member Section Stresses (Continued)

	Member	Sec		Axial[...	lc	y Shear[...	lc	z Shear[k...	lc	y-T...	lc	y-Bot[ksi]	lc	z-Top[ksi]	lc	z-Bot[ksi]	lc
258			...	0	1	.006	1	-.08	6	-.281	9	-.121	1	-.493	8	-.055	7
259		5	...	.047	6	.021	9	0	1	.129	1	.176	9	.012	1	.785	8
260			...	0	1	-.002	1	-.077	7	-.176	9	-.129	1	-.785	8	-.012	1
261	M27	1	...	.047	6	.021	9	0	1	.112	1	.012	9	.016	1	1.322	8
262			...	0	1	-.002	1	-.077	7	-.012	9	-.112	1	-1.322	8	-.016	1
263		2	...	.049	6	.014	9	0	1	.089	1	-.052	9	.018	1	1.571	8
264			...	0	1	-.01	1	-.081	7	.052	9	-.089	1	-1.571	8	-.018	1
265		3	...	.051	6	.006	9	0	1	.087	9	-.037	1	.02	1	1.806	8
266			...	0	1	-.018	1	-.084	7	.037	1	-.087	9	-1.806	8	-.02	1
267		4	...	.052	6	-.002	9	0	1	.093	9	.043	1	.022	1	2.026	8
268			...	0	9	-.026	1	-.088	7	-.043	1	-.093	9	-2.026	8	-.022	1
269		5	...	.054	6	-.01	9	0	1	.07	9	.153	1	.024	1	2.231	8
270			...	.003	9	-.034	1	-.092	7	-.153	1	-.07	9	-2.231	8	-.024	1
271	M28	1	...	.031	8	.049	8	.036	6	.832	8	1.162	7	0	1	.075	8
272			...	-.023	7	-.017	7	-.009	9	-1.1...	7	-.832	8	-.075	8	0	1
273		2	...	.031	8	.046	8	.034	6	.895	8	1.185	7	.007	7	.084	8
274			...	-.024	7	-.018	7	-.007	9	-1.1...	7	-.895	8	-.084	8	-.007	7
275		3	...	.031	8	.043	8	.033	6	.954	8	1.209	7	.051	6	.092	9
276			...	-.026	7	-.019	7	-.006	9	-1.2...	7	-.954	8	-.092	9	-.051	6
277		4	...	.03	8	.04	8	.032	6	1.0...	8	1.235	7	.093	6	.098	9
278			...	-.027	7	-.02	7	-.004	9	-1.2...	7	-1.008	8	-.098	9	-.093	6
279		5	...	.03	8	.037	8	.03	6	1.0...	8	1.262	7	.134	6	.103	9
280			...	-.029	7	-.021	7	-.003	9	-1.2...	7	-1.059	8	-.103	9	-.134	6
281	M29	1	...	.03	8	.038	8	.03	6	1.0...	8	1.262	7	.134	6	.103	9
282			...	-.028	7	-.02	7	-.003	9	-1.2...	7	-1.059	8	-.103	9	-.134	6
283		2	...	.03	8	.035	8	.029	6	1.1...	8	1.289	7	.172	6	.106	9
284			...	-.03	7	-.021	7	-.002	9	-1.2...	7	-1.108	8	-.106	9	-.172	6
285		3	...	.029	8	.032	8	.027	6	1.1...	8	1.318	7	.209	6	.107	9
286			...	-.031	7	.023	7	0	9	-1.3...	7	-1.152	8	-.107	9	-.209	6
287		4	...	.029	8	.029	8	.026	6	1.1...	8	1.349	7	.244	6	.106	9
288			...	-.033	7	-.024	1	0	1	-1.3...	7	-1.192	8	-.106	9	-.244	6
289		5	...	.028	8	.026	8	.024	6	1.2...	8	1.381	7	.277	6	.104	9
290			...	-.034	7	-.027	1	0	1	-1.3...	7	-1.229	8	-.104	9	-.277	6
291	M30	1	...	0	6	0	1	0	1	0	1	0	1	0	1	0	1
292			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
293		2	...	0	6	0	1	0	1	0	1	0	1	0	1	0	1
294			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
295		3	...	0	6	0	1	0	1	0	1	0	1	0	1	0	1
296			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
297		4	...	0	6	0	1	0	1	0	1	0	1	0	1	0	1
298			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
299		5	...	0	6	0	1	0	1	0	1	0	1	0	1	0	1
300			...	0	1	0	1	0	1	0	1	0	1	0	1	0	1
301	M31	1	...	.054	6	.03	1	0	1	.07	9	.153	1	.024	1	2.231	8
302			...	.003	9	.002	9	.092	7	-.153	1	-.07	9	-2.231	8	-.024	1
303		2	...	.056	6	.024	1	0	1	.06	9	.086	1	.025	1	2.386	9
304			...	.004	9	.007	9	.095	7	-.086	1	-.06	9	-2.386	9	-.025	1
305		3	...	.057	6	.019	1	0	1	.036	9	.032	1	.027	1	2.613	9
306			...	-.006	9	-.012	9	-.098	7	-.032	1	-.036	9	-2.613	9	-.027	1
307		4	...	.058	6	.013	1	0	1	.008	1	.002	9	.028	1	2.846	9
308			...	-.007	9	-.018	9	-.1	7	-.002	9	-.008	1	-2.846	9	-.028	1
309		5	...	.06	6	.008	1	0	1	.035	1	.052	9	.029	1	3.086	9
310			...	-.008	9	.023	9	-.103	7	-.052	9	-.035	1	-3.086	9	-.029	1

Company : DMJM H&N
Designer : Kevin M. Jones - DMJMH&N
Job Number : 145579-V-CA-005 DBVS Off-Gas Treatment Duct Analysis

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Envelope Member Section Torsion

	Member	Sec		Torque[k...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
1	M1	1	max	-.037	1	-.081	1	NC		NC		NC		NC	
2			min	-.114	8	-.251	8	NC		NC		NC		NC	
3		2	max	-.037	1	-.081	1	NC		NC		NC		NC	
4			min	-.114	8	-.251	8	NC		NC		NC		NC	
5		3	max	-.037	1	-.081	1	NC		NC		NC		NC	
6			min	-.114	8	-.251	8	NC		NC		NC		NC	
7		4	max	-.037	1	-.081	1	NC		NC		NC		NC	
8			min	-.114	8	-.251	8	NC		NC		NC		NC	
9		5	max	-.037	1	-.081	1	NC		NC		NC		NC	
10			min	-.114	8	-.251	8	NC		NC		NC		NC	
11	M2	1	max	-.037	1	-.082	1	NC		NC		NC		NC	
12			min	-.094	8	-.206	8	NC		NC		NC		NC	
13		2	max	-.037	1	-.082	1	NC		NC		NC		NC	
14			min	-.094	8	-.206	8	NC		NC		NC		NC	
15		3	max	-.037	1	-.082	1	NC		NC		NC		NC	
16			min	-.094	8	-.206	8	NC		NC		NC		NC	
17		4	max	-.037	1	-.082	1	NC		NC		NC		NC	
18			min	-.094	8	-.206	8	NC		NC		NC		NC	
19		5	max	-.037	1	-.082	1	NC		NC		NC		NC	
20			min	-.094	8	-.206	8	NC		NC		NC		NC	
21	M3	1	max	-.037	1	-.082	1	NC		NC		NC		NC	
22			min	-.094	8	-.206	8	NC		NC		NC		NC	
23		2	max	-.037	1	-.082	1	NC		NC		NC		NC	
24			min	-.094	8	-.206	8	NC		NC		NC		NC	
25		3	max	-.037	1	-.082	1	NC		NC		NC		NC	
26			min	-.094	8	-.206	8	NC		NC		NC		NC	
27		4	max	-.037	1	-.082	1	NC		NC		NC		NC	
28			min	-.094	8	-.206	8	NC		NC		NC		NC	
29		5	max	-.037	1	-.082	1	NC		NC		NC		NC	
30			min	-.094	8	-.206	8	NC		NC		NC		NC	
31	M4	1	max	-.06	1	-.132	1	NC		NC		NC		NC	
32			min	-.095	8	-.21	8	NC		NC		NC		NC	
33		2	max	-.06	1	-.132	1	NC		NC		NC		NC	
34			min	-.095	8	-.21	8	NC		NC		NC		NC	
35		3	max	-.06	1	-.132	1	NC		NC		NC		NC	
36			min	-.095	8	-.21	8	NC		NC		NC		NC	
37		4	max	-.06	1	-.132	1	NC		NC		NC		NC	
38			min	-.095	8	-.21	8	NC		NC		NC		NC	
39		5	max	-.06	1	-.132	1	NC		NC		NC		NC	
40			min	-.095	8	-.21	8	NC		NC		NC		NC	
41	M5	1	max	-.085	6	-.187	6	NC		NC		NC		NC	
42			min	-.097	1	-.214	1	NC		NC		NC		NC	
43		2	max	-.085	6	-.187	6	NC		NC		NC		NC	
44			min	-.097	1	-.214	1	NC		NC		NC		NC	
45		3	max	-.085	6	-.187	6	NC		NC		NC		NC	
46			min	-.097	1	-.214	1	NC		NC		NC		NC	
47		4	max	-.085	6	-.187	6	NC		NC		NC		NC	
48			min	-.097	1	-.214	1	NC		NC		NC		NC	
49		5	max	-.085	6	-.187	6	NC		NC		NC		NC	
50			min	-.097	1	-.214	1	NC		NC		NC		NC	
51	M6	1	max	-.06	6	-.132	6	NC		NC		NC		NC	
52			min	-.113	1	-.249	1	NC		NC		NC		NC	
53		2	max	-.06	6	-.132	6	NC		NC		NC		NC	
54			min	-.113	1	-.249	1	NC		NC		NC		NC	
55		3	max	-.06	6	-.132	6	NC		NC		NC		NC	
56			min	-.113	1	-.249	1	NC		NC		NC		NC	

