#40-8681

RECEIVED

energy fuels nuclear, inc.
executive offices • suite 900 • three park central • 1515 arapahoe • denver, colorado 80202 • (303) 623-8317

November 8, 1978

Mr. E. A. Trager
Nuclear Material Safety
and Safeguards
Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Trager:

Attached to this letter are the formal submissions of technical information previously telecopied or telephoned to Oakridge and your office. Included are:

1. Summaries of estimated costs for tailing alternatives discounted to present worth,

2. Status of regulatory approvals and permits,

3. Joint frequency wind distributions for stability classes A-F, and

4. Population rose data.

Responses to Mr. William P. Staub's letter of October 12, 1978, will be forthcoming following publication of the DES.

Very truly yours,

D. J. Markley
Environmental Coordinator

DJM/jf
/attachments

cc: MDV
DKS
GWG
C.Parr
DJM
HRR

FEE EXEMPT

7811280068

11238

ATTACHMENT 1

SUMMARIES OF ESTIMATED COSTS

CONVENTIONAL DISPOSAL

Dam Construction Using Tailings Sands

Capital Cost	$ 253,000
Operating Cost	1,352,203
Reclamation Cost	4,143,767
Total Cost	$ 5,748,970

Engineered Embankment - Full Height

a. With Riprap Slope Protection

Capital Cost	$ 2,064,000
Operating Cost	1,352,203
Reclamation Cost	4,655,701
Total Cost	$ 8,071,904

b. With Concrete Slope Protection in Lieu of Riprap — $ 8,826,904

Engineered Embankment - Staged Construction

Staged Construction - Vertical

a. With Riprap Slope Protection

Capital Cost	$ 1,875,543
Operating Cost	1,352,203
Reclamation Cost	4,674,276
Total Cost	$ 7,902,022

b. With Concrete Slope Protection in Lieu of Riprap — $ 8,656,022

Staged Construction - Horizontal

a. With Riprap Slope Protection

Capital Cost	$ 2,177,762
Operating Cost	1,352,203
Reclamation Cost	5,371,962
Total Cost	$ 8,901,927

b. With Concrete Slope Protection in Lieu of Riprap — $ 10,311,927

DISPOSAL USING EXCAVATED BASINS

Disposal Partially Below Grade
(Dames & Moore Proposal)

Capital Cost	$ 9,205,972
Operating Cost	1,352,203
Reclamation Cost	4,505,692
Total Cost	$ 15,063,867

Disposal Totally Below Grade

Capital Cost	$ 26,301,220
Operating Cost	1,352,203
Reclamation Cost	3,429,297
Total Cost	$ 31,082,720

SEGREGATED DISPOSAL

Sand and Slime Separation with Cyclones

a. With Slimes Evaporation Pond Above Grade

Capital Cost	$ 6,658,000
Operating Cost	6,597,507
Reclamation Cost	3,464,656
Total Cost	$ 16,720,163

b. With Partial Burial of Slimes Evaporation Pond

Capital Cost	$ 15,333,000
Operating Cost	6,597,507
Reclamation Cost	3,216,490
Total Cost	$ 25,146,997

c. With Total Burial of Slimes Evaporation Pond

Capital Cost	$ 21,801,000
Operating Cost	6,597,507
Reclamation Cost	2,969,068
Total Cost	$ 31,367,575

d. With Several Small Slimes Evaporation Ponds

Capital Cost	$ 6,658,000
Operating Cost	6,597,507
Reclamation Cost	3,464,656
Total Cost	$ 16,720,163

Sand and Slime Separation with Cylcones and Dewatering Screen

a. With Slimes Evaporation Pond Above Grade

Capital Cost	$ 6,723,000
Operating Cost	6,736,793
Reclamation Cost	3,464,656
Total Cost	$ 16,924,449

b. With Partial Burial of Slimes Evaporation Pond

Capital Cost	$ 15,397,000
Operating Cost	6,736,793
Reclamation Cost	3,216,490
Total Cost	$ 25,350,283

c. With Total Burial of Slimes Evaporation Pond

Capital Cost	$21,865,000
Operating Cost	6,736,793
Reclamation Cost	2,969,068
Total Cost	$31,570,861

d. With Several Small Slimes Evaporation Ponds

Capital Cost	$ 6,723,000
Operating Cost	6,736,793
Reclamation Cost	3,464,656
Total Cost	$16,924,449

