

MEMORANDUM

TO: Robert Evangelista
FROM: Elisa *EW*
DATE: Sept. 10. 1998
SUBJECT: EPA Videocassettes

I want to extend this belated thank you for your efforts in arranging to have EPA give the Southwestern College Learning Resource Center a large number of videocassettes concerning environmental technology. These programs are a valuable source of information for students in your classes as well as those in other classes which consider the effects of modern technology and culture on the world's environmental health.

I have attached a list of the programs in case you need to know which ones were included in this gift.

- VC
ENV
01
Alabama Oil Burn
Mobile Bay, Alabama, was the scene of a joint United States-Canadian study designed to measure the environmental impact of burning spilled oil as a cleanup technique. The experiment was comprised of a series of test burns of oil spilled into a large open tank. (7 min.)
- VC
ENV
02
Baltic Emergency Response
Documents training sessions that the U.S. EPA conducted for the newly independent nations of Latvia, Lithuania, and Estonia. (22 min.)
- VC
ENV
03
Basket Creek Site
Highlights the multiphase cleanup of the Basket Creek dump in Douglas County, Georgia, which involved erecting a prefab building over the contaminated area to control and treat toxic vapors released from the soil. (6 min.)
- VC
ENV
04
Bayou Bonfouca
An overview of the Superfund cleanup effort at Bayou Bonfouca in Slidell, Louisiana. Due to the magnitude and difficulty of this cleanup, sophisticated equipment was engineered specifically for this site, including a computer-monitored dredge. (8 min.)
- VC
ENV
45
The Clean Green: Phytoremediation
Surveys sites at which a newly developing technique called "phytoremediation" is being used for decontamination. This method takes advantage of the natural abilities of plants to contain and remove toxic materials from soil and groundwater. (15 min.)
- VC
ENV
05
Cleanup by the CRV
Depicts the step-by-step cylinder cleanup using the Cylinder Recovery Vessel (CRV) at an Elizabeth, New Jersey, site. (12 min.)
- VC
ENV
06
Divex Response and Removal Action
Highlights a unique site consisting of two different locations within Richland County, South Carolina. The cleanup personnel identified and moved scores of unknown volatile chemicals and detonated 40,000 pounds of explosives. (22 min.)
- VC
ENV
07
Drum Site
Surveys the task of identifying and disposing of 5,000 contaminant-filled drums from an abandoned warehouse in Matthews, North Carolina. An on-site laboratory was set up at the site to aid in the characterization of wastes, allowing compatible waste streams to be "bulked" for disposal. (5 min.)
- VC
ENV
08
Ecotoxicologists at Oak Hill
Explains the ecotoxicological investigation in Oak Hill, North Carolina, which was initiated to determine whether run-off contamination from an adjacent PCB site had affected the aquatic community in a nearby stream. (5 min.)

VC
ENV
09

e-Data Overview: Electronic Data Transfer and Validation System
Highlights 3-Data, a PC-based system developed by the U.S. EPA
to assist in the validation, management, and communication of
hazardous waste sample information. (6 min.)

Environmental Response Video News Magazine

A series that highlights various environmental issues and
technology including Superfund site biographies, field
investigation techniques and instrumentation, and cleanup
technologies.

VC
ENV
10

Program 1, Fall 1992
Abandoned Wood-Treating Sites
Operation Inland Response
Site: Unseen (Pickett Road, Pt. 1)
Eco-Toxicologists at Oak Hill (27 min.)

VC
ENV
11

Program 2, Winter 1993
Navajo Vats
Site Shorts - Regions III, VI, VIII
RASTER - Day of the Robot
Basket Creek Site (27 min.)

VC
ENV
12

Program 3, Summer 1993
Montana Groundwater
Site Shorts - Regions V, IX, X
Alabama Oil Burn (25 min.)

VC
ENV
13

Program 4, Winter 1994
Oil Burn Update
Summitville Mine
Site Shorts - Regions I, II, V, X
Drum Site (Matthews, NC) (29 min.)

VC
ENV
14

Program 5, Fall 1994
DIVEX: Response and Removal Action
Site Shorts - Regions VI, VII, IX
Technology Update - ISV (30 min.)

VC
ENV
15

Program 6, Summer 1995
Bayou Bonfouca
Site Shorts - Regions III, IV, VI
SACM (30 min.)

VC
ENV
16

Program 7, Spring 1996
Sishc's Foundry: Preserving the Past
Site Shorts - Regions IV, IX
LCP Chemical Site (31 min.)

VC
ENV
17

Program 8, Winter 1996
Lorain County Pesticide
ERTP Training

Environmental Response Video News Magazine, Continued

VC
ENV
18

Program 9, Summer 1997
Grawn, Michigan, Tire Fire
Technology Update - Scribe
The Clean Green (30 min.)

VC
ENV
62

Program 10, Winter 1998
Midwest Floods 1998
Site Shorts - Regions I, II, IX
Technology Update (Flywheel Technology)

VC
ENV
19

EPA Worker Protection Standards
Describes the HAZWOPER regulation and presents details of its requirements. (21 min.)

VC
ENV
20

Grawn, MI Tire Fire
Documents a 20-day fire that ignited at Carl's Retreading, a tire and battery disposal plant, in Traverse City, Michigan. Conventional fire fighting techniques proved ineffective. (16 min.)

VC
ENV
21

Gulf Coast Methyl Parathion
As many as 1000 homes and businesses in the Mississippi Gulf Coast were sprayed illegally with methyl parathion, an agricultural pesticide. This video explains how to recognize symptoms of methyl parathion poisoning, what to look for if you suspect it has been used, and how to contact government agencies for assistance. (12 min.)

