



MATERIAL SAFETY DATA SHEET

FLY ASH

THIS DOCUMENT HAS BEEN CREATED TO COMPLY WITH OSHA'S HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200

SECTION I PRODUCT INFORMATION

CHEMICAL NAME: FLY ASH **MANUFACTURER:** RED TRAIL ENERGY
CHEMICAL FAMILY: COAL ASH 3682 HWY 8 S
RICHARDTON, ND 58652

PHONE NUMBER FOR INFORMATION: (701) 974-3308

EMERGENCY PHONE NUMBER: 1-800-424-9300 (CHEMTREC)

DATE PREPARED: JULY 15TH, 2008

SECTION II PRODUCT INGREDIENTS/IDENTITY INFORMATION

MINERAL ANALYSIS OF ASH	WT%	CAS NUMBER	OSHA PEL (MG/M ³)
SILICON DIOXIDE	13%-14%	7631-86-9	80
ALUMINUM OXIDE	5% - 6%	1344-28-1	15
TITANIUM OXIDE	<1%	13463-67-7	15
IRON OXIDE	3% - 5%	1309-37-1	10
CALCIUM OXIDE	40% - 42%	1305-78-8	5
MAGNESIUM OXIDE	1% - 2%	1309-48-4	15
POTASSIUM OXIDE	<1%	12136-45-7	
SODIUM OXIDE	1% - 2%	1313-59-3	
SO ₃	30% - 32%	7446-11-9	
P ₂ O ₅	<1%	1314-56-3	
STRONTIUM OXIDE	<1%	1314-11-0	
BIARIUM OXIDE	<1%	1304-28-5	
MANGANESE DIOXIDE	<1%	1313-13-9	

*FLY ASH COMPOSITION IS VARIABLE BASED ON COAL QUALITY AND PLANT CONDITIONS

*FLY ASH HAS A RESPIRABLE PARTICLE SIZE DISTRIBUTION

SECTION III PHYSICAL/CHEMICAL CHARACTERISTICS

APPEARANCE AND ODOR: GRAY POWDER NO DISCERNABLE ODOR **EVAPORATION RATE:** N/A

BOILING POINT: N/A **SOLUBILITY IN WATER:** N/A

VAPOR PRESSURE: N/A **SPECIFIC GRAVITY:** N/A

VAPOR DENSITY: N/A **PH:** 4-12

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: N/A FLAMMABLE LIMITS IN AIR UPPER LEL: N/A LOWER LEL: N/A
EXTINGUISHING MEDIA: N/A
SPECIAL FIRE FIGHTING PROCEDURES: N/A
UNUSUAL FIRE AND EXPLOSION HAZARDS: N/A

SECTION V REACTIVITY DATA

STABILITY: STABLE: YES
CONDITIONS TO AVOID: NONE KNOWN
INCOMPATIBILITY: NONE KNOWN
HAZARDOUS DECOMPOSITION AND/OR BY-PRODUCTS FORMED: NONE KNOWN

SECTION VI HEALTH HAZARD DATA

ROUTES OF ENTRY: EYE CONTACT, SKIN CONTACT, INHALATION, & INGESTION

ACUTE EFFECTS OF OVEREXPOSURE

EYES: MAY CAUSE EYE IRRITATION
SKIN: MAY CAUSE IRRITATION IN SENSITIVE INDIVIDUALS
INHALATION: MAY CAUSE IRRITATION OF LUNGS AND MUCOUS MEMBRANES
INGESTION: NO KNOWN ACUTE EFFECTS

EMERGENCY AND FIRST AID PROCEDURES

EYES: IMMEDIATELY FLUSH EYES FOR 15 MINUTES. DO NOT RUB. SEEK MEDICAL ATTENTION AS SOON AS POSSIBLE
SKIN: BRUSH AWAY ASH PARTICLES. REMOVE CONTAMINATED CLOTHING AND WASH SKIN WITH SOAP AND WATER. IF SKIN IRRITATION OCCURS CONSULT A PHYSICIAN.
INHALATION: MOVE PERSON TO FRESH AIR. REMOVE DEBRIS FROM NASAL PASSAGES. IF DIFFICULTY IN BREATHING PERSISTS CONSULT A PHYSICIAN.

CHRONIC EFFECTS OF OVEREXPOSURE

EXCESSIVE EXPOSURE TO RESPIRABLE DUST OVER AN EXTENDED PERIOD MAY RESULT IN THE DEVELOPMENT OF PULMONARY DISEASES SUCH AS SILICOSIS.
FLY ASH MAY CONTAIN CRYSTALLINE SILICA, A CHEMICAL THAT HAS BEEN DETERMINED BY SOME AGENCIES TO CAUSE CANCER. INHALATION OF DUST ABOVE ESTABLISHED OR RECOMMENDED VALUES SHOULD BE AVOIDED.

SECTION VII HANDLING AND STORAGE

HANDLING: WHEN HANDLING USE CAUTION TO MINIMIZE DUST. SURFACE MAY BE WETTED TO HELP CONTROL DUST.
STORAGE: STORE IN DRY CONDITIONS
SPECIAL PRECAUTIONS: WHEN TRANSPORTING TRUCKS SHOULD BE COVERED.

SECTION VIII EXPOSURE CONTROL/PERSONAL PROTECTION

PERSONAL PROTECTION: EMPLOYEES WORKING AROUND FLY ASH SHOULD WEAR GLOVES, GOGGLES, PROTECTIVE CLOTHING AND A NIOSH APPROVED RESPIRATOR.

SPECIAL PRECAUTIONS: EMPLOYEES HANDLING FLY ASH SHOULD PRACTICE PROPER PERSONAL HYGIENE. I.E. WASH HANDS AND REMOVE CONTAMINATED CLOTHING BEFORE EATING, SMOKING, APPLYING COSMETICS OR USING TOILET FACILITIES.

SECTION IX SPECIAL PRECAUTIONS

SPILLS/RELEASES: FLY ASH SHOULD BE PLACED IN SUITABLE CONTAINERS AND COVERED.

FLY ASH IS NOT CONSIDERED A HAZARDOUS WASTE UNDER THE EPA'S RESOURCE CONSERVATION AND RECOVERY ACT (RCRA). FLY ASH MAY BE DISPOSED OF IN AN APPROVED LANDFILL OR BY ADDING IT TO CEMENT MIXTURES, ASPHALT ADDITIVES, AND AGRICULTURAL SOIL MODIFIERS.

ALL INFORMATION AND RECOMMENDATIONS SET FORTH HEREIN ARE BASED ON DATA WE HAVE IN OUR POSSESSION AND WE BELIEVE TO BE TRUE. IT IS HOWEVER, THE RESPONSIBILITY OF THE USER TO DETERMINE THE SAFETY, TOXICITY, AND SUITABILITY FOR HIS/HER OWN USE OF THE ABOVE DESCRIBED PRODUCT. BECAUSE THE ACTIONS OF OTHERS ARE BEYOND OUR CONTROL RED TRAIL ENERGY LLC MAKES NO WARRANTY EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.