FILTERED TAILINGS DISPOSAL

Tailings Filtration with Belt Extractors

a. With Truck Haulage of Tailings

Capital Cost	$ 6,069,000
Operating Cost	13,353,333
Reclamation Cost	3,050,799
Total Cost	$22,473,132

b. With Belt Conveyor System for Tailings

Capital Cost	$ 7,518,000
Operating Cost	12,028,814
Reclamation Cost	3,050,799
Total Cost	$22,597,613

Tailings Filtration with Disc Filters

a. With Truck Haulage of Tailings

Capital Cost	$ 5,651,000
Operating Cost	13,575,672
Reclamation Cost	3,050,799
Total Cost	$22,277,471

b. With Belt Conveyor System for Tailings

Capital Cost	$ 7,099,000
Operating Cost	12,259,804
Reclamation Cost	3,050,799
Total Cost	$22,409,603

OFFSITE DISPOSAL

No cost estimate developed.

ADDITIONAL CONSIDERATIONS

Neutralization of Tailings

a. Total Neutralization

Capital Cost	$ 476,000
Operating Cost	18,073,500
Total Cost	$18,549,500

b. Partial Neutralization (Slimes Only)

Capital Cost	$ 476,000
Operating Cost	15,865,680
Total Cost	$16,341,680

Chemical Fixation

Capital Cost	$ 500,000
Operating Cost	90,839,000
Total Cost	$ 91,339,000

ATTACHMENT 2

Status of Regulatory Approvals and Permits Required Prior to Initiation of the Energy Fuels White Mesa Uranium Mill

rmit or License	Granting Authority	Date of Application	Date Granted	Not Applied For	Expected Date of Application
ter Well Permits) 47943-(09-689)) 47331-(09-672)	Utah State Engineer	3-7-77 12-10-76	10-17-77 4-27-77		
ter Quality Construction Permit	Utah Bureau of Water Quality and Utah Pollution Control Committee			X	12-1-78
blic Drinking Water System	Utah Bureau of Water Quality and Utah Pollution Control Committee			X	12-1-78
r Quality Construction Permit	Utah Bureau of Air Quality and the Air Conservation Committee			X	12-1-78
ource Material License	U.S. Nuclear Regulatory Commission	2-6-78	In Review		
ill Tailing Disposal	Utah Bureau of Solid Waste Management			X	12-1-78
anitation Facilities	Utah Bureau of Sanitation			X	12-1-78
revention of Significant Deterioration	U.S. Environmental Protection Agency			X	12-1-78

ATTACHMENT 3

TRANSMITTAL SHEET

DAMES & MOORE
CONSULTING ENGINEERS IN THE APPLIED EARTH SCIENCES

605 PARFET STREET • DENVER, COLORADO 80215 • (303) 232-6262
CABLE: DAMEMORE TWX (910) 931-2600

To: ENERGY FUELS NUCLEAR, INC.
Executive Offices, Suite 900
Three Park Central
1515 Arapahoe Street
Denver, Colorado

Date 7 Nov 78

Your Order No.

Our Job No. 09973-017-14

Attention [redacted]

Subject: Population distribution data for NRC, White Mesa Uranium Project

We are sending you via messenger the following a copy of the table telecopied to NRC indicating population to 80km by 16-sector directions. List of references used in compiling this information.

~~This~~ These are for your information and use.