VC
ENV
22

Investigation and Cleanup of Wood-Treating Sites
Delves into the cleanup efforts that are currently underway at wood-treating sites in the northwestern and southeastern United States. (7 min.)

VC
ENV
23

LCP Chemical Site
The LCP Chemical site in Brunswick, Georgia, consists of 550 acres of tidal wetlands contaminated with mercury, PCBs, sulfuric acid, and oil refinery wastes. Surveys the engineering solutions such as settling ponds, burns, dredging, and filter press operations that have been employed to prevent tidal action from driving contaminants deeper into the surrounding marsh. (16 min.)

VC
ENV
24

Lorain County Pesticide Removal Site Story
Examines the Superfund program to decontaminate 235 homes and apartments in Lorain County, Ohio that were contaminated with methyl parathion. (25 min.)

VC
ENV
25

Manasota Plating
Demonstrates the steps taken to install systems to test and treat soils and groundwater at an abandoned electroplating company in Sarasota, Florida. (10 min.)

VC
ENV
26

Mercury Video News Release

A sinister talking skull takes viewers on a tour of the fascinations and dangers of mercury. Warns that mercury should be treated with caution and explains what to do in the event of a spill. (two versions: 2 min. and 1 min.)

VC
ENV
27

Montana Post and Pole Groundwater Treatment Facility

Explains how recovery wells and a water-treatment plant were constructed to recover toxins and clean the contaminated groundwater at the Montana Pole and Treatment facility in Butte, Montana. (7 min.)

VC
ENV
28

Navajo Vats

Bioremediation activities at two pit sites where toxaphene was discarded on the Navajo Nation. In English. (10 min.)

VC
ENV
29

Navajo Vats II

Highlights pilot treatability studies conducted on the Navajo Nation to determine a cost-effective way to clean up soils contaminated with toxaphene residues resulting from cattle and sheep dipping operations for tick control. In English. (12 min.)

VC
ENV
30

Operation Border Crossing

A full-field hazardous materials and modified functional exercise designed to serve as a training tool for first responders held in San Ysidro, California. (7 min.)

VC
ENV
31

Operation Contra Costa Shore

Shows an example of readiness training in Richmond, California, which brought together local, state, and federal agencies in response to a simulated collision between a train carrying flammable liquid and a delivery truck transporting potentially hazardous material. (7 min.)

VC
ENV
32

Operation Diamond Head

A full field emergency response training exercise in Oahu, Hawaii, which simulated a vehicle collision and subsequent chemical release. Discusses the different aspects of response, including assessment, control, and cleanup. (11 min.)

VC
ENV
33

Operation Garden Isle II

An emergency response training exercise in Kauai, Hawaii which simulated the collision of a passenger vehicle with a flatbed truck transporting a mixed load of hazardous materials. (11 min.)

VC
ENV
34

Operation Inland Response

A response training simulation of a collision between a bulk chlorine supply tanker and a diesel tanker. (6 min.)

VC
ENV
35

Operation Wildfire

Allows the viewer to observe a simulated HAZMAT incident. Emphasizes evacuation procedures and emergency response techniques. (13 min.)

VC
ENV
36

Region III Emergency Response Exercise 1995
Depicts a U.S. EPA Region III Area Exercise - a one-day emergency response drill simulating a pipeline break which released approximately 300 barrels of gasoline into a creek in Nicholson, Pennsylvania. (10 min.)

VC
ENV
37

Regulating Hazardous Waste at Wood Preserving Facilities
(30 min.)

VC
ENV
38

SACM
The Superfund Accelerated Cleanup Model (SACM) is a fast-track approach used to speed up the cleanup process at hazardous waste sites by streamlining and integrating the removal and remedial phases at the site. In this video, it is applied to the Penta Woods site in Daniels, Wisconsin. (9 min.)

VC
ENV
39

Sishc's Foundry: Preserving the Past
Highlights the efforts of U.S. EPA Region VII, the Western Area Power Administration, and several concerned historians to preserve early 20th-century artifacts found at the Sishc's Foundry site in Scotts Bluff, Nebraska. (7 min.)

VC
ENV
40

The Southern Shipbuilding Site
Details the on-going cleanup of the Southern Shipbuilding Company site on the Bayou Bonfouca in Slidell, Louisiana. (7 min.)

VC
ENV
41

Summitville Mine
Highlights the challenges of solving the environmental problems at the Summitville Mine site in Colorado where highly contaminated water runs through an abandoned mine shaft. (9 min.)

VC
ENV
42

Superfund Seniors
Chronicles the experiences of 12 students from Washington D.C.'s Duke Ellington School for the Gifted and Talented who attended a 6-week internship at the U.S. EPA headquarters during the summer of 1989. (12 min.)

VC
ENV
43

Tire Fires
Identifies and discusses the health and environmental threats that result from tire fires. Offers suggestions on how to combat tire-laden landfill fires, the advantages and disadvantages of various extinguishing methods, and ways community leaders can safeguard against this type of hazard. (15 min.)

VC
ENV
44

Wood-Treatment Site Cleanup
An overview of the wood-treating facility cleanup process. (10 min.)