Company : DMJM H&N
Designer : Kevin M. Jones - DMJMH&N
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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[k...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
57		4	max	-.06	6	-.132	6	NC		NC		NC		NC	
58			min	-.113	1	-.249	1	NC		NC		NC		NC	
59		5	max	-.06	6	-.132	6	NC		NC		NC		NC	
60			min	-.113	1	-.249	1	NC		NC		NC		NC	
61	M7	1	max	-.044	8	-.096	8	NC		NC		NC		NC	
62			min	-.112	1	-.247	1	NC		NC		NC		NC	
63		2	max	-.044	8	-.096	8	NC		NC		NC		NC	
64			min	-.112	1	-.247	1	NC		NC		NC		NC	
65		3	max	-.044	8	-.096	8	NC		NC		NC		NC	
66			min	-.112	1	-.247	1	NC		NC		NC		NC	
67		4	max	-.044	8	-.096	8	NC		NC		NC		NC	
68			min	-.112	1	-.247	1	NC		NC		NC		NC	
69		5	max	-.044	8	-.096	8	NC		NC		NC		NC	
70			min	-.112	1	-.247	1	NC		NC		NC		NC	
71	M8	1	max	-.044	8	-.096	8	NC		NC		NC		NC	
72			min	-.112	1	-.247	1	NC		NC		NC		NC	
73		2	max	-.044	8	-.096	8	NC		NC		NC		NC	
74			min	-.112	1	-.247	1	NC		NC		NC		NC	
75		3	max	-.044	8	-.096	8	NC		NC		NC		NC	
76			min	-.112	1	-.247	1	NC		NC		NC		NC	
77		4	max	-.044	8	-.096	8	NC		NC		NC		NC	
78			min	-.112	1	-.247	1	NC		NC		NC		NC	
79		5	max	-.044	8	-.096	8	NC		NC		NC		NC	
80			min	-.112	1	-.247	1	NC		NC		NC		NC	
81	M9	1	max	-.024	8	-.054	8	NC		NC		NC		NC	
82			min	-.103	1	-.227	1	NC		NC		NC		NC	
83		2	max	-.024	8	-.054	8	NC		NC		NC		NC	
84			min	-.103	1	-.227	1	NC		NC		NC		NC	
85		3	max	-.024	8	-.054	8	NC		NC		NC		NC	
86			min	-.103	1	-.227	1	NC		NC		NC		NC	
87		4	max	-.024	8	-.054	8	NC		NC		NC		NC	
88			min	-.103	1	-.227	1	NC		NC		NC		NC	
89		5	max	-.024	8	-.054	8	NC		NC		NC		NC	
90			min	-.103	1	-.227	1	NC		NC		NC		NC	
91	M10	1	max	.014	8	.031	8	NC		NC		NC		NC	
92			min	-.069	1	-.152	1	NC		NC		NC		NC	
93		2	max	.014	8	.031	8	NC		NC		NC		NC	
94			min	-.069	1	-.152	1	NC		NC		NC		NC	
95		3	max	.014	8	.031	8	NC		NC		NC		NC	
96			min	-.069	1	-.152	1	NC		NC		NC		NC	
97		4	max	.014	8	.031	8	NC		NC		NC		NC	
98			min	-.069	1	-.152	1	NC		NC		NC		NC	
99		5	max	.014	8	.031	8	NC		NC		NC		NC	
100			min	-.069	1	-.152	1	NC		NC		NC		NC	
101	M11	1	max	.045	8	.099	8	NC		NC		NC		NC	
102			min	-.022	1	-.048	1	NC		NC		NC		NC	
103		2	max	.045	8	.099	8	NC		NC		NC		NC	
104			min	-.022	1	-.048	1	NC		NC		NC		NC	
105		3	max	.045	8	.099	8	NC		NC		NC		NC	
106			min	-.022	1	-.048	1	NC		NC		NC		NC	
107		4	max	.045	8	.099	8	NC		NC		NC		NC	
108			min	-.022	1	-.048	1	NC		NC		NC		NC	
109		5	max	.045	8	.099	8	NC		NC		NC		NC	
110			min	-.022	1	-.048	1	NC		NC		NC		NC	
111	M12	1	max	.055	8	.12	8	NC		NC		NC		NC	
112			min	.002	1	.005	1	NC		NC		NC		NC	
113		2	max	.055	8	.12	8	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[k...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
114			min	.002	1	.005	1	NC		NC		NC		NC	
115		3	max	.055	8	.12	8	NC		NC		NC		NC	
116			min	.002	1	.005	1	NC		NC		NC		NC	
117		4	max	.055	8	.12	8	NC		NC		NC		NC	
118			min	.002	1	.005	1	NC		NC		NC		NC	
119		5	max	.055	8	.12	8	NC		NC		NC		NC	
120			min	.002	1	.005	1	NC		NC		NC		NC	
121	M13	1	max	.055	8	.12	8	NC		NC		NC		NC	
122			min	.002	1	.005	1	NC		NC		NC		NC	
123		2	max	.055	8	.12	8	NC		NC		NC		NC	
124			min	.002	1	.005	1	NC		NC		NC		NC	
125		3	max	.055	8	.12	8	NC		NC		NC		NC	
126			min	.002	1	.005	1	NC		NC		NC		NC	
127		4	max	.055	8	.12	8	NC		NC		NC		NC	
128			min	.002	1	.005	1	NC		NC		NC		NC	
129		5	max	.055	8	.12	8	NC		NC		NC		NC	
130			min	.002	1	.005	1	NC		NC		NC		NC	
131	M14	1	max	-.044	8	0	1	NC		NC		NC		NC	
132			min	-.112	1	0	1	NC		NC		NC		NC	
133		2	max	-.044	8	0	1	NC		NC		NC		NC	
134			min	-.112	1	0	1	NC		NC		NC		NC	
135		3	max	-.044	8	0	1	NC		NC		NC		NC	
136			min	-.112	1	0	1	NC		NC		NC		NC	
137		4	max	-.044	8	0	1	NC		NC		NC		NC	
138			min	-.112	1	0	1	NC		NC		NC		NC	
139		5	max	-.044	8	0	1	NC		NC		NC		NC	
140			min	-.112	1	0	1	NC		NC		NC		NC	
141	M15	1	max	.11	8	.092	8	NC		NC		NC		NC	
142			min	0	1	0	1	NC		NC		NC		NC	
143		2	max	.11	8	.092	8	NC		NC		NC		NC	
144			min	0	1	0	1	NC		NC		NC		NC	
145		3	max	.11	8	.092	8	NC		NC		NC		NC	
146			min	0	1	0	1	NC		NC		NC		NC	
147		4	max	.11	8	.092	8	NC		NC		NC		NC	
148			min	0	1	0	1	NC		NC		NC		NC	
149		5	max	.11	8	.092	8	NC		NC		NC		NC	
150			min	0	1	0	1	NC		NC		NC		NC	
151	M16	1	max	.126	8	.277	8	NC		NC		NC		NC	
152			min	-.021	7	-.045	7	NC		NC		NC		NC	
153		2	max	.126	8	.277	8	NC		NC		NC		NC	
154			min	-.021	7	-.045	7	NC		NC		NC		NC	
155		3	max	.126	8	.277	8	NC		NC		NC		NC	
156			min	-.021	7	-.045	7	NC		NC		NC		NC	
157		4	max	.126	8	.277	8	NC		NC		NC		NC	
158			min	-.021	7	-.045	7	NC		NC		NC		NC	
159		5	max	.126	8	.277	8	NC		NC		NC		NC	
160			min	-.021	7	-.045	7	NC		NC		NC		NC	
161	M17	1	max	.11	8	.241	8	NC		NC		NC		NC	
162			min	0	1	0	1	NC		NC		NC		NC	
163		2	max	.11	8	.241	8	NC		NC		NC		NC	
164			min	0	1	0	1	NC		NC		NC		NC	
165		3	max	.11	8	.241	8	NC		NC		NC		NC	
166			min	0	1	0	1	NC		NC		NC		NC	
167		4	max	.11	8	.241	8	NC		NC		NC		NC	
168			min	0	1	0	1	NC		NC		NC		NC	
169		5	max	.11	8	.241	8	NC		NC		NC		NC	
170			min	0	1	0	1	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[k...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
171	M18	1	max	.128	6	.282	6	NC		NC		NC		NC	
172			min	0	1	-.002	1	NC		NC		NC		NC	
173		2	max	.128	6	.282	6	NC		NC		NC		NC	
174			min	0	1	-.002	1	NC		NC		NC		NC	
175		3	max	.128	6	.282	6	NC		NC		NC		NC	
176			min	0	1	-.002	1	NC		NC		NC		NC	
177		4	max	.128	6	.282	6	NC		NC		NC		NC	
178			min	0	1	-.002	1	NC		NC		NC		NC	
179		5	max	.128	6	.282	6	NC		NC		NC		NC	
180			min	0	1	-.002	1	NC		NC		NC		NC	
181	M19	1	max	0	1	0	1	NC		NC		NC		NC	
182			min	0	1	0	1	NC		NC		NC		NC	
183		2	max	0	1	0	1	NC		NC		NC		NC	
184			min	0	1	0	1	NC		NC		NC		NC	
185		3	max	0	1	0	1	NC		NC		NC		NC	
186			min	0	1	0	1	NC		NC		NC		NC	
187		4	max	0	1	0	1	NC		NC		NC		NC	
188			min	0	1	0	1	NC		NC		NC		NC	
189		5	max	0	1	0	1	NC		NC		NC		NC	
190			min	0	1	0	1	NC		NC		NC		NC	
191	M20	1	max	-.003	1	-.002	1	NC		NC		NC		NC	
192			min	-.367	8	-.308	8	NC		NC		NC		NC	
193		2	max	-.003	1	-.002	1	NC		NC		NC		NC	
194			min	-.367	8	-.308	8	NC		NC		NC		NC	
195		3	max	-.003	1	-.002	1	NC		NC		NC		NC	
196			min	-.367	8	-.308	8	NC		NC		NC		NC	
197		4	max	-.003	1	-.002	1	NC		NC		NC		NC	
198			min	-.367	8	-.308	8	NC		NC		NC		NC	
199		5	max	-.003	1	-.002	1	NC		NC		NC		NC	
200			min	-.367	8	-.308	8	NC		NC		NC		NC	
201	M21	1	max	-.005	1	-.004	1	NC		NC		NC		NC	
202			min	-.552	8	-.462	8	NC		NC		NC		NC	
203		2	max	-.005	1	-.004	1	NC		NC		NC		NC	
204			min	-.552	8	-.462	8	NC		NC		NC		NC	
205		3	max	-.005	1	-.004	1	NC		NC		NC		NC	
206			min	-.552	8	-.462	8	NC		NC		NC		NC	
207		4	max	-.005	1	-.004	1	NC		NC		NC		NC	
208			min	-.552	8	-.462	8	NC		NC		NC		NC	
209		5	max	-.005	1	-.004	1	NC		NC		NC		NC	
210			min	-.552	8	-.462	8	NC		NC		NC		NC	
211	M22	1	max	-.005	1	-.004	1	NC		NC		NC		NC	
212			min	-.778	8	-.651	8	NC		NC		NC		NC	
213		2	max	-.005	1	-.004	1	NC		NC		NC		NC	
214			min	-.778	8	-.651	8	NC		NC		NC		NC	
215		3	max	-.005	1	-.004	1	NC		NC		NC		NC	
216			min	-.778	8	-.651	8	NC		NC		NC		NC	
217		4	max	-.005	1	-.004	1	NC		NC		NC		NC	
218			min	-.778	8	-.651	8	NC		NC		NC		NC	
219		5	max	-.005	1	-.004	1	NC		NC		NC		NC	
220			min	-.778	8	-.651	8	NC		NC		NC		NC	
221	M23	1	max	-.002	1	-.002	1	NC		NC		NC		NC	
222			min	-.916	8	-.767	8	NC		NC		NC		NC	
223		2	max	-.002	1	-.002	1	NC		NC		NC		NC	
224			min	-.916	8	-.767	8	NC		NC		NC		NC	
225		3	max	-.002	1	-.002	1	NC		NC		NC		NC	
226			min	-.916	8	-.767	8	NC		NC		NC		NC	
227		4	max	-.002	1	-.002	1	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[k...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
228			min	-.916	8	-.767	8	NC		NC		NC		NC	
229		5	max	-.002	1	-.002	1	NC		NC		NC		NC	
230			min	-.916	8	-.767	8	NC		NC		NC		NC	
231	M24	1	max	.004	1	.004	1	NC		NC		NC		NC	
232			min	-.946	8	-.792	8	NC		NC		NC		NC	
233		2	max	.004	1	.004	1	NC		NC		NC		NC	
234			min	-.946	8	-.792	8	NC		NC		NC		NC	
235		3	max	.004	1	.004	1	NC		NC		NC		NC	
236			min	-.946	8	-.792	8	NC		NC		NC		NC	
237		4	max	.004	1	.004	1	NC		NC		NC		NC	
238			min	-.946	8	-.792	8	NC		NC		NC		NC	
239		5	max	.004	1	.004	1	NC		NC		NC		NC	
240			min	-.946	8	-.792	8	NC		NC		NC		NC	
241	M25	1	max	.009	1	.008	1	NC		NC		NC		NC	
242			min	-.924	6	-.773	6	NC		NC		NC		NC	
243		2	max	.009	1	.008	1	NC		NC		NC		NC	
244			min	-.924	6	-.773	6	NC		NC		NC		NC	
245		3	max	.009	1	.008	1	NC		NC		NC		NC	
246			min	-.924	6	-.773	6	NC		NC		NC		NC	
247		4	max	.009	1	.008	1	NC		NC		NC		NC	
248			min	-.924	6	-.773	6	NC		NC		NC		NC	
249		5	max	.009	1	.008	1	NC		NC		NC		NC	
250			min	-.924	6	-.773	6	NC		NC		NC		NC	
251	M26	1	max	.009	1	.008	1	NC		NC		NC		NC	
252			min	-.924	6	-.773	6	NC		NC		NC		NC	
253		2	max	.009	1	.008	1	NC		NC		NC		NC	
254			min	-.924	6	-.773	6	NC		NC		NC		NC	
255		3	max	.009	1	.008	1	NC		NC		NC		NC	
256			min	-.924	6	-.773	6	NC		NC		NC		NC	
257		4	max	.009	1	.008	1	NC		NC		NC		NC	
258			min	-.924	6	-.773	6	NC		NC		NC		NC	
259		5	max	.009	1	.008	1	NC		NC		NC		NC	
260			min	-.924	6	-.773	6	NC		NC		NC		NC	
261	M27	1	max	.009	1	.008	1	NC		NC		NC		NC	
262			min	-.924	6	-.773	6	NC		NC		NC		NC	
263		2	max	.009	1	.008	1	NC		NC		NC		NC	
264			min	-.924	6	-.773	6	NC		NC		NC		NC	
265		3	max	.009	1	.008	1	NC		NC		NC		NC	
266			min	-.924	6	-.773	6	NC		NC		NC		NC	
267		4	max	.009	1	.008	1	NC		NC		NC		NC	
268			min	-.924	6	-.773	6	NC		NC		NC		NC	
269		5	max	.009	1	.008	1	NC		NC		NC		NC	
270			min	-.924	6	-.773	6	NC		NC		NC		NC	
271	M28	1	max	.107	8	.09	8	NC		NC		NC		NC	
272			min	0	1	0	1	NC		NC		NC		NC	
273		2	max	.107	8	.09	8	NC		NC		NC		NC	
274			min	0	1	0	1	NC		NC		NC		NC	
275		3	max	.107	8	.09	8	NC		NC		NC		NC	
276			min	0	1	0	1	NC		NC		NC		NC	
277		4	max	.107	8	.09	8	NC		NC		NC		NC	
278			min	0	1	0	1	NC		NC		NC		NC	
279		5	max	.107	8	.09	8	NC		NC		NC		NC	
280			min	0	1	0	1	NC		NC		NC		NC	
281	M29	1	max	.107	8	.09	8	NC		NC		NC		NC	
282			min	0	1	0	1	NC		NC		NC		NC	
283		2	max	.107	8	.09	8	NC		NC		NC		NC	
284			min	0	1	0	1	NC		NC		NC		NC	