No. of copies submitted: one

Copies to: Job File 09973-017-14
KRP

DAMES & MOORE

By

Kenneth R. Porter, Ph.D.
Principal-in-Charge

114.6DN

Sector

Km	S SSW	SSW SW	SW WSW	WSW W	W WNW	WNW NW	NW NNW	NNW N
0-.1								
.1-.5								
.5-1.0								
1-2								
2-3								
3-4								
4-5								
5-10								
10-20					10			
20-30	280					3		10
30-40	50							
40-50	150							
50-60	250	350	100		15			
60-70	500	250	400					
70-80	400	350	500	100				10

Sector

Km	N NNE	NNE NE	NE ENE	ENE E	E ESE	ESE SE	SE SSE	SSE S
0-.1								
.1-.5								
.5-1.0								
1-2								
2-3								
3-4								
4-5	4							
5-10	253						120	100
10-20	3075							75
20-30			5		10			
30-40	2000	5	32	10			200	60
40-50	208	5	100			100	1193	100
50-60	10	20	1036	100		100	634	630
60-70	10	35	184	375	53	100	475	720
70-80	19	115			235	200	1300	100

Marilyn Lian
11-7-78

WHITE MESA POPULATION
REFERENCES - Population Wheel

U.S. Department of Commerce, Bureau of the Census, 1977, 1973 (Revised) and 1975 population estimates and 1972 (Revised) and 1974 per capita income estimates for counties and incorporated places in Colorado. Current population reports series P-25, no. 654, Population estimates and projections.

U.S. Department of Commerce, Bureau of the Census, 1973, 1970 census of population, v. 1, pt. 7, Characteristics of population, Colorado.

U.S. Bureau of Indian Affairs, Navajo Area Office of Information and Statistics, 1976, Navajo tribal chapters, estimated population, January 1, 1976. Window Rock, Arizona, USBIA.

Denver Post Library Staff, 1978, Personal communication, November 7, 1978.

U.S. Geological Survey, 1969, 1970, Maps, scale 1:250,000,
Shiprock, N. Mex.; Ariz.; Colo; Utah
Cortez, Colo; Utah
Moab, Utah; Colo.
Escalante, Utah
Salina, Utah

Rand McNally, 1972, Road atlas, United States/
Canada/Mexico, 48th annual edition.

ATTACHMENT 4

TRANSMITTAL SHEET

DAMES & MOORE
CONSULTING ENGINEERS IN THE APPLIED EARTH SCIENCES

605 PARFET STREET • DENVER, COLORADO 80215 • (303) 232-6262
CABLE: DAMEMORE TWX (910) 931-2600

To: ENERGY FUELS NUCLEAR, INC.
EXECUTIVE OFFICES, SUITE 900
Three Park Central
1515 Arapahoe St.
Denver, Colorado 80202

Date November 6, 1978

Your Order No.

Our Job No. 09973-~~015~~ 017-14

Attention: Mr. D. J. Markley

Subject: JOINT FREQUENCY DISTRIBUTIONS

We are sending you via mail the following Copies of the Energy Fuels Blanding site joint frequency wind distributions for stability classes A-F for March 1977 - February 1978 data. Also enclosed are the distributions by occurrences for the same time period and stability classes.

This is
These are for your files.

No. of copies submitted: 1

Copies to:
K. R. PORTER

DAMES & MOORE

By

114.6DN

DAMES AND MOORE JOB NO.-997301714
CLIENT- ENERGY FUELS
SITE- BLANDING, UTAH
DATA PERIOD- 770301 TO 780228
FOR THE MONTH OF ALL

WIND FREQUENCY DISTRIBUTION - STABILITY CLASS "A"
(PERCENT)

	SPEED(KTS)						
DIRECTION	0 - 3	4 - 6	7 - 10	11 - 16	17 - 21	GREATER THAN 21	TOTAL
N	0.	0.	0.	0.	0.	0.	0.
NNE	0.	0.	0.	0.	0.	0.	0.
NE	0.	0.	0.	0.	0.	0.	0.
ENE	0.	0.	0.	0.	0.	0.	0.
E	0.	.000387	0.	0.	0.	0.	.000387
ESE	0.	0.	0.	0.	0.	0.	0.
SE	0.	.000387	0.	0.	0.	0.	.000387
SSE	0.	0.	0.	0.	0.	0.	0.
S	0.	.001550	0.	0.	0.	0.	.001550
SSW	0.	.000387	0.	0.	0.	0.	.000387
SW	.000387	.001162	0.	0.	0.	0.	.001550
WSW	0.	.000387	0.	0.	0.	0.	.000387
W	0.	.000387	0.	0.	0.	0.	.000387
WNW	0.	0.	0.	0.	0.	0.	0.
NW	0.	0.	0.	0.	0.	0.	0.
NNW	0.	0.	0.	0.	0.	0.	0.
CAL	0.	0.	0.	0.	0.	0.	0.
VAR	0.	0.	0.	0.	0.	0.	0.
ALL	.000387	.004649	0.	0.	0.	0.	.005037