ENVIRONMENTAL TECHNOLOGY VIDEOS

TAPE 1

Title: *RCRA ORIENTATION PROGRAM*

Time: (1hr & 7 min)

Description: This video goes with the U.S. EPA's RCRA Orientation Manual. RCRA how & regs. policy, & guidance documents for HW management. RCRA subtitles D, I, & J for solid non-hazardous waste, including: landfill design, resource recovery & recycling UST, & medical waste. RCRA subtitle C for hazardous waste management; hazardous characteristics: listed wastes: generator status, records, packaging, inspection of Facilities. A little superfund Policy: Superfund: Removal Actions & Remedial Actions: public participation, public information, Freedom of Information Act, Office of Ombudsmon & RCRA Hotline. This is an U.S. EPA produced video. ET 150 RCRA, eliminate solid waste segment

Title: *WASTE DRUM TRACKING SYSTEM*

Time: (~30 min)

Description: A developed bar-code tracking system to comply with waste management. Uses barcode identification with a computer program that does the actual tracking DOW has a manual "Waste Drum Tracking System: The majority of the rest of this video is on the details of using the Vax computer software that is the core of this system

ET 150, Hazardous Waste Management/RCRA)

Title: *WRAP (WASTE REDUCTION ALWAYS PAYS),
GETTING OF THE PONDS*

Time: (~8 min)

Description: Reduction DOW's wastewater flows to the solar ponds. Video goes over the reduction of the various sources of wastewater; however, the presentation of this information is not clearly presented. A DOW promo video. ET 110; P2

Title: *WRAP*

Time: (6 min)

Description: The story is about a catalyst waste stream at an agricultural plant. Dow analyzes the waste and then develops new technologies to deal with the waste, but Dow does NOT say how is did this.

ET 110; P2

Title: *WRAP*

Time: (6 min)

Description: Overall concept of waste minimization at an industrial facility. Video ties industrial waste minimization to harmful waste reduction a vague comparison. Introduces teams of various plants. Ends with four excellent concepts of waste minimizations.

ET 110; P2

TAPE 2

Title: *COOPERATION ACROSS BOUNDARIES*

Time: (32 min)

Description: The issues of acid in the Northwest US Eastern and Canada from the emissions of high sulfur coal burning power plants in the Midwest. Looks at the issues: jobs vs environment, the political struggle to solve the problem, pollution control technology, fuel substitution, and the possible sharing of costs of remediating the problem. Balanced view.

ET 110 Air pollution. ET 100 Air pollution

Title: *RECOGNIZING HAZARDS, EMERGENCY RESPONSE SERIES* Time: (21 min)

Description: A film for first responders about what hazardous materials to look for in an emergency response. Some UN placarding and NFPA labels.

ET 230; ET 200 transportation

Title: *ASBESTOS PROBLEMS; A PUBLIC AWARENESS* **Time:** (20 min)
Description: Three types of minerals. Where it is used. How the fibers are a hazard. Health effects of asbestos. Carcinogens: lung cancer & mesophilioma. Asbestos hazard control program; building inspection and statement. Asbestos management and planning.
ET 130. Asbestos - first 2 thirds of video;
ET 200 or 150 Asbestos abatement first third & last third

Title: *ASBESTOS AWARENESS, ARE YOU AT RISK?* **Time:** (23 min)
Description: Asbestos in building and construction. OSHA standards. Asbestos in building & uses. Health effects. Potential locations Asbestos-containing material damage and deterioration. U.S. EPA regulated asbestos-containing material. housekeeping requirements.
ET 130 first 2/5 of tape, Intro and Health Effect of Asbestos;
ET 200 and ET 150 first 1/5 and last 3/5 of video General Asbestos Awareness

TAPE 3

Title: *CONQUERING CANCER; THE SECRET LIFE* **Time:** (60 min)
Description: David Suzuki introduces this video on cancer. Focuses mostly on the gene research to find the base pairs that cause errors in transition. Also examines the role of receptor sites on cell wall in failing to turn off cellular division.
ET 130. Carcinogenesis- about first 5 to 10 min appropriate

Title: *OUR COMMON FUTURE: SAVING THE PLANET* **Time:** (~20 min)

(A DOUBLE VIDEO) *LIVING AND WORKING IN A TOXIC ENVIRONMENT*
Description: Samuel S. Epstein, MD gives an excellent speech to an audience about our exposure to toxic chemicals. He details the application risk assessment to the toxic assaulting us and how risk assessment is being used to justify our exposure. He describes corporate influence on some university researchers, some government risk standards, and on the risk assessment process. Dr. Epstein provides a hard-hitting speech that could make the listener aware of the forces trying to "scientifically" change toxicology.
ET 130 Risk assessment, health effects

Title: *RADIATION, THE ENVIRONMENT, AND HEALTH* **Time:** (20 min)
Description: Myron Wollin, Health Physicist, gives a speech about the contamination of the environment by the nuclear weapons production facilities. He also talks about the risk of radon gas in the homes of people. This is a 2 part speech: nuclear weapons facilities & radon.
ET 150: Nuclear contamination; ET 130 Radiation health effects.

TAPE 4

Title: *CHEMICAL CONTROL ROOM* **Time:** (23 min)
Description: How hazardous are stored, used in industry; hazard warranty; routes of entry; how chemicals can harm; MIOS; GOAPS and contact dermatitis; inside the plant; soaps; NaOH, acetone. CL₂, hydrazine.
ET 150

Title: *Personal Sampler Calibration* **Time:** (10 min)
Description: Bubble test to calibrate rotameter of personal air sampler
ET 230, 130 Personal air sampler

Title: *HAZARD COMMUNICATION FOR BUSINESS PROFESSIONALS*

Description: Need Haz Communication; setting up at HazCom program; need for employee training
ET 200. HazCom

Title: *SONG OF THE CANARY*

Time: (57 min)

Description: A mid 70's look at 2 industries.

1) Oxidental Petrolems plant in Lathrop, CA. Plant manufacturing of agricultural chemicals causes health and sterility problems in workmen at plant.

2) The problem of Brown Lung Disease, Biocenosis, in the cotton mill workers of health effects. corporate policy. politics.

ET 130: Pesticides, Dust & fibers

ET 100: Health effects of chemicals.