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Envelope Member Section Torsion (Continued)

	Member	Sec		Torque[k...	lc	Torsion Shear[ksi]	lc	y-y Warp...	lc	z-z Warp Shear[ksi]	lc	z-Top W...	lc	z-Bot Wa...	lc
285		3	max	.107	8	.09	8	NC		NC		NC		NC	
286			min	0	1	0	1	NC		NC		NC		NC	
287		4	max	.107	8	.09	8	NC		NC		NC		NC	
288			min	0	1	0	1	NC		NC		NC		NC	
289		5	max	.107	8	.09	8	NC		NC		NC		NC	
290			min	0	1	0	1	NC		NC		NC		NC	
291	M30	1	max	.009	1	0	1	NC		NC		NC		NC	
292			min	-.924	6	0	1	NC		NC		NC		NC	
293		2	max	.009	1	0	1	NC		NC		NC		NC	
294			min	-.924	6	0	1	NC		NC		NC		NC	
295		3	max	.009	1	0	1	NC		NC		NC		NC	
296			min	-.924	6	0	1	NC		NC		NC		NC	
297		4	max	.009	1	0	1	NC		NC		NC		NC	
298			min	-.924	6	0	1	NC		NC		NC		NC	
299		5	max	.009	1	0	1	NC		NC		NC		NC	
300			min	-.924	6	0	1	NC		NC		NC		NC	
301	M31	1	max	.009	1	.008	1	NC		NC		NC		NC	
302			min	-.924	6	-.773	6	NC		NC		NC		NC	
303		2	max	.009	1	.008	1	NC		NC		NC		NC	
304			min	-.924	6	-.773	6	NC		NC		NC		NC	
305		3	max	.009	1	.008	1	NC		NC		NC		NC	
306			min	-.924	6	-.773	6	NC		NC		NC		NC	
307		4	max	.009	1	.008	1	NC		NC		NC		NC	
308			min	-.924	6	-.773	6	NC		NC		NC		NC	
309		5	max	.009	1	.008	1	NC		NC		NC		NC	
310			min	-.924	6	-.773	6	NC		NC		NC		NC	

amec

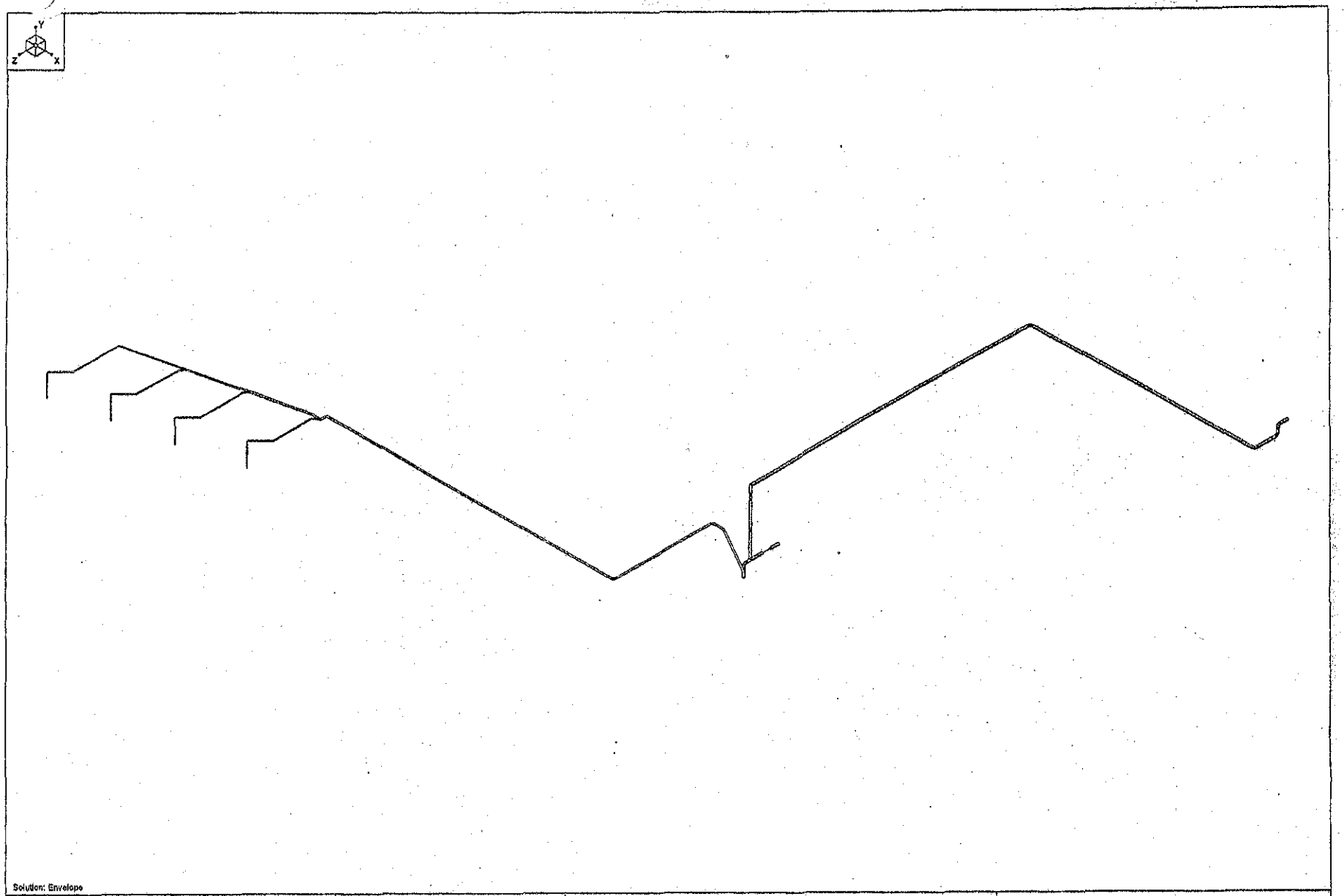
CALCULATION SHEET

CALC. NO.:	145579-V-CA-005	REV:	1	DATE:	March 26, 2006
CALC. TITLE:	Off-Gas Treatment System Pipe Stress Analysis				
PROJECT NO.:	145579	PROJECT TITLE:	Final DBVS Design		

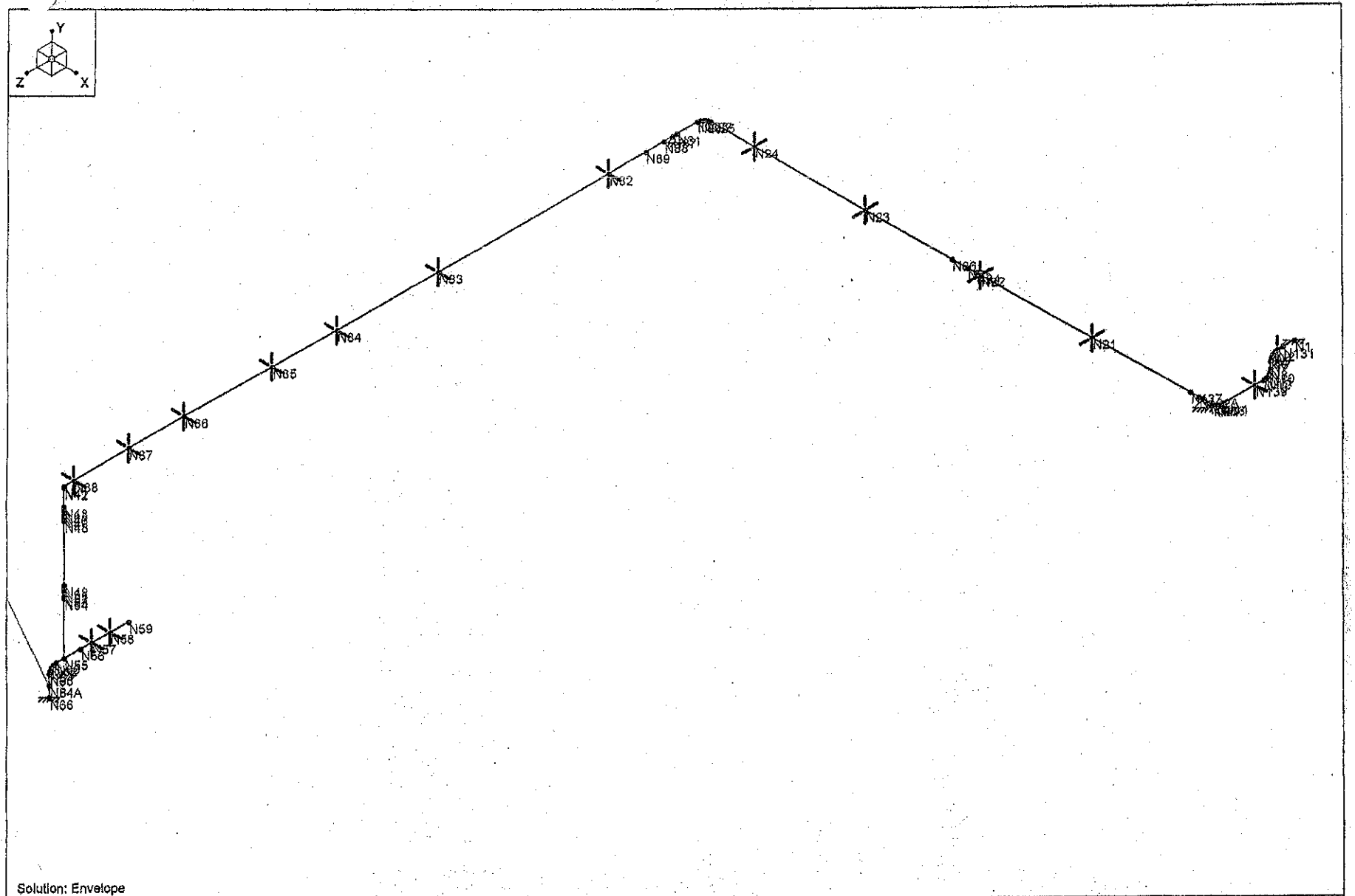
Attachment 7 Model 4 RISA 3D Analysis Input and Output Data

NOTE: This cover sheet represents the approval signatures of the originator and checker for all pages of this attachment

ORIGINATOR:	DATE:	CHECKER:	DATE:
Kevin M. Jones KMJ	3/26/06	J. Van Corbach JVC	3/26/06