NUMBER OF INVALID OBSERVATIONS = 0
TOTAL NUMBER OF OBSERVATIONS = 34

DAMES AND MOORE JOB NO.-997301714
CLIENT- ENERGY FUELS
SITE- BLANDING, UTAH
DATA PERIOD- 770301 TO 780228
FOR THE MONTH OF ALL

WIND FREQUENCY DISTRIBUTION - STABILITY CLASS "B"
(PERCENT)

	SPEED(KTS)						
DIRECTION	0 - 3	4 - 6	7 - 10	11 - 16	17 - 21	GREATER THAN 21	TOTAL
N	.000775	.001162	0.	0.	0.	0.	.001937
NNE	.000387	.000775	0.	0.	0.	0.	.001162
NE	.000775	.001162	.000775	0.	0.	0.	.002712
ENE	.000387	.000775	.000775	0.	0.	0.	.001937
E	0.	.002325	.000387	0.	0.	0.	.002712
ESE	.000775	.001937	.001162	0.	0.	0.	.003874
SE	.000775	.005812	.006199	0.	0.	0.	.012786
SSE	.000387	.007361	.007361	0.	0.	0.	.015110
S	.001550	.012011	.013561	0.	0.	0.	.027121
SSW	.000775	.004262	.002325	0.	0.	0.	.007361
SW	.001937	.005812	.004262	0.	0.	0.	.012011
WSW	.001162	.002712	.001550	0.	0.	0.	.005424
W	.000387	.002712	.003487	0.	0.	0.	.006587
WNW	0.	.001550	.000387	0.	0.	0.	.001937
NW	.001550	.001162	.000387	0.	0.	0.	.003100
NNW	.000387	.000775	0.	0.	0.	0.	.001162
CAL	0.	0.	0.	0.	0.	0.	0.
VAR	0.	0.	0.	0.	0.	0.	0.
ALL	.012011	.052305	.042619	0.	0.	0.	.106935

NUMBER OF INVALID OBSERVATIONS = 0
TOTAL NUMBER OF OBSERVATIONS = 828

DAMES AND MOORE JOH NO.-997301714
CLIENT- ENERGY FUELS
SITE- BLANDING, UTAH
DATA PERIOD- 770301 TO 780228
FOR THE MONTH OF ALL

WIND FREQUENCY DISTRIBUTION - STABILITY CLASS "C"
(PERCENT)

	SPEED(KTS)						
DIRECTION	0 - 3	4 - 6	7 - 10	11 - 16	17 - 21	GREATER THAN 21	TOTAL
N	0.	.001937	.001550	0.	0.	0.	.003487
NNE	.000387	.002325	.000775	0.	0.	0.	.003487
NE	.000387	.005037	.000775	0.	0.	0.	.006199
ENE	0.	.003487	.000387	0.	0.	0.	.003874
E	.000387	.005812	.000775	0.	0.	0.	.006974
ESE	0.	.002325	.001550	0.	0.	0.	.003874
SE	.000387	.006587	.002712	.002325	0.	0.	.012011
SSE	.000387	.003874	.002325	.001937	0.	0.	.008524
S	0.	.005812	.009686	.002325	.000775	0.	.018597
SSW	0.	.003874	.008136	.003874	0.	.000387	.016273
SW	.001162	.005037	.006974	.005812	0.	0.	.018985
WSW	.000387	.001937	.001937	.001162	.000387	.000387	.006199
W	.000775	.001550	.001162	.001162	0.	0.	.004649
WNW	0.	.000775	.001162	.000775	0.	0.	.002712
NW	0.	.002712	.003487	.001162	0.	0.	.007361
NNW	.000387	.001162	.000775	.000387	0.	0.	.002712
CAL	0.	0.	0.	0.	0.	0.	0.
VAR	0.	.000775	0.	0.	0.	0.	.000775
ALL	.004649	.055017	.044169	.020922	.001162	.000775	.126695