TAPE 5

Title: *BIOLOGICAL TREATMENT TECHNOLOGIES*

Time: (29 min)

Description: Introduction to microbial degradation; trickling filter & activated sludge treatment of municipal wastewater. On site Bioremediation of GW. includes Mr sparging; above ground treatment of petroleum contaminated soil; bioreactors; cometabolism; phytoremediation. Preserving the Legacy Series

ET 110 treatment technologies 1st third. ET 150, remediation later 2/3rd

Title: *THERMAL: TREATMENT TECHNOLOGIES*

Time: (29 min)

Description: Mass burn of garbage; Aptro Rotary Kiln incinerator of haz waste; wet air oxidation-Zimpro; rotary hearth incinerator; plasma arc incinerator. Preserving the Legacy Series
ET 110 treatment technologies

Title: *CHEMICAL TREATMENT TECHNOLOGIES,*

Time: (30 min)

Description: Acid/base chemistry. Precipitation NPDES Cyanide Oxidation Chrome 6 reduction. Electrolysis of silver. Caustic air stripper. O₃ treatment. Preserving the Legacy

ET 110. Treatment technologies

Title: *PHYSICAL TREATMENT TECHNOLOGIES,*

Time: (30 min)

Description: Filtration: belt. press, dual media. Centrifuge. Bag house Microfiltration & Reverse Osmosis. Sedimentation & flocculation. Air stripping. Distillation. Electrostatic precipitation. Carbon adsorption. Preserving the Legacy

ET 110. Treatment technologies

TAPE 6

Title: *POLLUTION PREVENTION THROUGH CAER*

Time: (~12 min)

Description: A business oriented; very general P2 cheerleading. Ends with promotion of non profit CAER. A San Diego County video.

ET 110. P2

Title: *CENTRAL VALLEY POLLUTION PREVENTION COMMITTEE* **Time:** (~13 min)

Description: A video about urban run-off pollution and the P2 to eliminate problem. A video for the average person to show the sources, then the solutions of urban run-off. An excellent video on the many causes of water pollution due to urban run off. Provides methods on reducing urban run off.

ET 100, Water Pollution. ET 110. P2 general

Title: *SCAPS PETROLEUM*

Time: (24 min)

Description: A.U.S. Navy film on the cone penetrometer soil sampler development by the Army, Navy, Air force.

ET 150. Sampling

Title: *THE SRS INTEGRATE OF DEMONSTRATION*

Time: (15 min)

Description: Savannah River Site clean up of solvents in soil & GW . A fabulous video on computer generated graphics of plumos to integrate with pump and treat. Graphics of clay layers. Insitu air stripping (air sparging). Insitu bioremediation. Excellent data imaging.

ET 150; Superfund data

Title: *ANATOMY OF AN OIL SPILL*

Time: (58 min)

Description: Detailed analysis of the Exxon Valdez spill in Alaska

ET 100 Oil spills, emergency response

TAPE 7

Title: *POLLUTION PREVENTION*

Time: (~30 min)

Description: A video showing in general, overall P2 efforts of Dow, Northrop, & MC Donalds. No real process information.

ET 100: General P2 info; ET 110, Gen P2 info

Title: *WILLIAM ENVIRONMENTAL*

Time: (~7 min)

Description: A marketing video for Williams Environmental showing the habilitation of coal fair contaminated soil. Shows general level of effort to remediate a site.

ET 150: superfund

Title: *WILLIAM ENVIRONMENTAL THERMAL DESORPTION*

Time: (~10 min)

Description: A marketing tool for the William Low Temperature Thermal Desorption unit at Superfund sites. Give a general overview of how this type of technology can be used.

ET 150: Superfund

Title: *U:S, EPA, MOBILE INCINERATOR*

Time: (~15 min)

Description: The story of the U.S. EPA Mobile Incinerator and Times Beach, Missouri for burning dioxin contaminated soil.

ET 150. Superfund

TAPE 8

Title: *CHEMICAL HAZARD CLASSES*

Time: (21 min)

Description: Covers the flammable, reactive, unstable, corrosive, ect. properties of chemicals. Routes of exposure explained briefly.

ET 130. end of lect.1; ET 200; ET 100 Hazardous materials

Title: *MATERIAL SAFETY DATA SHEETS*

Time: (15 min)

Description: The details of the ANSI format of the MSDSs

ET 100. Haz Mat; ET 150; ET 200; ET 130

Title: *PLAIN TALK ABOUT A SERIOUS PROBLEM IN SILICOSIS.* **Time:** (20 min)

Description: The effects of Silicosis ad how it damages the lung. The 4 factors that affect health.

ET 130 Dusts & fibers. A NIOSH video.

Title: *ASBESTOS SCREENING PROCESS. DEPT. HEW* **Time:** (20 min)

Description: NIOSH developed screening test to determine if asbestos could be present; a type of field test. A NIOSH note: "field reports indicate that some buildings materials produce many false-positive, making further testing fruitless. Shows the details of adding reagents. Show accuracy of report: true positive, false positive, true negatives, false negatives.

ET 200, Asbestos, ET 150, Asbestos statement

Title: *PLAIN TALK ABOUT A SERIOUS PROBLEM IN SILICOSIS. NIOSH* **Time:** (20 min)

Description: The effects of Silicosis and how it damages the lung. The 4 factors that affect health.

ET 130 Dusts & fibers

Title: *ASBESTOS SCREENING PROCESS. DEPT. HEW* **Time:** (20 min)

Description: NIOSH developed screening test to determine if asbestos could be present; a type of field test. A NIOSH note: "field reports indicate that some buildings materials produce many false-positive, making further testing fruitless. Shows the details of adding reagents. Show accuracy of report: true positive, false positive, true negatives, false negatives. ET 200, Asbestos, ET 150, Asbestos

TAPE 9

Title: *INTRO TO ATOMS*

N/A

Title: *THE CELL*

N/A

TAPE 10

Title: *OAKWOOD APTS, SEAL BEACH* **Time:** (5 min)

Description: Dow Chemical leaves a toxic legacy where the Oakwood apts have been built at Seal Beach. A TV new piece.