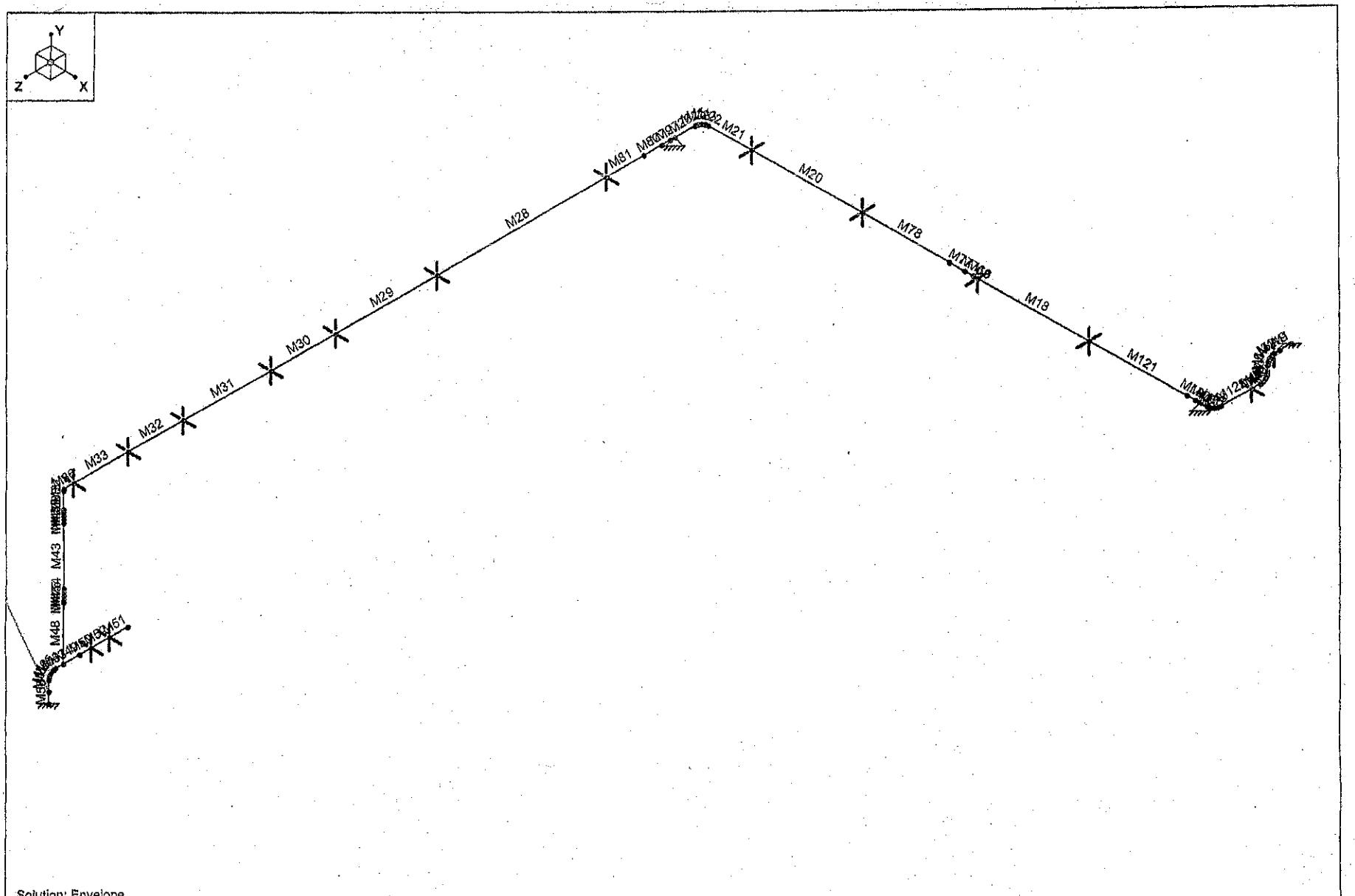


DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones - DMJMH&N		Feb 14, 2006 at 12:10 AM
145579-V-CA-005 - Model 4	Rendered Model Geometry	145579-V-CA-005 Model 4 today.r3d



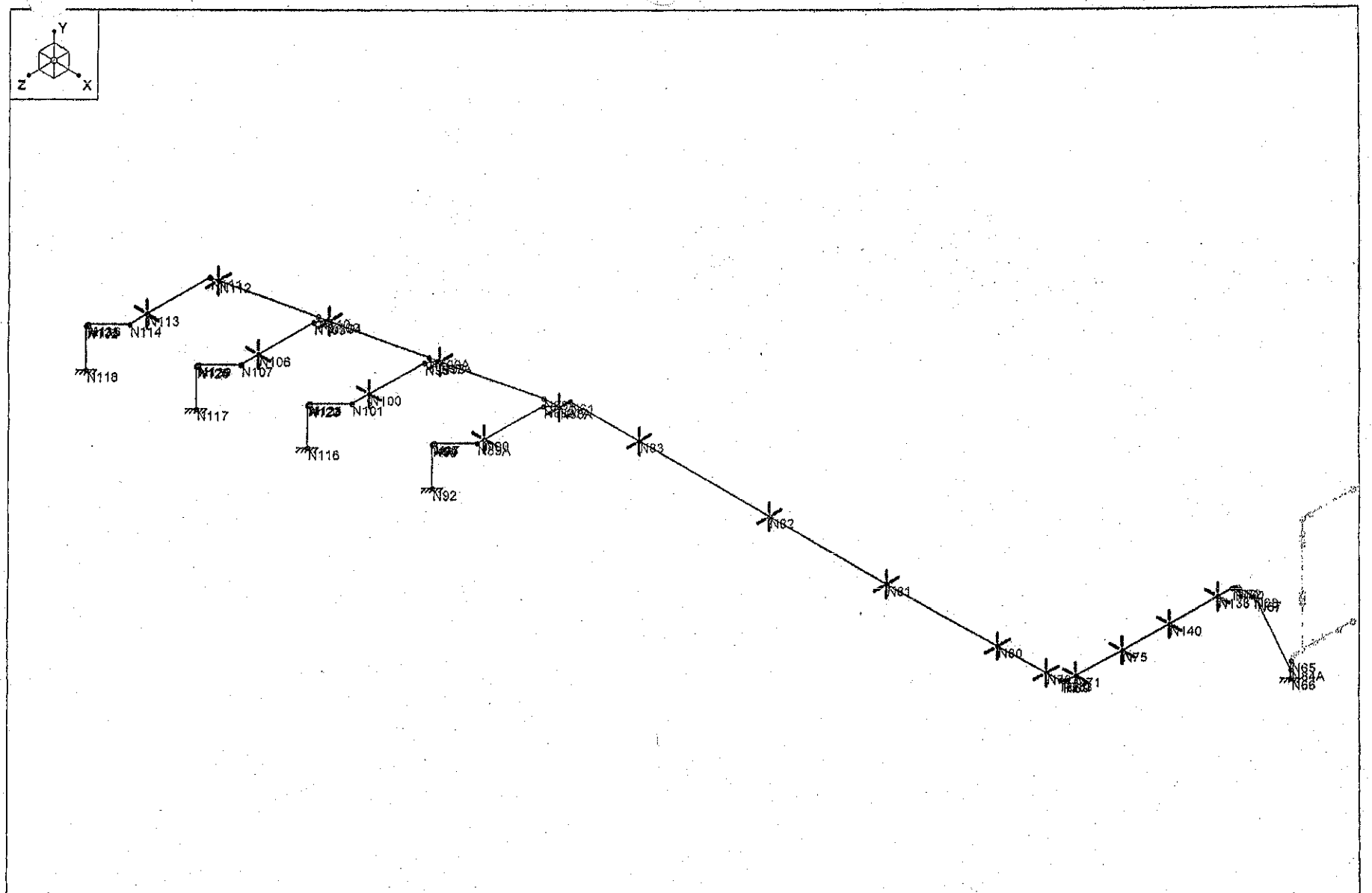
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones - DMJMH&N		Feb 14, 2006 at 7:30 AM
145579-V-CA-005 - Model 4	Nodes and Supports (6-VOG-33-0155)	145579-V-CA-005 Model 4.r3d



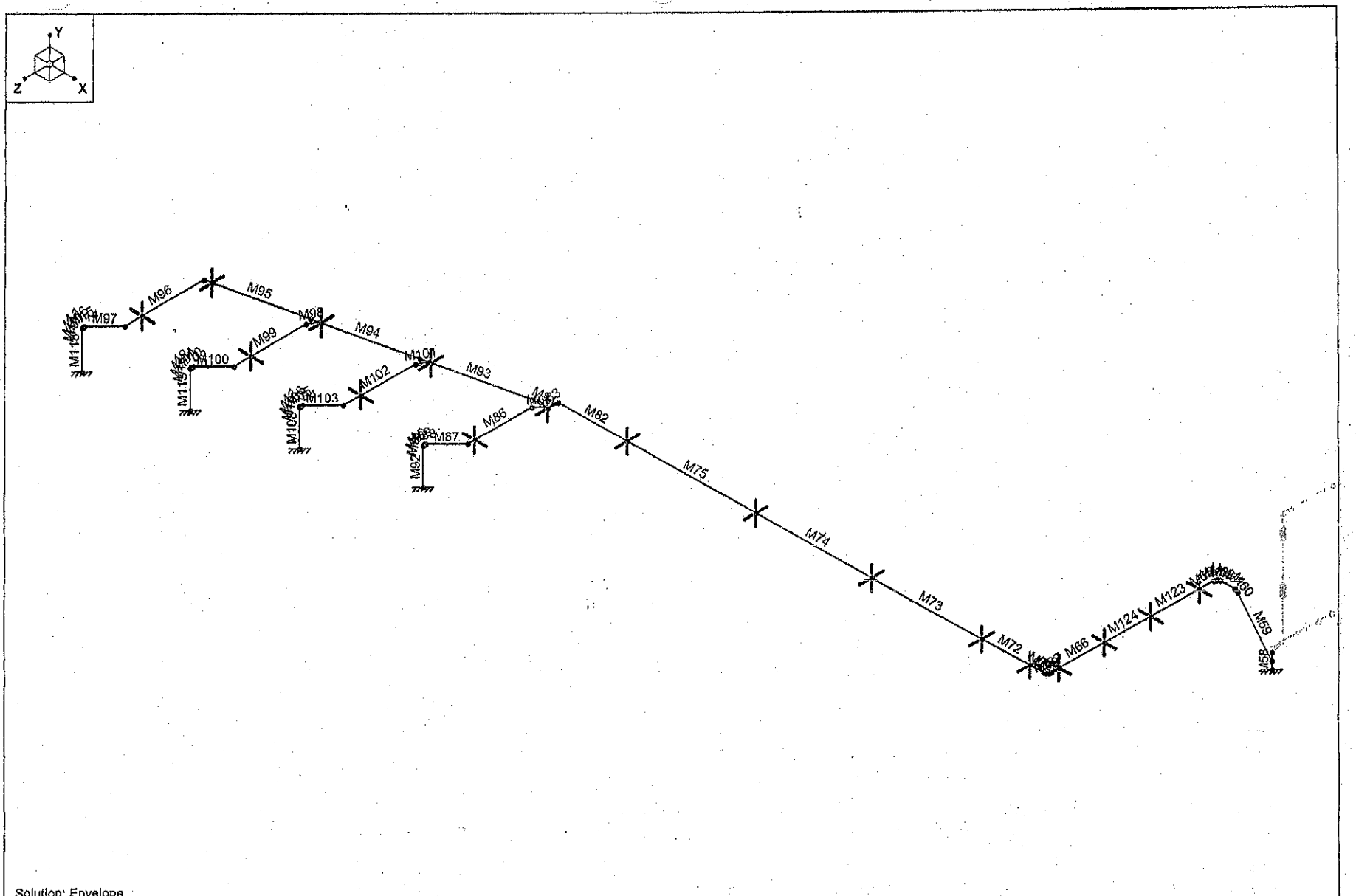
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones - DMJMH&N		Feb 14, 2006 at 7:32 AM
145579-V-CA-005 - Model 4	Members (6-VOG-33-0155)	145579-V-CA-005 Model 4.r3d