NUMBER OF INVALID OBSERVATIONS = 0
TOTAL NUMBER OF OBSERVATIONS = 981

DAMES AND MOORE JOB NO.-997301714
CLIENT- ENERGY FUELS
SITE- BLANDING, UTAH
DATA PERIOD- 770301 TO 780228
FOR THE MONTH OF ALL

WIND FREQUENCY DISTRIBUTION - STABILITY CLASS "D"
(PERCENT)

	SPEED(KTS)						
DIRECTION	0 - 3	4 - 6	7 - 10	11 - 16	17 - 21	GREATER THAN 21	TOTAL
N	.001550	.003100	.001550	.006199	.002325	.000387	.015110
NNE	.001162	.005037	.005812	.010074	.000775	0.	.022859
NE	.001162	.010074	.006974	.006974	.000775	0.	.025959
ENE	.001937	.009299	.002325	.001162	0.	0.	.014723
E	.002325	.009299	.001162	.001162	0.	0.	.013948
ESE	.003487	.009686	.001937	.004649	.001162	.000387	.021310
SE	.001162	.007749	.004262	.004649	.000387	.000775	.018985
SSE	.002325	.005424	.004262	.004262	0.	0.	.016273
S	.002325	.003874	.006974	.015498	.001937	.000775	.031383
SSW	.001162	.002712	.005424	.014336	.006974	.004262	.034870
SW	.000387	.004649	.003874	.014723	.005037	.003487	.032158
WSW	.001162	.001550	.001937	.008911	.005037	.001550	.020147
W	.000387	.002712	.001937	.010849	.004262	.001550	.021697
WNW	.001550	.003100	.003487	.005037	.001550	.001937	.016660
NW	.000387	.001550	.004649	.014723	.004649	.005424	.031383
NNW	.001550	.002325	.002325	.007361	.003487	.001550	.018597
CAL	0.	0.	0.	0.	0.	0.	0.
VAR	0.	.000387	0.	0.	0.	0.	.000387
ALL	.024022	.082526	.058892	.130570	.038357	.022084	.356451

NUMBER OF INVALID OBSERVATIONS = 0
TOTAL NUMBER OF OBSERVATIONS = 2760

DAMES AND MOORE JOB NO.-997301714
CLIENT- ENERGY FUELS
SITE- BLANDING, UTAH
DATA PERIOD- 770301 TO 780228
FOR THE MONTH OF ALL

WIND FREQUENCY DISTRIBUTION - STABILITY CLASS "E"
(PERCENT)

	SPEED(KTS)						
DIRECTION	0 - 3	4 - 6	7 - 10	11 - 16	17 - 21	GREATER THAN 21	TOTAL
N	0.	.003874	.011236	.001162	0.	0.	.016273
NNE	0.	.005812	.013173	.002325	0.	0.	.021310
NE	0.	.008136	.018985	.003100	0.	0.	.030221
ENE	0.	.004649	.001937	0.	0.	0.	.006587
E	0.	.001550	.000775	.000775	0.	0.	.003100
ESE	0.	.001550	0.	.000387	0.	0.	.001937
SE	0.	.001937	.001162	0.	0.	0.	.003100
SSE	0.	.001937	.000775	.000775	0.	0.	.003487
S	0.	.003487	.003487	0.	0.	0.	.006974
SSW	0.	.001550	.006974	.000775	0.	0.	.009299
SW	0.	.002712	.004649	.001550	0.	0.	.008911
WSW	0.	.001162	.001550	.001162	0.	0.	.003874
W	0.	.000387	.003487	.001937	0.	0.	.005812
WNW	0.	.001937	.002712	0.	0.	0.	.004649
NW	0.	.003874	.015110	.005037	0.	0.	.024022
NNW	0.	.004649	.012011	.003100	0.	0.	.019760
CAL	0.	0.	0.	0.	0.	0.	0.
VAR	0.	0.	0.	0.	0.	0.	0.
ALL	0.	.049206	.098024	.022084	0.	0.	.169314