ET 150: Superfund, Toxic Dumps

Title: *TOXIC POND STORY* **Time:** (~30 min)

Description: TV news story on toxic ponds shows BKK, Camalia, Texaco, Katz bill, Co atrans dumping, Santa Fe Springs dump, San Gabriel Valley, String fellow site, McColl site in fullerton fire from illegally disposed drums.

ET 150: Superfund, Toxic Dumps

Title: *CELLULAR ENERGY, ATP* **Time:** (~15 min)

N/A

Title: *CELL MOTILITY & MICROTUBLES* **Time:**(~10 min)

N/A

Title: *GRESAFE INSITU VITRIFICATION* **Time:**(~15 min)

Description: A U.S. EPA. SITE Program tape on the evaluation of ISV. Has good criteria for evaluation, process, & economics.

ET 150: Superfund

TAPE 11

Title: *DO WE REALLY WANT TO LIVE THIS WAY,
RACE TO SAVE THE PLANET*

Time: (60 min)

Description: A 2 part story of the effects of modern society on air and waste quality. The first part is about Los Angeles on the effects of autos, industry and our life style on air quality, and the effect of air pollution on our health and vegetation. The second part is about the effect of industry, agriculture, and human population on the quality of Rhine River water, and the effect of Rhine water on the health of water creatures. This is an excellent video on Air & water pollution. A Dutch chemist in Los Angeles worked on the problem of agricultural crop damage in the Los Angeles Basin in the 50's. He noticed that the damage to agricultural plants was similar to the damage from O₃ but there were few emitter of O₃. He discovered the formation of photochemical smog. The main componenet of photochemical smog is O₃. The main causes of air pollution are: cars, large and small businesses, and individuals. Cars produced 2/3 of LA's air pollution. The Ponderosa Pines are being weakened from O₃ and susesptible to other lethal agents. ET 100: Water pollution. Air pollution

Title: *ONLY ONE ATMOSPHERE, RACE TO SAVE THE PLANET* **Time:** (60 min)

Description: The story addresses two major global atmospheric problems: ozone depletion and global warming.
ET 100, Air pollution

TAPE 12

Title: *UNRAVELING THE TRAGEDY AT BHOPAL*

Time:(30 min)

Description: The investigation of the cause of Bhopal incident by Union Carbide. A Union Carbide produced film where the blame of the incident is placed on some angry employee. A corporate "cover up" film to blame.

Title: *MAD COW DISEASE*

Time:(15 min)

Description: The spread of CJD by transplant of human tissue. The extract of human fluids, and the eating of beef. The British outbreak may be the caused by feeding cows the remains of cows & sheep-bone meal.

ET 130, Toxicity of substances

Title: *MUTANT FROGS*

Time:(10 min)

Description: Frogs with deformed legs found in ponds in Minnesota. No cause is known; effects of environment on frogs is feared.

ET 100, Pollution

Title: *HANFORD*

Time:(~58 min)

Description: The background of Hanford nuclear reactor facility. The storage of past wastes generated in soil trenches and underground tanks. GW plumes. Soil remediation.

ET 150, Toxic dump intro

TAPE 13

Title: *THE POISONING OF AMERICA*

Time: (~20 min)

Description: New story on topic waste dumps, nuclear waste, pesticides, recycling of trash & mini waste

ET 100, General Hazardous Waste

Title: *THE INCIDENT*

Time: (20 min)

Description: Improper dispose of grove drums. Explosives training & procedures.

Stresses proper procedures for company environmental management

ET 150, RCRA Superfund, ET 100 Waste Mgmt

TAPE 14

Title: *THE PRECIOUS ENVELOPE*

Time: (30 min)

Description: Video on the atmosphere. Depletion of the O₃ layer in upper atmosphere and the effect of CFCs on this layer. Formation of the early atmosphere, then the resulting formation of organic molecules on the ocean, followed by the evolution of life. Hydrologic cycle and carbon cycle, the generation of O₂ by green plants. The Greenhouse generation of too much CO₂ generation

ET 100 Air pollution

TAPE 15

Title: *MIGHTY MANIFEST AND ITS EFFECTS ON SMALL BUSINESS*

Time: (14

MIN)

Description: What is Haz Waste? Small quantity generator decision. Uniform hazardous waste generator; Toll-free EPA phone number#s (at 9 min); details filling out of manifest

ET 150: Generator Requirements, Hazardous Waste Transportation

Title: *SOCIAL CAPITAL & SUSTAINABILITY*

Time:(22 min)

Description: Sustainable agriculture community & public participation in sustainable agriculture in the changing agricultural communities.

community. The role of

ET 100 Sustainability

Title: *CLEANING UP TOXIC IN BUSINESS*

Time: (25 MIN)

Description: The generation & prevention of pollution by small business.

Perc in dry cleaning; auto repair-wastes; silver in Palo Alto Bay from photo processing; silver-free technology.

ET 100-Haz Waste Mgmt or P2; ET 110 transition to P2

TAPE 16

Title: *THE INCREDIBLE HUMAN MACHINE*

Time: (60 min)

Description: Various human systems: blood, heart, lungs, dating, hearing, running, ect...

ET 130 Lungs, skin, digestion

TAPE 17

Title: *URBAN WATER POLLUTION PREVENTION*

Time: (12 min)

Description: Urban Runoff on its effect on natural waters. Water (sewage) treatment, pollution prevention of urban wastewater.