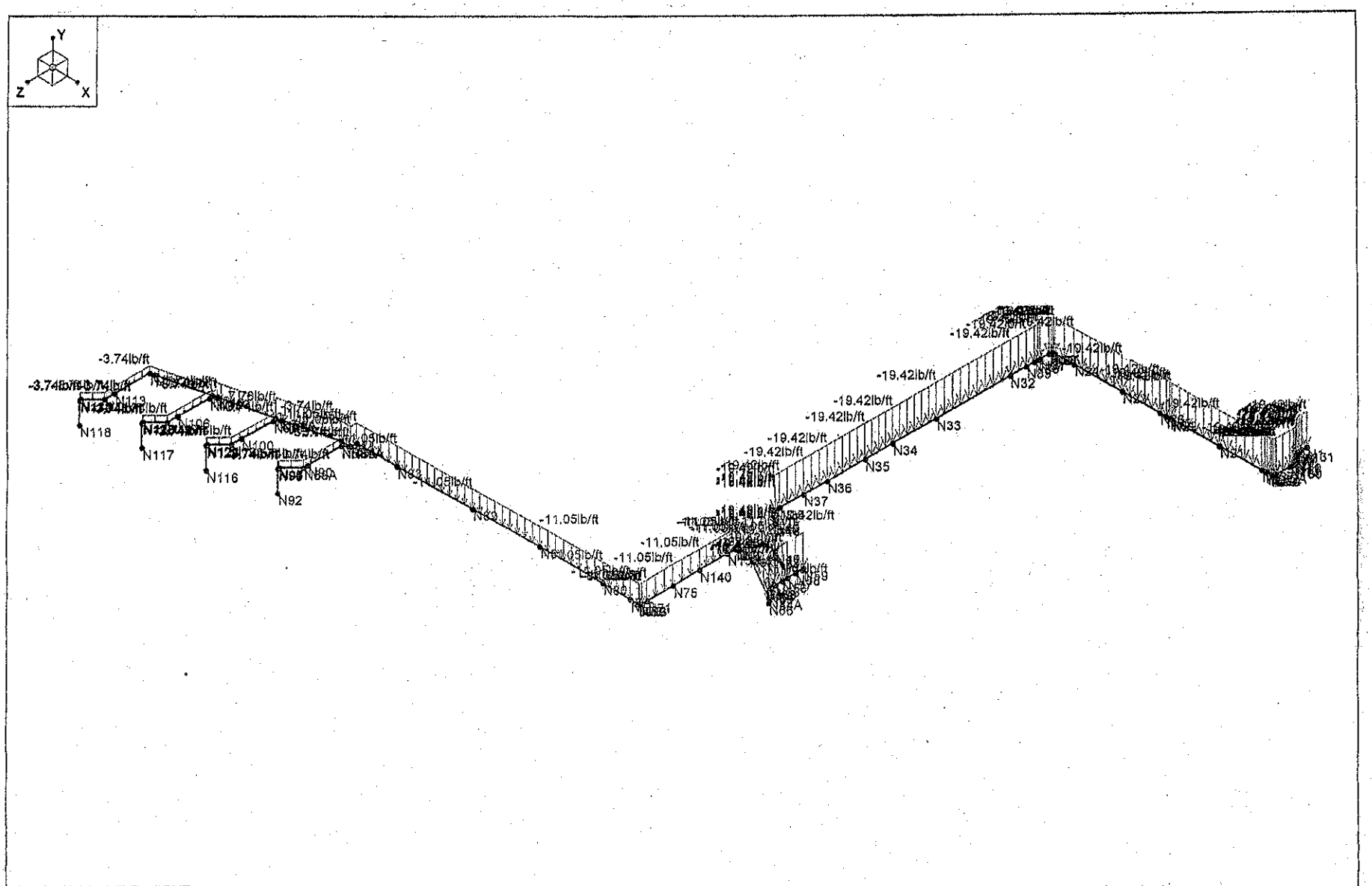
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones - DMJMH&N		Feb 14, 2006 at 7:49 AM
145579-V-CA-005 - Model 4	Nodes and Supports (4-VOG-37-0370, etc)	145579-V-CA-005 Model 4.r3d



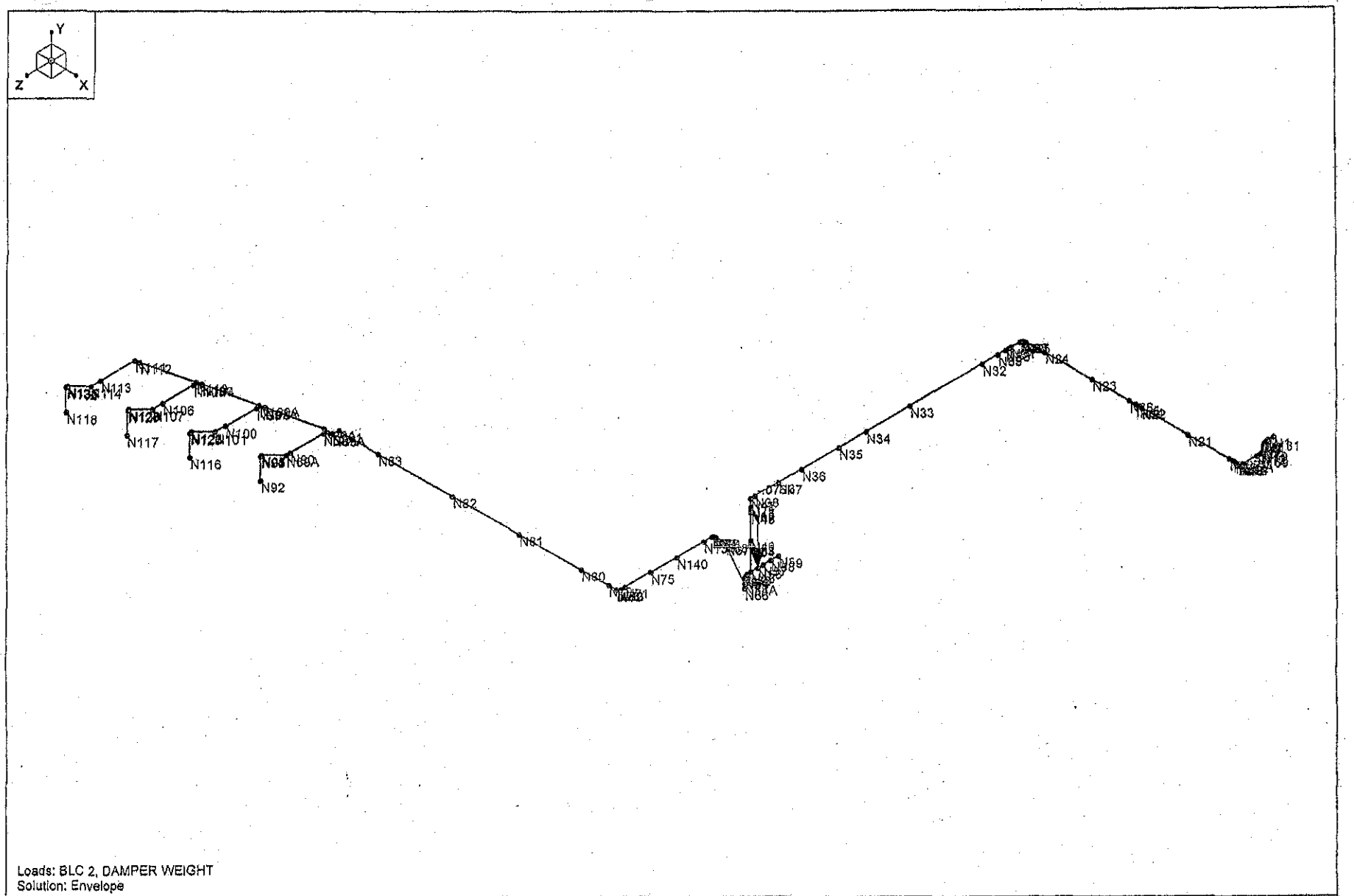
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones - DMJMH&N		Feb 14, 2006 at 7:48 AM
145579-V-CA-005 - Model 4	Members (4-VOG-37-0370, etc)	145579-V-CA-005 Model 4.r3d



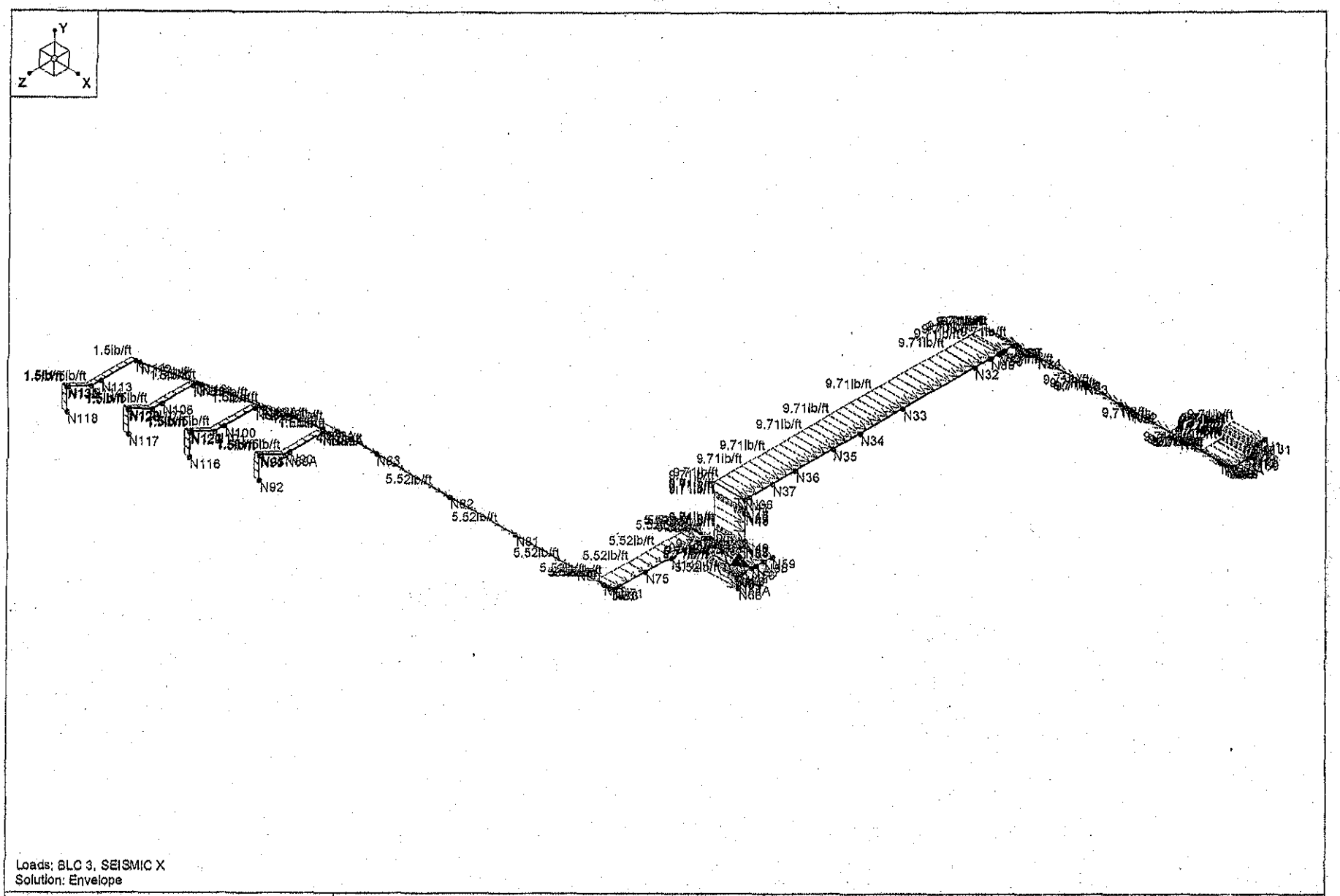
Loads: BLC 1, SELFWEIGHT
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones - DMJMH&N		Feb 14, 2006 at 8:07 AM
145579-V-CA-005 - Model 4	BLC - Selfweight	145579-V-CA-005 Model 4.r3d