NUMBER OF INVALID OBSERVATIONS = 0
TOTAL NUMBER OF OBSERVATIONS = 1311

DAMES AND MOORE JOB NO.-997301714
CLIENT- ENERGY FUELS
SITE- BLANDING, UTAH
DATA PERIOD- 770301 TO 780228
FOR THE MONTH OF ALL

WIND FREQUENCY DISTRIBUTION - STABILITY CLASS "F"
(PERCENT)

	SPEED(KTS)						
DIRECTION	0 - 3	4 - 6	7 - 10	11 - 16	17 - 21	GREATER THAN 21	TOTAL
N	.003487	.014336	.004262	0.	0.	0.	.022084
NNE	.001550	.017435	.005424	0.	0.	0.	.024409
NE	.002325	.018597	.004262	0.	0.	0.	.025184
ENE	.001550	.010849	.002325	0.	0.	0.	.014723
E	.003487	.004649	0.	0.	0.	0.	.008136
ESE	.001162	.005037	.000387	0.	0.	0.	.006587
SE	.001162	.004262	.000387	0.	0.	0.	.005812
SSE	.003100	.004262	.000387	0.	0.	0.	.007749
S	.001550	.006587	.001937	0.	0.	0.	.010074
SSW	.000775	.008911	.001162	0.	0.	0.	.010849
SW	.001550	.007749	.001937	0.	0.	0.	.011236
WSW	.001162	.003874	.000387	0.	0.	0.	.005424
W	.001937	.008911	.000387	0.	0.	0.	.011236
WNW	.002712	.008136	.002712	0.	0.	0.	.013561
NW	.003100	.021697	.003487	0.	0.	0.	.028284
NNW	.002325	.016273	.010074	0.	0.	0.	.028671
CAL	0.	0.	0.	0.	0.	0.	0.
VAR	.000387	.000775	.000387	0.	0.	0.	.001550
ALL	.033320	.162340	.039907	0.	0.	0.	.235568

NUMBER OF INVALID OBSERVATIONS = 0
TOTAL NUMBER OF OBSERVATIONS = 1824

DAMES AND MOORE JOB NO.-997301714
CLIENT- ENERGY FUELS
SITE- BLANDING, UTAH
DATA PERIOD- ~~770101 TO 771231~~ 1 Mar 77 - 28 Feb 78
FOR THE MONTH OF ALL

WIND FREQUENCY DISTRIBUTION - STABILITY CLASS "A"
(OCCURRENCES)

	SPEED(KTS)							Mean
DIRECTION	0 - 3	4 - 6	7 - 10	11 - 16	17 - 21	GREATER THAN 21	TOTAL	SPEED
N	0	0	0	0	0	0	0	0.
NNE	0	0	0	0	0	0	0	0.
NE	0	0	0	0	0	0	0	0.
ENE	0	0	0	0	0	0	0	0.
E	0	3	0	0	0	0	3	5.2
ESE	0	0	0	0	0	0	0	0.
SE	0	3	0	0	0	0	3	5.2
SSE	0	0	0	0	0	0	0	0.
S	0	12	0	0	0	0	12	5.0
SSW	0	3	0	0	0	0	3	5.2
SW	3	9	0	0	0	0	12	4.1
WSW	0	3	0	0	0	0	3	3.5
W	0	3	0	0	0	0	3	5.2
WNW	0	0	0	0	0	0	0	0.
NW	0	0	0	0	0	0	0	0.
NNW	0	0	0	0	0	0	0	0.
CAL	0	0	0	0	0	0	0	0.
VAR	0	0	0	0	0	0	0	0.
ALL	3	36	0	0	0	0	39	4.7

NUMBER OF INVALID OBSERVATIONS = 0
TOTAL NUMBER OF OBSERVATIONS = 39

DAMES AND MOORE JOB NO.-997301714
CLIENT- ENERGY FUELS
SITE- BLANDING, UTAH
DATA PERIOD- 770101 TO 771231
FOR THE MONTH OF ALL