ET 100, P2, or water pollution

Title: *RECYCLE AMERICA*

Time: (12 min)

Description: Waste Management, Inc. on MRF. A self-promoting video.

ET 100, Solid waste

Title: *SAVE THE EARTH-FEED THE WORLD,
RACE TO SAVE THE PLANET*

Time: (60 min)

Description: The story looks at the effects of pesticides and fertilizer on our health with the farm workers and their children of the McFarland, CA. as an example. Shows the example of an early 19th century diversified farm. This diversified and traditional farms led to intensive farming because of the growth of population. New strains of grains with pesticides and fertilizers led to the Green Revolution. Indonesia found new farming techniques led to destruction of rice plants by the Hopper; integrated pest control is now being used by 5% of farmers. Top soil erosion in Australia due to intensive cattle ranching. The Sahel is having similar problem as Australia. Organic farming in North Dakota and California. Use of biotechnology to develop resistant strains.
ET 100 Sustainable agriculture, Pesticides

Title: *ETHYLENE OXIDE NIOSH*

Time: (20 min)

Description: About the safe use of ethylene oxide (EO) in medical facilities. ETO sources in the workplace from hospital sterilizers. ventilation. Personal sampling devices for EO. Emergency procedures. Warning devices. A safety engineering video.
ET 130, Organic gases

More VIDEOS:

Title: *SOIL & GROUND WATER
REMEDIATION*

Time: (30 min)

Description: Ground water & pump treat system at Long Beach Naval Ship yard, includes oil-water separation, bio treatment, filtration, carbon absorption; soil vapor treatment system, cat ox
ET 150, Superfund

Title: *SITE PROGRAM VIDEOS*

Time: (~15 min)

Description: Terra Vac vacuum extraction at Groveland Wells Superfund Site
ET 150, Remediation Technologies

Title: *MUNICIPAL WATER TREATMENT*

Time: (~18 min)

Description: Removal of ions from water supply; precipitation, ion exchange, chelating agent. Descriptive chemistry
ET 100, water treatment

Title: *DISTILLATION*

Time: (~18 min)

Description: The use of ethanol as fuel. Details basics of distillation, and 2 component (volatile liquid) separation. Benzene-toluene fractional distillation and alcohol-water distillation
ET 110: Physical treatment

Title: *P.E.L. PLUS RESPIRATORY PROTECTION SYSTEM*

Time: (~20 MIN)

Description: A manufactures promo of their respiratory in the context of respiratory protection. Fit tests-quantative & qualitative. Details of the P.E.L. Plus mask. Fitting, storage, cleaning. Assembly of face piece after storage. ET 230: Respiratory protection

Title: *RCRA MODULE 1*

Time: (~15 min)

Description: An employee introduction into hazardous waste management. RCRA, RCRA goals, identification, storage, handling & disposed, training, labeling, manifest, drum, emergency response ET 150: RCRA

Title: ASBESTOS, THE INVISIBLE KILLER

Description: Health effects of asbestos especially from the point of view refinery workers: Refinery Instructions 80, OSHA General Industrial Safety Ordec 5208 Title 8. Protective Equipment, decon. safe-work procedures for asbestos removal
ET 200: Asbestos; ET 130 Asbestos

Title: JOHN CANDY FILM CLIP

Time: (5 min)

Description: John Candy a rent-a-cop at a toxic waste site
ET 100-haz-waste; ET 150: Superfund

Title: EXXON VALDEZ

Time: (10 min)

Description: A very poor 10 minutes. Don't play!

Title: EXPLOSION AT TEXAS CITY, TEXAS

Time: (5 min)

Description: Ammonium nitrate in a ship explodes
ET 230. Emerg Resp.

Title: PETE

Time: (5 min)

Description: A propaganda film

Title: PLAGUE FIGHTERS

Time: (~58 min)

Description: The story of the Ebola virus outbreak in Kik Wik, Zaire

Title: THE CHEMISTRY OF EARTH

Description: NOT an environmental topic, but of metal extraction from the earth. Good for geology or earth science.

Title: ON THE SURFACE

Description: Not an environmental topic. but video on surface chemistry.

**Title: TOXICITY CHARACTERISTIC LEACHING PROCEDURE,
U.S. EPA**

Time: (36 min)

Description: SW 846 Method 1311. The video details the equipment, methodology, and analytical techniques for performing the TCLP.
ET 150: RCRA

Title: NEW VENTILATION SYSTEM FOR AUTOMATED ROUTER

Time: (5 min)

Description: NIOSH developed jet stripper ventilation system to reduce wood dust on automated routers.
ET 130: Ventilation

Title: MILL VENTILATION, NIOSH

Time: (7 min)

Description: Ventilation design at plastic and rubber mill to improve workplace ventilation. A push jet air curtain manifold.
ET 160: Ventilation

Title: PRENATAL DEVELOPMENT

Time: (~2.5 min)

Description: Short clip about the effects of Thalidomide on organ development
ET 130 Mutagenesis

Title: *LEARNING ABOUT CANCER*

Time: (13 min)

Description: NO environmental toxicology content.

Title: *ASBESTOS, THE LEGAL LEGACY*

Time: (60 min)

Description: A NOVA film made in England looks at individual cases; the history of toxicological effects; asbestos removal, the effect of asbestos mining on workers, on short-term workers, and on workers in industries using asbestos products. OSHA regulated Asbestos based on British data. Suits against John Mansville company and their Chapter 11 reorganization.

ET 130 Asbestos

Title: *HARTBEESPORT DAM, THE STORY OF
A HYPERTROPHIC LAKE*

Time: (13 min)

Description: A dam and the retained lake. Hypertrophy due to treated sewage going into the lake. Problem with water hydrants high blue-green algal concentration cause hyperscum. The organisms and growth of hyperscums. Water quality downstream when the water is used for drinking. Can the lake be restored.