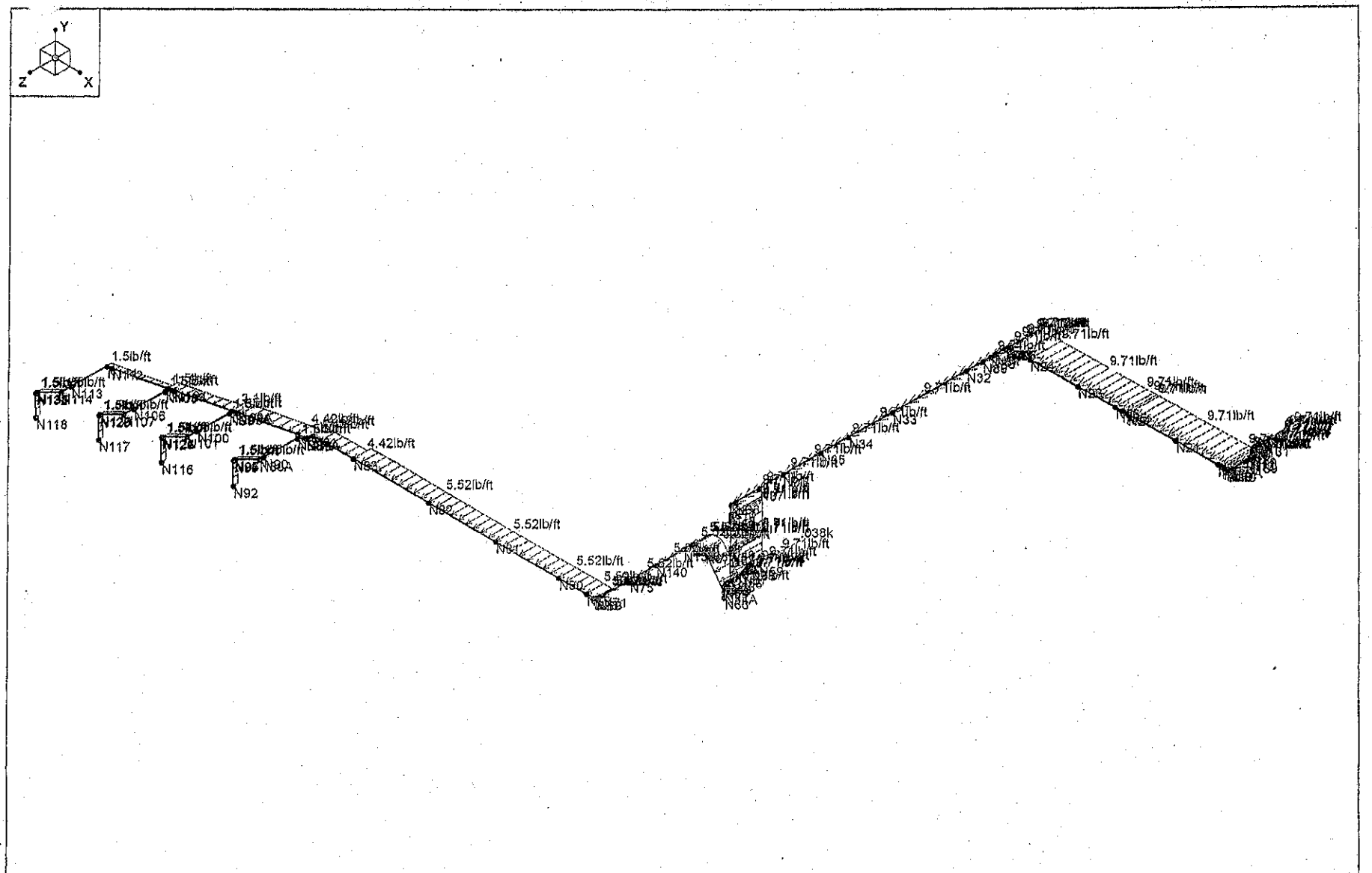
Loads: BLC 2, DAMPER WEIGHT
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones - DMJMH&N		Feb 14, 2006 at 8:10 AM
145579-V-CA-005 - Model 4	BLC - Dampers	145579-V-CA-005 Model 4.r3d



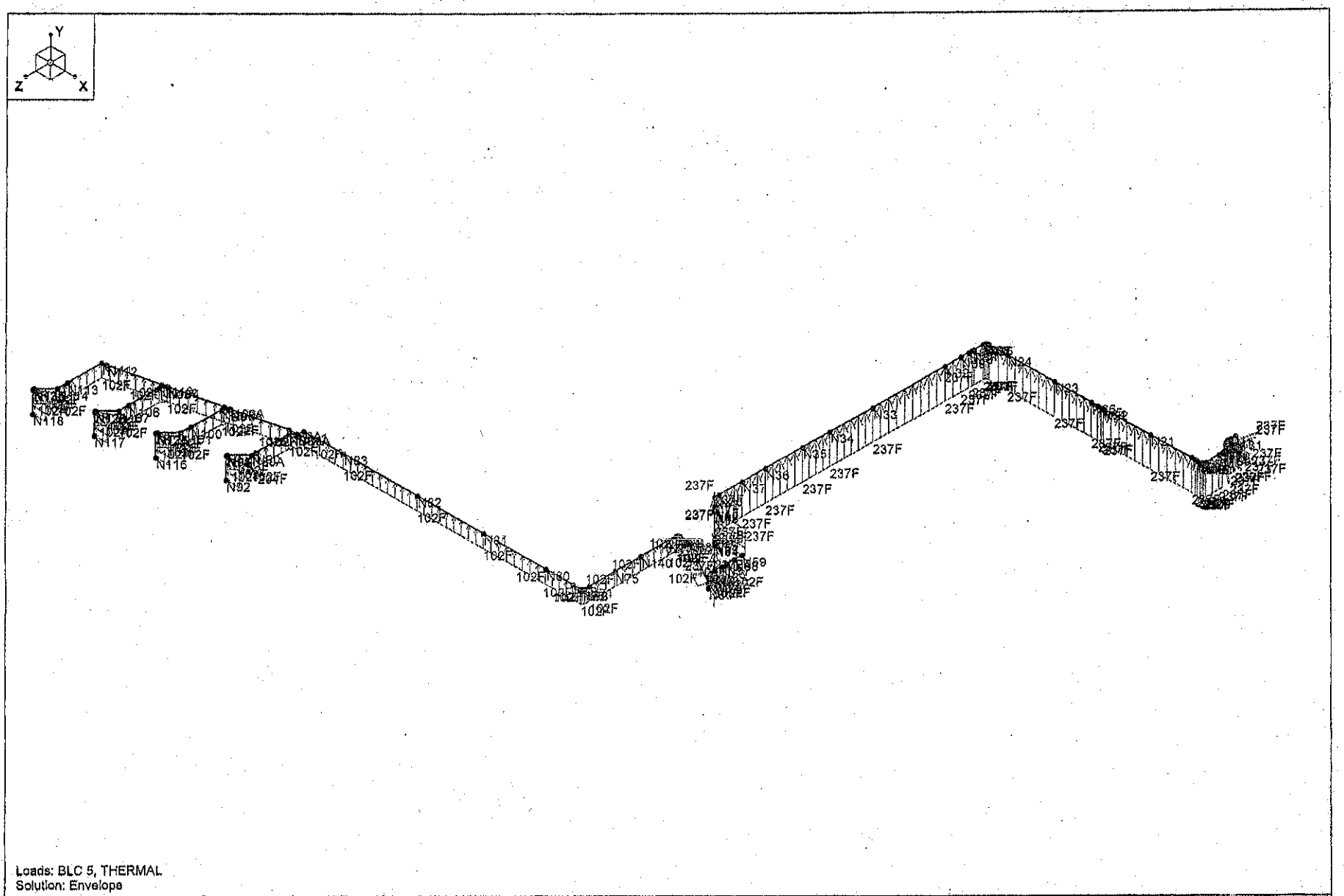
Loads: BLC 3, SEISMIC X
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones - DMJMH&N		Feb 14, 2006 at 8:11 AM
145579-V-CA-005 - Model 4	BLC - Seismic X	145579-V-CA-005 Model 4.r3d



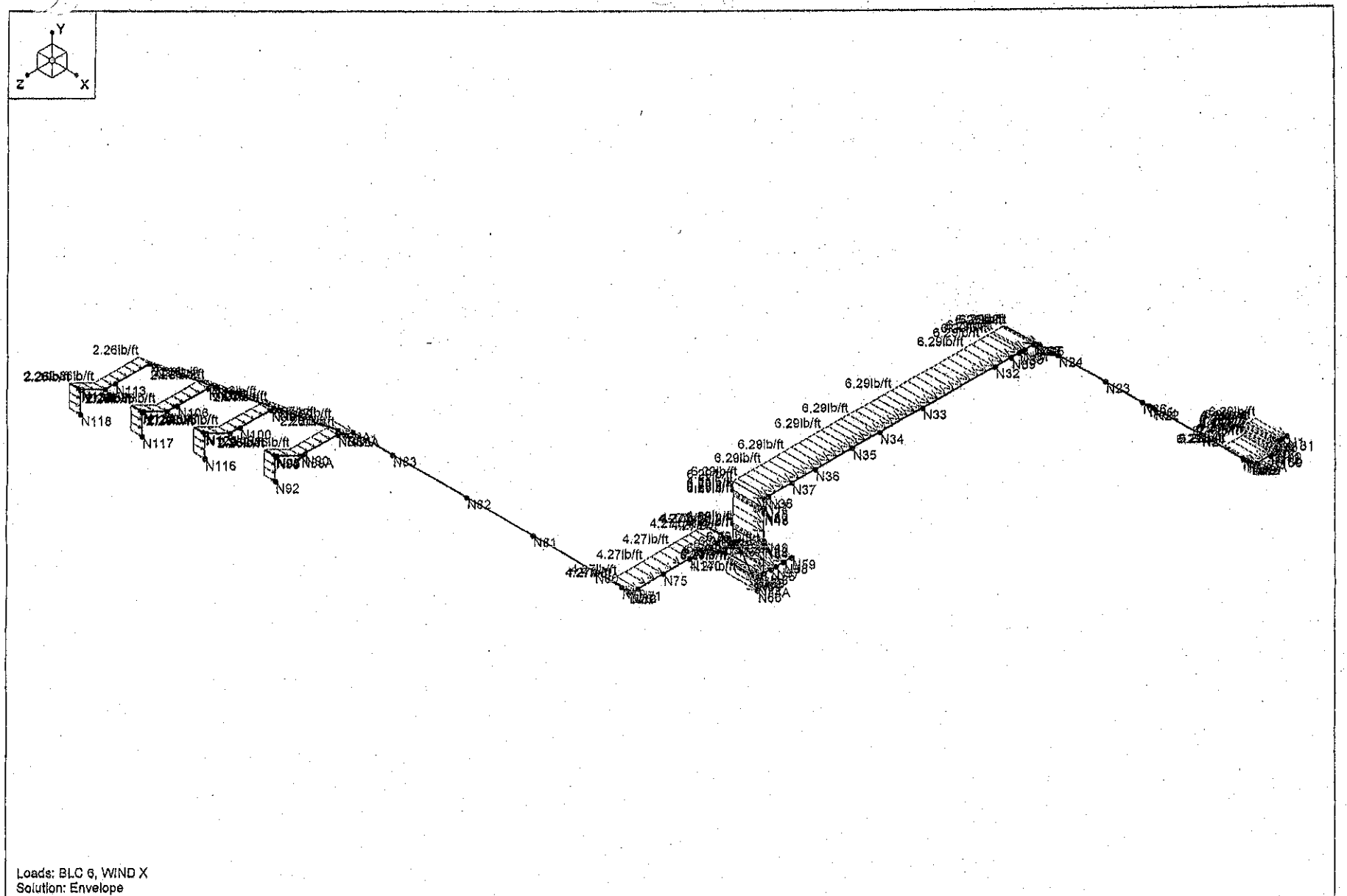
Loads: BLC 4, SEISMIC Z
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones - DMJMH&N		Feb 14, 2006 at 8:12 AM
145579-V-CA-005 - Model 4	BLC - Seismic Z	145579-V-CA-005 Model 4.r3d