WIND FREQUENCY DISTRIBUTION - STABILITY CLASS "B"
(OCCURRENCES)

	SPEED(KTS)							
DIRECTION	0 - 3	4 - 6	7 - 10	11 - 16	17 - 21	GREATER THAN 21	TOTAL	SPEED
N	6	9	0	0	0	0	15	3.6
NNE	3	6	0	0	0	0	9	3.2
NE	6	9	6	0	0	0	21	4.3
ENE	3	6	6	0	0	0	15	5.4
E	0	18	3	0	0	0	21	4.6
ESE	6	15	9	0	0	0	30	5.5
SE	6	45	48	0	0	0	99	5.9
SSE	3	57	57	0	0	0	117	6.2
S	12	93	105	0	0	0	210	6.0
SSW	6	33	18	0	0	0	57	5.6
SW	15	45	33	0	0	0	93	5.3
WSW	9	21	12	0	0	0	42	5.1
W	3	21	27	0	0	0	51	6.0
WNW	0	12	3	0	0	0	15	4.5
NW	12	9	3	0	0	0	24	3.5
NNW	3	6	0	0	0	0	9	3.2
CAL	0	0	0	0	0	0	0	0.
VAR	0	0	0	0	0	0	0	0.
ALL	93	405	330	0	0	0	828	5.6

NUMBER OF INVALID OBSERVATIONS = 0
TOTAL NUMBER OF OBSERVATIONS = 828

DAMES AND MOORE JOB NO.-997301714
CLIENT- ENERGY FUELS
SITE- BLANDING, UTAH
DATA PERIOD- 770101 TO 771231
FOR THE MONTH OF ALL

WIND FREQUENCY DISTRIBUTION - STABILITY CLASS "C"
(OCCURRENCES)

	SPEED(KTS)							
DIRECTION	0 - 3	4 - 6	7 - 10	11 - 16	17 - 21	GREATER THAN 21	TOTAL	SPEED
N	0	15	12	0	0	0	27	6.2
NNE	3	18	6	0	0	0	27	6.0
NE	3	39	6	0	0	0	48	5.3
ENE	0	27	3	0	0	0	30	5.5
E	3	45	6	0	0	0	54	5.0
ESE	0	18	12	0	0	0	30	5.7
SE	3	51	21	18	0	0	93	6.9
SSE	3	30	18	15	0	0	66	7.3
S	0	45	75	18	6	0	144	8.0
SSW	0	30	63	30	0	3	126	8.7
SW	9	39	54	45	0	0	147	8.1
WSW	3	15	15	9	3	3	48	9.5
W	6	12	9	9	0	0	36	6.9
WNW	0	6	9	6	0	0	21	7.9
NW	0	21	27	9	0	0	57	7.7
NNW	3	9	6	3	0	0	21	6.7
CAL	0	0	0	0	0	0	0	0.
VAR	0	6	0	0	0	0	6	5.2
ALL	36	426	342	162	9	6	981	7.4

NUMBER OF INVALID OBSERVATIONS = 0
TOTAL NUMBER OF OBSERVATIONS = 981

DAMES AND MOORE JOB NO.-997301714
CLIENT- ENERGY FUELS
SITE- BLANDING, UTAH
DATA PERIOD- 770101 TO 771231
FOR THE MONTH OF ALL

WIND FREQUENCY DISTRIBUTION - STABILITY CLASS "D"
(OCCURRENCES)