ET 100 Water pollution

Title: *WASTE MINIMIZATION IN MANUFACTURING
ENVIRONMENTS*

Time: (13 min)

Description: History of waste disposal. One company (unnamed) eliminated 100,000 ton of hazardous waste (HW). Labeling and disposal of HW. Waste exchanges. Waste management.

ET 110 Waste Minimization

Title: *FOUR ELEMENTS OF RESPIRATORY CONTAMINANTS*

Time: (10 min)

Description: Airborne contaminants, respiratory of entry. Identifying workplace hazards. IDLH. Selection of proper respirators. Respirator fit. Respirator maintenance.

ET 230 Respiratory Protection

ET 130 Respiratory Protection

Title: *NEW VENTILATION SYSTEM FOR MULTIPLE
OPENING PRESS*

Time: (5 min)

Description: NIOSH developed air curtain to provide an air barrier between the aperture and the press

ET 130 Industrial Hygiene

Title: *NEW VENTILATION SYSTEM FOR DISK STANDARDS*

Time: (5 min)

Description: NIOSH developed forced air manifold to disrupt a layer of wood dust on the disk surface to capture dust.

ET 130 Industrial Hygiene

Title: *NEW CONTROL FOR USE WITH
ROTATING HAND SANDING*

Time: (5 min)

Description: NIOSH developed modification of Sander to include an internal vacuum and modification of the sanding disk to reduce wood dust.

ET 130 Industrial Hygiene

Title: *SARA BRIEFING, VOL 7: FEDERAL FACILITIES*

Time: (61 min)

Description: An U.S. EPA meeting on the cleanup of U.S. DOD and DOE(federal) facilities. How will the facilities remediate sites: under RCRA corrective actions or under CERCLA remedial actions.

ET 130 Superfund

Title: *SARA BRIEFING, VOL 8: TITLE 3* Time: (25 min)
Description: Reporting requirements. Chemical Emergency Preparedness Program. The tie in with the states. A 1986? Video
ET 200 Community Right to Know

Title: *MAGNUM WATER TECHNOLOGY (AV-OX CAVITATION OXIDATION PROCESS)* Time: (14 min)
Description: U.S. EPA SITE Program. This process rises cavitation (heat forming bubbles) H₂O₂ & UV light to destroy organics. Configurations: low energy, high energy 5KW, high energy 10KW
ET 150 Superfund

Title: *INNOVATIONS IN SANER VENTILATION, NIOSH* Time: (8 min)
Description: Existing horizontal beltsander emissions on a 1 hood sander. Innovative auxiliary hood reduces wood dust emissions 75%. Air jet stripper also reduced emissions independent of the auxiliary hood.
ET 130 Ventilation

Title: *CHEMISTRY AND THE ENVIRONMENT, THE WORLD OF CHEMISTRY* Time: (29 min)
Description: Talks about elimination of PCBs & DDT. Health effects and chemical thresholds. Toxic dumps and their remediation. Incineration & bioremediation. Reduction and recycling of wastes at Exxon's Bayton, TX, plant. Video is a public relations instrument for the founders: Exxon, Dow, and Kodak.
ET 100 general environmental, hazardous wastes

Title: *RCRA/CERCLA INTEGRATION CONFERENCE* Time: (1:7 min)
Description: Authority cleanup. Corrective action & Superfund together RCRA CERCLA Integration. Common Goal of CERCLA and RCRA of sites. Low priority Universe. Environmental Priorities Initiative (EPI). First Priority Site-EPA to engage in enforcement with owner/operator: Cleanup priority sites through Superfund. RCRA RFA (RCRA Facility Assessment): PA/SI, Listing site
ET 150 after CERCLA & RCRA

Title: *PAUL ERLICH AND THE POPULATION BOMB* Time: (60 min)
Description: Introduction is the story of Paul Erlich. Rachel Carlson book "Silent Spring". Carrying capacity of various countries are based on resources is population. I=PAT. Controversy of scientists for and against population issues. Woen's education and economic gas will reduce family size. China and India's impact on the environment. ET 100 Population

Title: *ORGANIC CLEANUP: MICROBES AND POLLUTION* Time: (29 min)
Description: Fungus that concentrate radioactivity. Sewage sludge into fertilizer, small bioreactor that treats oil and grease forma fast food restaurant, and indigo dye from a fabric dyer. Use of fertilizer to enhance microbe growth at Prince William Sound. Bioremediation of uranium in wastewater: the alternative is to use need beds and anaerobes. Bioteaching of contaminants from soil.
ET 110: Biological Treatment
ET 150: Bioremediation
Fungi concentrate uranium, lead, cadium, and mercury from wastewater.
Biodrier-dries, pasterizes, and sifts sewage sludge, then can be applied as fertilizer on land.
McDonalds restaurant is using a taylor-made bioreactor to biologically degrade oils and grease (fats)
For the Exxon Valdez spill, fertilizer was added to oil to simulate the growth of microbes.
Uranium was adsorb by bacteria. Bioremediation is being used to remove uranium for acid mine drain. Reed beds support bacteira which support iron and arsenic.
Bioleaching uses bacteria to dissolve metals in contaminanated soil. Anaerobic bacteria take the metals out of solution and concentrate the metals in the biosludge. Therefore, 2 types of bacteria are used.\

Title: THE NEW SUPERFUND AND HOW IT WORKS

Time: (62 min)

Description: Lee Thomas, EPA Administrator, speaks about old and new (SARA)

Superfund. Weston Porter speaks. Henry Longest speaks about Superfund: Assessment, Ranking, Investigators, selecting a remedy, design + construction, and operations and maintenance; state involvement; citizens; ATSDR; TSDf siting. Russell Wyr, talks remedial investigation: mature & extent of contaminants, treat, study, risk assess, health analysis, screening of cleanup alternatives, ARAR. Elaine Stanley changes in the decision-making process with community relations. Dr. Johnson, ATSDR, speaks Question & Answer period.