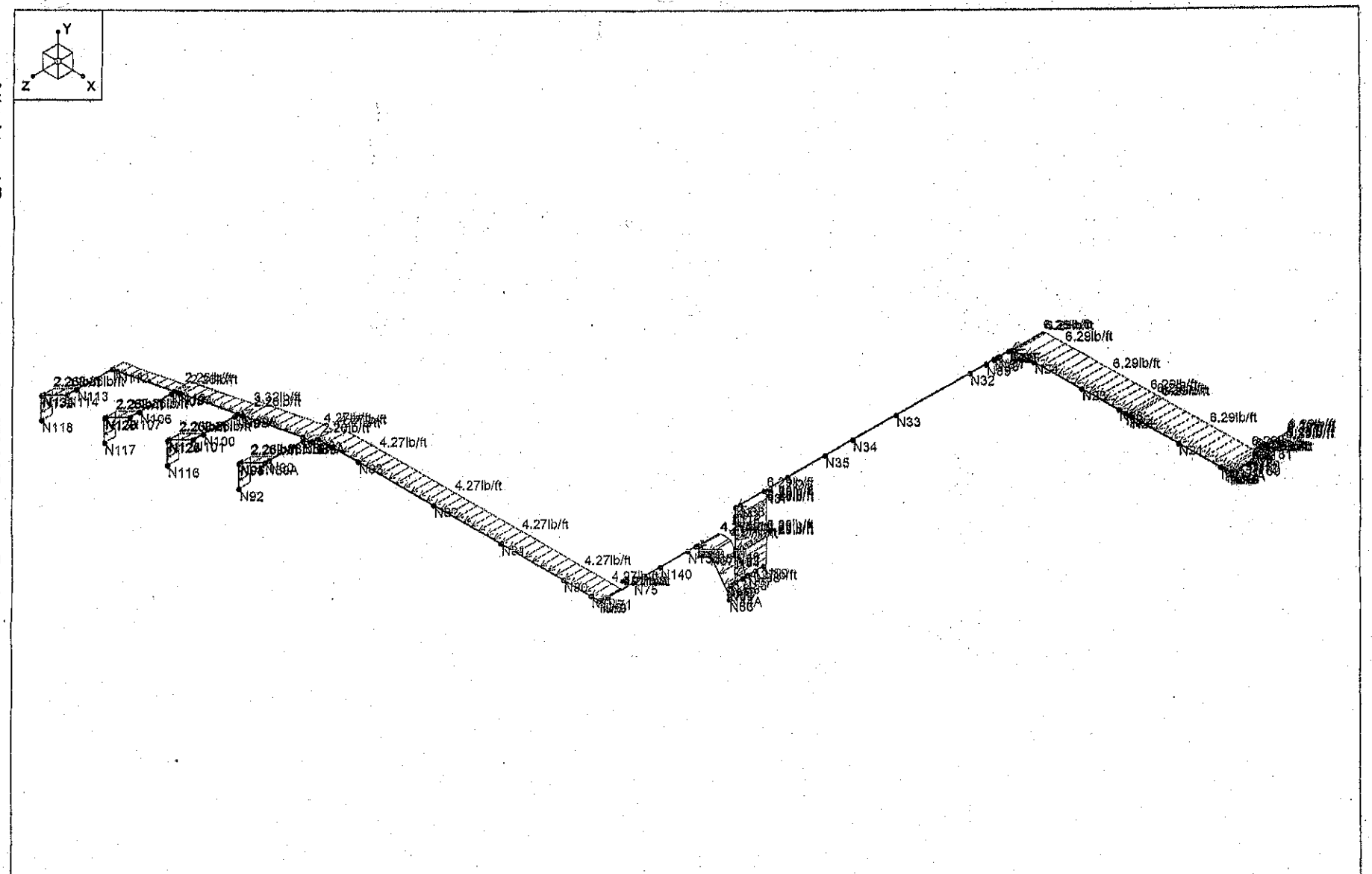
Loads: BLC 5, THERMAL
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones - DMJMH&N		Feb 14, 2006 at 8:13 AM
145579-V-CA-005 - Model 4	BLC - Thermal	145579-V-CA-005 Model 4.r3d



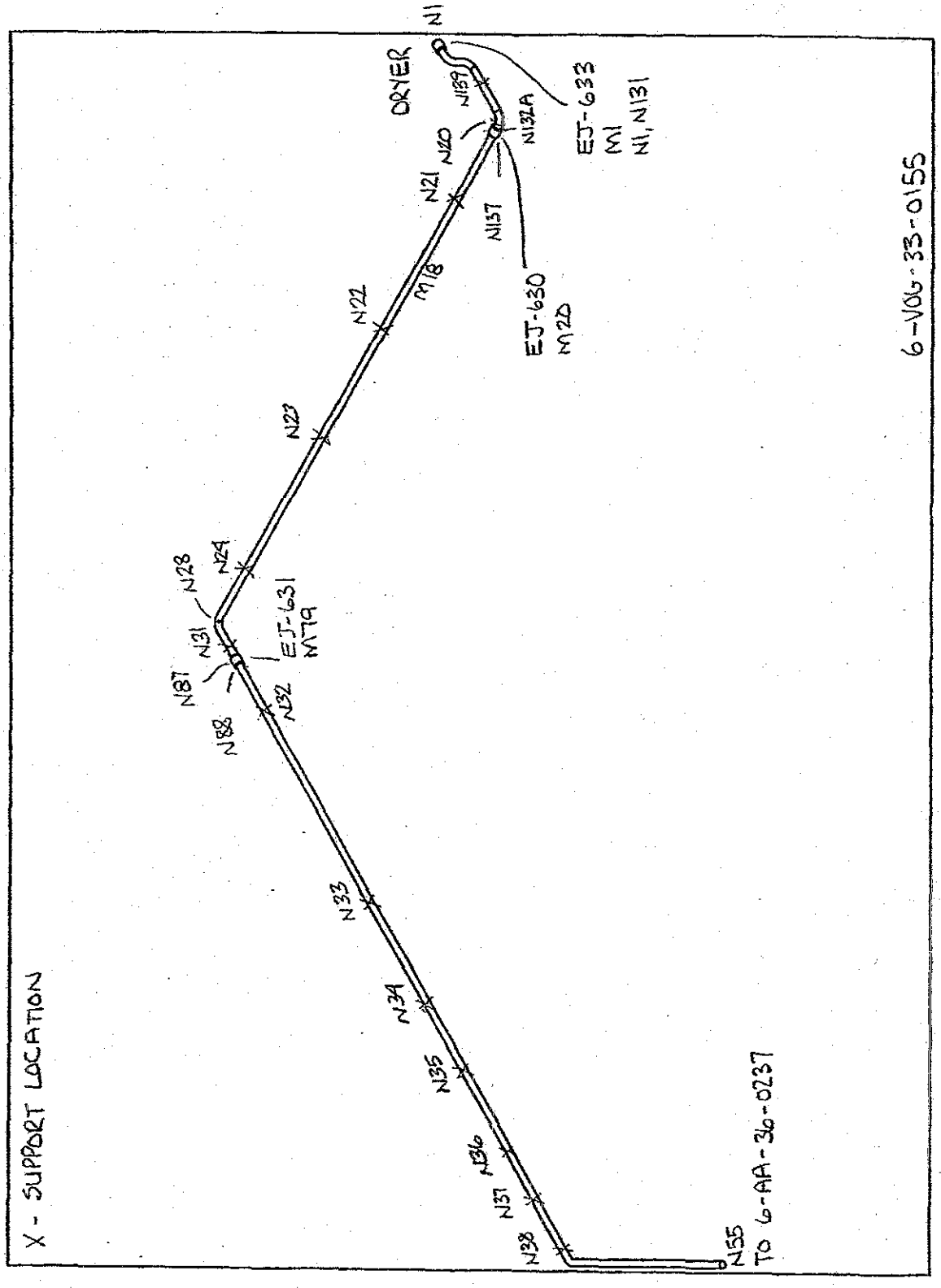
Loads: BLC 6, WIND X
Solution: Envelope

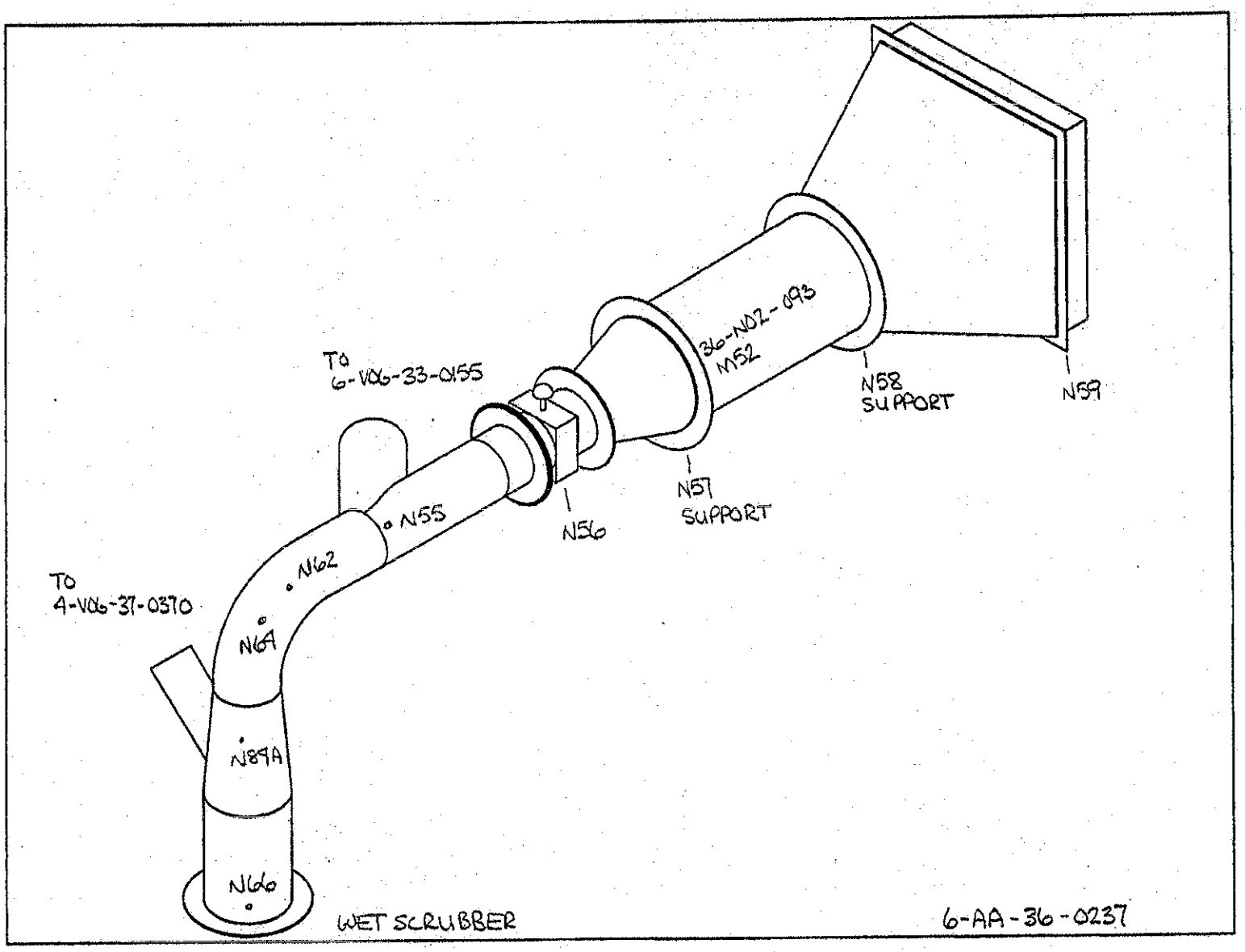
DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones - DMJMH&N		Feb 14, 2006 at 8:14 AM
145579-V-CA-005 - Model 4	BLC - Wind X	145579-V-CA-005 Model 4.r3d

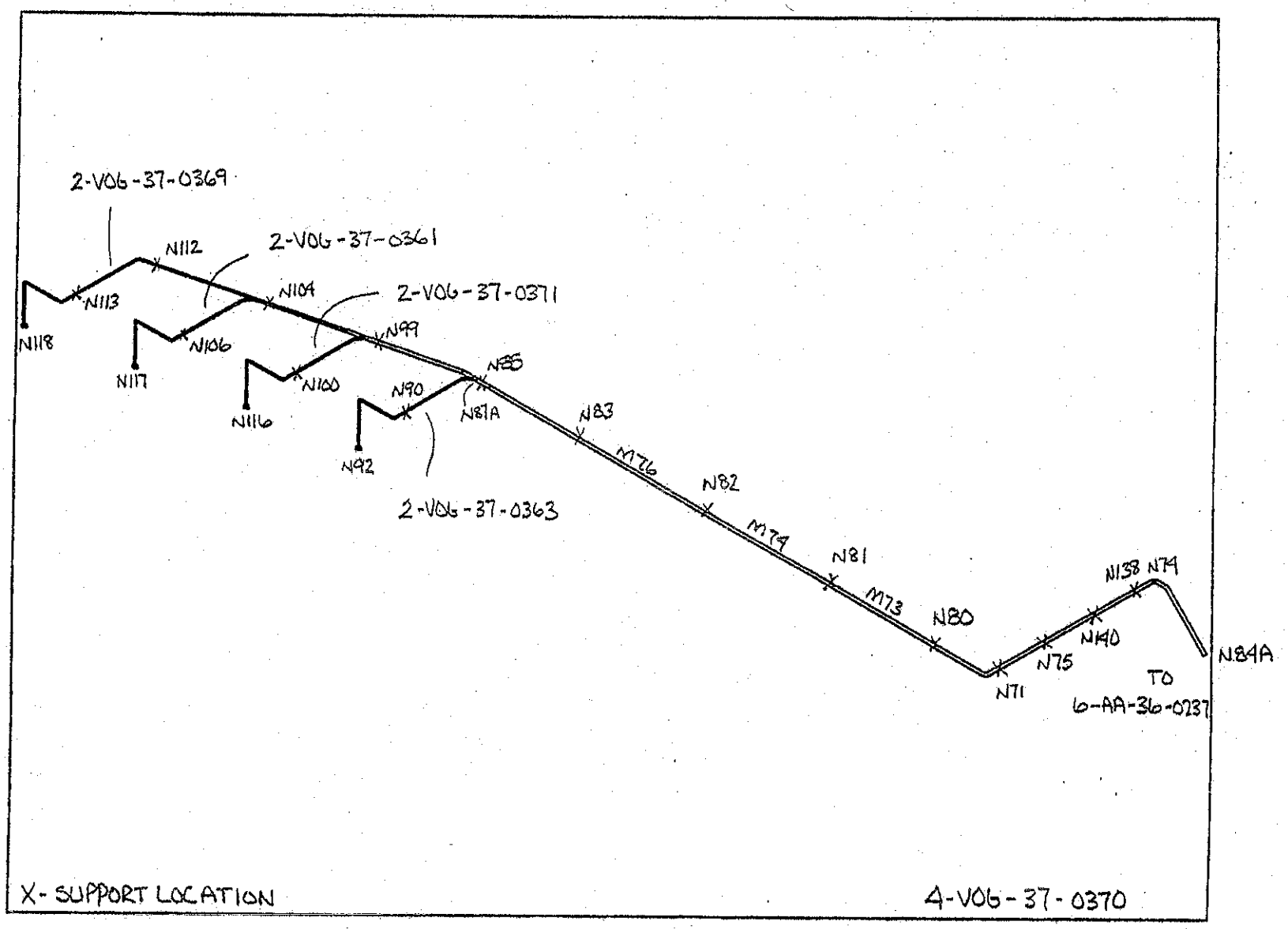


Loads: BLC 7, WIND Z
Solution: Envelope

DMJM H&N	DBVS Off-Gas Treatment Duct Analysis	
Kevin M. Jones - DMJMH&N		Feb 14, 2006 at 8:17 AM
145579-V-CA-005 - Model 4	BLC - Wind Z	145579-V-CA-005 Model 4.r3d