	SPEED(KTS)						
DIRECTION	0 - 3	4 - 6	7 - 10	11 - 16	17 - 21	GREATER THAN 21	TOTAL SPEED
N	12	24	12	48	18	3	117 10.6
NNE	9	39	45	78	6	0	177 8.9
NE	9	78	54	54	6	0	201 7.6
ENE	15	72	18	9	0	0	114 5.3
E	18	72	9	9	0	0	108 5.1
ESE	27	75	15	36	9	3	165 7.1
SE	9	60	33	36	3	6	147 8.3
SSE	18	42	33	33	0	0	126 7.3
S	18	30	54	120	15	6	243 10.4
SSW	9	21	42	111	54	33	270 13.9
SW	3	36	30	114	39	27	249 13.1
WSW	9	12	15	69	39	12	156 13.8
W	3	21	15	84	33	12	168 12.9
WNW	12	24	27	39	12	15	129 11.3
NW	3	12	36	114	36	42	243 14.8
NNW	12	18	18	57	27	12	144 12.5
CAL	0	0	0	0	0	0	0 0.
VAR	0	3	0	0	0	0	3 4.3
ALL	186	639	456	1011	297	171	2760 10.7

NUMBER OF INVALID OBSERVATIONS = 0
TOTAL NUMBER OF OBSERVATIONS = 2760

DAMES AND MOORE JOB NO.-997301714
CLIENT- ENERGY FUELS
SITE- BLANDING, UTAH
DATA PERIOD- 770101 TO 771231
FOR THE MONTH OF ALL

WIND FREQUENCY DISTRIBUTION - STABILITY CLASS "E"
(OCCURRENCES)

	SPEED(KTS)							
DIRECTION	0 - 3	4 - 6	7 - 10	11 - 16	17 - 21	GREATER THAN 21	TOTAL	SPEED
N	0	30	87	9	0	0	126	8.0
NNE	0	45	102	13	0	0	165	7.8
NE	0	63	147	24	0	0	234	7.8
ENE	0	36	15	0	0	0	51	5.9
E	0	12	6	6	0	0	24	6.7
ESE	0	12	0	3	0	0	15	5.9
SE	0	15	9	0	0	0	24	5.9
SSE	0	15	6	6	0	0	27	6.8
S	0	27	27	0	0	0	54	6.6
SSW	0	12	54	6	0	0	72	8.2
SW	0	21	36	12	0	0	69	7.7
WSW	0	9	12	9	0	0	30	8.0
W	0	3	27	15	0	0	45	9.0
WNW	0	15	21	0	0	0	36	6.9
NW	0	30	117	39	0	0	186	8.3
NNW	0	36	93	24	0	0	153	8.0
CAL	0	0	0	0	0	0	0	0.
VAR	0	0	0	0	0	0	0	0.
ALL	0	381	759	171	0	0	1311	7.7

NUMBER OF INVALID OBSERVATIONS = 0
TOTAL NUMBER OF OBSERVATIONS = 1311

DAMES AND MOORE JOB NO.-997301714
CLIENT- ENERGY FUELS
SITE- BLANDING, UTAH
DATA PERIOD- 770101 TO 771231
FOR THE MONTH OF ALL

WIND FREQUENCY DISTRIBUTION - STABILITY CLASS "F"
(OCCURRENCES)

	SPEED(KTS)							
DIRECTION	0 - 3	4 - 6	7 - 10	11 - 16	17 - 21	GREATER THAN 21	TOTAL	SPEED
N	27	111	33	0	0	0	171	4.8
NNE	12	135	42	0	0	0	189	5.1
NE	18	144	33	0	0	0	195	4.8
ENE	12	84	18	0	0	0	114	5.0
E	27	36	0	0	0	0	63	3.4
ESE	9	39	3	0	0	0	51	4.1
SE	9	33	3	0	0	0	45	4.1
SSE	24	33	3	0	0	0	60	3.6
S	12	51	15	0	0	0	78	4.7
SSW	6	69	9	0	0	0	84	4.9
SW	12	60	15	0	0	0	87	4.7
WSW	9	30	3	0	0	0	42	4.2
W	15	69	3	0	0	0	87	4.3
WNW	21	63	21	0	0	0	105	4.9
NW	24	168	27	0	0	0	219	4.8
NNW	18	126	78	0	0	0	222	5.5
CAL	0	0	0	0	0	0	0	0.
VAR	3	6	3	0	0	0	12	4.1
ALL	258	1257	309	0	0	0	1824	4.8

NUMBER OF INVALID OBSERVATIONS = 0
TOTAL NUMBER OF OBSERVATIONS = 1824