N1
DRYER
N139
N132A
N120
N121
N137
N118
N122
N123
N124
N128
N131
N127
N132
N138
N133
N134
N135
N136
N137
N138
N155
TO 6-AA-36-0237
EJ-633
M1
N1, N131
EJ-630
M2D
EJ-631
M7A
6-V06-33-0155
X - SUPPORT LOCATION


TO
6-VQ6-33-0155
TO
4-VQ6-37-0370
N55
N62
N64
N89A
N66
N56
36-ND2-093
N52
N57
SUPPORT
N58
SUPPORT
N59
WET SCRUBBER
6-AA-36-0237


2-VOG-37-0369
2-VOG-37-0361
2-VOG-37-0371
2-VOG-37-0363
N118
N113
N112
N117
N106
N104
N116
N100
N99
N92
N90
N85
N81A
N83
M76
N82
M74
N81
M73
N80
N71
N75
N140
N138
N79
N84A
TO
6-AA-36-0237
X- SUPPORT LOCATION
4-VOG-37-0370

Global

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation	Yes
Include Warping	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Vertical Axis	Y

Hot Rolled Steel Code	AISC: ASD 9th
Cold Formed Steel Code	AISI 99: ASD
NDS Wood Code	NDS 91: ASD
NDS Temperature	< 100F
Concrete Code	ACI 1999

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	PCA Load Contour
Parme Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections	Yes
Bad Framing Warnings	No
Unused Force Warnings	Yes

Joint Coordinates and Temperatures

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diaphragm
1	N1	0	26	0	0	
2	N2	0	26	16.625	0	
3	N4	0	25.315	20.069	0	
4	N5	0	23.364	22.989	0	
5	N6	0	20.444	24.94	0	
6	N7	0	17	25.625	0	
7	N8	0	9	25.625	0	
8	N10	0	5.556	26.31	0	
9	N11	0	2.636	28.261	0	
10	N12	0	.685	31.181	0	
11	N13	0	0	34.625	0	
12	N14	0	0	91.125	0	
13	N16	-.685	0	94.569	0	
14	N17	-2.636	0	97.489	0	
15	N18	-5.556	0	99.44	0	
16	N19	-9	0	100.125	0	
17	N20	-17.75	0	100.125	0	
18	N21	-161.75	0	100.125	0	
19	N22	-305.75	0	100.125	0	
20	N23	-455.75	0	100.125	0	
21	N24	-599.75	0	100.125	0	
22	N25	-656.875	0	100.125	0	
23	N27	-660.319	0	100.81	0	
24	N28	-663.239	0	102.761	0	
25	N29	-665.19	0	105.681	0	
26	N30	-665.875	0	109.125	0	
27	N31	-665.875	0	136.125	0	
28	N32	-665.875	0	226.125	0	
29	N33	-665.875	0	448.125	0	
30	N34	-665.875	0	580.1875	0	
31	N35	-665.875	0	664.1875	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diaphragm
32	N36	-665.875	0	778.1875	0	
33	N37	-665.875	0	850.1875	0	
34	N38	-665.875	0	922.1875	0	
35	N41	-665.875	0	935.415	0	
36	N42	-664.196055	0	937.094691	0	
37	N43	-593.750067	0	1007.540048	0	
38	N45	-591.314686	-.685	1009.975718	0	
39	N46	-589.250139	-2.636	1012.039703	0	
40	N47	-587.870958	-5.556	1013.41977	0	
41	N48	-587.386165	-9	1013.903788	0	
42	N49	-587.386165	-75.125	1013.903788	0	
43	N51	-586.901372	-78.569	1014.387807	0	
44	N52	-585.522191	-81.489	1015.767874	0	
45	N53	-583.457386	-83.44	1017.832825	0	
46	N54	-581.022263	-84.125	1020.267528	0	
47	N55	-559.159	-84.125	1042.131	0	
48	N56	-559.159	-84.125	1020.438	0	
49	N57	-559.159	-84.125	1005.188	0	
50	N58	-559.159	-84.125	981.063	0	
51	N59	-559.159	-84.125	956.813	0	
52	N60	-559.159	-84.125	1052.563	0	
53	N61	-1523.6905	-30	1358.3125	0	
54	N62	-559.159	-84.81	1056.007	0	
55	N63	-559.159	-86.761	1058.927	0	
56	N64	-559.159	-89.681	1060.878	0	
57	N65	-559.159	-93.125	1061.563	0	
58	N66	-559.16	-120.125	1061.563	0	
59	N67	-630.346	-33	1061.563	0	
60	N68	-635.535	-30	1061.563	0	
61	N69	-652.839	-30	1355.3125	0	
62	N70	-646.035	-30	1061.563	0	
63	N71	-652.035	-30	1337.6835	0	
64	N72	-649.035	-30	1062.367	0	
65	N73	-652.035	-30	1352.3125	0	
66	N74	-651.231	-30	1064.563	0	
67	N75	-652.035	-30	1257.996	0	
68	N76	-652.035	-30	1067.564	0	
69	N77	-655.035	-30	1357.508652	0	
70	N78	-658.035	-30	1358.3125	0	
71	N79	-683.876	-30	1358.3125	0	
72	N80	-767.876	-30	1358.3125	0	
73	N81	-959.876	-30	1358.3125	0	
74	N82	-1163.876	-30	1358.3125	0	
75	N83	-1391.876	-30	1358.3125	0	
76	N84	-311.75	0	100.125	0	
77	N84A	-559.16	-106.6875	1061.563	0	
78	N85	-322.75	0	100.125	0	
79	N85A	-1541.6905	-48	1358.3125	0	
80	N86	-342.75	0	100.125	0	
81	N86A	-1569.6905	-48	1358.3125	0	
82	N87	-665.875	0	142.125	0	
83	N87A	-1544.9405	-48	1358.3125	0	
84	N88	-665.875	0	153.125	0	
85	N88A	-1557.503	-48	1370.875	0	
86	N89	-665.875	0	177.125	0	
87	N89A	-1557.503	-48	1484.875	0	
88	N90	-1557.503	-48	1472.375	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diaphragm
89	N92	-1596.503	-116.1875	1523.875	0	
90	N93	-1596.503	-51	1523.875	0	
91	N94	-1596.341524	-49.85195	1523.713524	0	
92	N95	-1595.88168	-48.87868	1523.25368	0	
93	N96	-1595.193474	-48.228361	1522.565474	0	
94	N97	-1594.38168	-48	1521.75368	0	
95	N97A	-1718.3155	-48	1392.1875	0	
96	N98	-1715.503	-48	1391.5625	0	
97	N99	-1727.503	-48	1406.9375	0	
98	N100	-1727.503	-48	1502.375	0	
99	N101	-1727.503	-48	1532.938	0	
100	N103	-1883.503	-48	1442.9375	0	
101	N104	-1871.503	-48	1427.5625	0	
102	N106	-1883.503	-48	1538.375	0	
103	N107	-1883.503	-48	1568.938	0	
104	N109	-1874.3155	-48	1428.1875	0	
105	N109A	-1731.503	-48	1395.25	0	
106	N110	-1887.503	-48	1431.25	0	
107	N111	-2039.503	-48	1466.3125	0	
108	N112	-2027.503	-48	1463.5625	0	
109	N113	-2039.503	-48	1574.375	0	
110	N114	-2039.503	-48	1604.938	0	
111	N116	-1754.509375	-116.1875	1559.943874	0	
112	N117	-1910.509728	-116.1875	1595.944227	0	
113	N118	-2066.509728	-116.1875	1631.944227	0	
114	N120	-1754.509375	-51	1559.943874	0	
115	N121	-1754.347898	-49.85195	1559.782398	0	
116	N122	-1753.888054	-48.87868	1559.322554	0	
117	N123	-1753.199848	-48.228361	1558.634348	0	
118	N124	-1752.388054	-48	1557.822554	0	
119	N126	-1910.509728	-51	1595.944227	0	
120	N127	-1910.348252	-49.85195	1595.782751	0	
121	N128	-1909.888408	-48.87868	1595.322907	0	
122	N129	-1909.200202	-48.228361	1594.634701	0	
123	N130	-1908.388408	-48	1593.822907	0	
124	N131	0	26	10	0	
125	N132	-2066.509728	-51	1631.944227	0	
126	N132A	-23.75	0	100.125	0	
127	N133	-2066.348252	-49.85195	1631.782751	0	
128	N134	-2065.888408	-48.87868	1631.322907	0	
129	N135	-2065.200202	-48.228361	1630.634701	0	
130	N136	-2064.388408	-48	1629.822907	0	
131	N137	-34.75	0	100.125	0	
132	N138	-652.035	-30	1092.748	0	
133	N139	0	0	45.625	0	
134	N140	-652.035	-30	1176.853	0	

Joint Boundary Conditions

	Joint Label	X [lb/in]	Y [lb/in]	Z [lb/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N75	Reaction	Reaction				
2	N42						
3	N66	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
4	N1	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
5	N20	Reaction	Reaction	Reaction			
6	N21		Reaction	Reaction			
7	N22		Reaction	Reaction			

Joint Boundary Conditions (Continued)

	Joint Label	X [lb/in]	Y [lb/in]	Z [lb/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
8	N23		Reaction	Reaction			
9	N24		Reaction	Reaction			
10	N31	Reaction	Reaction	Reaction			
11	N32	Reaction	Reaction				
12	N33	Reaction	Reaction				
13	N34	Reaction	Reaction				
14	N35	Reaction	Reaction				
15	N36	Reaction	Reaction				
16	N37	Reaction	Reaction				
17	N38	Reaction	Reaction				
18	N58	Reaction	Reaction				
19	N59						
20	N56						
21	N55						
22	N57	Reaction	Reaction				
23	N71	Reaction	Reaction				
24	N73						
25	N69						
26	N77						
27	N78						
28	N79		Reaction	Reaction			
29	N80		Reaction	Reaction			
30	N81		Reaction	Reaction			
31	N82		Reaction	Reaction			
32	N83		Reaction	Reaction			
33	N61						
34	N86						
35	N89						
36	N84A						
37	N85A		Reaction	Reaction			
38	N86A						
39	N87A						
40	N88A						
41	N89A						
42	N90	Reaction	Reaction				
43	N92	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
44	N93						
45	N94						
46	N95						
47	N96						
48	N97						
49	N97A						
50	N98		Reaction	Reaction			
51	N99						
52	N100	Reaction	Reaction				
53	N101						
54	N103						
55	N104		Reaction	Reaction			
56	N106	Reaction	Reaction				
57	N107						
58	N109						
59	N109A						
60	N110						
61	N111						
62	N112		Reaction	Reaction			
63	N113	Reaction	Reaction				
64	N114						