ET 150 Superfund

Title: SARA BRIEFING: REMOVALS

Time: (34 min)

Description: Removal vs Remedial actions. Immediate responses vs. Final

remedy. Removals: 12 mo, \$2 mil. IG & GAO cost accountability. The impact of the soon to be implemented Lan Ban on cleanup. Role of alternative technologies. Mobile treatment units.

Title: THE ENVIRONMENT

Time: (24 min)

Description: PCBs - The problems of this chemical and the problems of its

disposal. The effects of chemicals from industry. SO₂ emitted from power plants and their conversion to sulfuric acid forming acid rain. Mentions the problems with acid rain: litigation, acidified lakes. Mentions O₃ layer. Talks about increase of CO₂ emissions and global warming. Goes back to O₃ layer.

ET 100 Hazardous Waste. Air Pollution

PCB's extremely stable, do not degrade, accumulate in organisms. Enter organisms, accumulate in fat of animals. Incineration changes PCBs to dioxin and furans.

The biggest culprit in Acid Rain is SO₂. High smoke stacks displace the problem of SO₂ emission to another place. Acid rain erodes buildings and sculptures, and leaches soil.

O₃ layer destruction CFC gases. CFC broken down in the upper atmosphere by cosmic rays. Then the CFC molecule degrade up to 100,000 O₃ molecules.

Greenhouse effect from CO₂ from the burning of coal, gas & oil. The Green house gases cause the heat from the sun to be trapped, rising the T of the earth.

Title: ENVIRONMENTAL POLLUTION

Time: (15 min)

Description: How does a substance become a pollutant. PO₄ discharge in lakes

and rivers. Long term environmental effects of flooding. Waste Management: recycling, reducing, reusing, & recovery. Industrial waste water treatment.

ET 100 Overall Pollution, Water Pollution, P2

What makes us pollutant? Persistent toxic compounds such as PCBs, Mercury, Cadmium, and organic compounds. Phosphates in detergents are not biodegradable. They accumulated in lakes and river. A substance becomes an environmental pollutant when it accumulates in water, air, and soil in quantities that damage the plants and animals normally existing.

When you flood land with water to produce a reservoir, you get large amounts of CO₂ and CH₄.

Recycle, Reduce, Reuse, Recover minimizes waste.

"Bugs" or microbes remove most of the waste in water.

Title: INCINERATION, PRESERVING THE LEGACY SERIES

Description: Rotary kiln - for hazardous waste treatment

Pyrolysis - O₂-free thermal oxidizer ex: tire destruction

Wet air oxidation

O₂ in compressed air (PI)

Multiple Health Incineration for soft, moist solids

Plasma arc incinerator

ET 110 Thermal Treatment

Title: ASBESTOS VIDEO

Description: Chrysolite - sound proofing, spray on (white asbestos) most common
Amnestied - pipe & hot wrap, ceiling files
Crocidolite blue asbestos - used in ship handling
US EPA outlawed friable asbestos. Asbestos found in floor tiles. Asbestos is only dangerous when it becomes airborne. Asbestos scar tissue - asbestosis of white lung. Mesothelioma -cancer of the lung tissue. The only cause of mesothelioma is asbestos exposure. Cigarettes smoking and asbestos exposure gives 50 to 90 times the chance of cancer. Asbestosis - hardening of the alveoli
Mesothelioma - initial irritation of the previa. Lung cancer of the bronchiolus especially if you smoke. Irritation of bronchiolus by asbestos fibers and cigarette smoke. Fibrobility - the ability of asbestos fibers to break apart

Title: INTRODUCTION TO WASTE STREAM MANAGEMENT (PRESERVING THE LEGACY SERIES)

Description: In the early days of manufacturing, waste disposal was not of sight, out of mind. John Muir & Henry David Thomas were 19th century environmentalists: Rachel Carson in the early 1960 was a stimulus to the modern environmental movement. Block flow diagrams - used to make sense of complex processes mass balance analysis The four types of treatment technologies are: physical, chemical, thermal, and biological. Recycling industrial pollution is called resource recovery, also known as pollution prevention.

ET 110

Title: Pollution Prevention: Bridging Troubles Waters (Preserving the Legacy Series)

Description: Wastewater from the pulp and paper industry. Secondary treatment was an issue with pulp plant in Eureka; papermills got a rider to the regs but had to prove that this effluent was not toxic. Chlorine caused dioxin. Plants went to TCF bleaching with less chlorine to achieve acceptable paper brightness. Screen printers produced waster pollution when cleaning screens with solvents. A product substitution, UV inks, allowed the use of water-based inks. Furthermore, a closed loop water process with reclamation using fluctuation, carbon, and a holding tank to reuse the water again.

Title: Pollution Prevention: Cleaning the Air (Preserving the Legacy Series)

Description: ARCO's reformulation of gasoline. Shows air stripping, catalytic conversion, and carbon treatment of MTBE wastewater. Dry wash cleaning using supercritical CO₂ as a solvent to remove dirt in lieu of perc

Title: PHYSICAL TREATMENT TECHNOLOGIES (PRESERVING THE LEGACY SERIES)

Description: Physical Treatment processes rely on natural forces such as gravity. More economical than other types of treatment. Filtration: bar screens, filter belt (belt filters), filter press, centrifuge, Bay House, microfiltration, Ro-energy intensive
Terms: filter cake; landfill, recycle, filtrate, flocculent, vapor pressure Gravity: sedimentation, Vapor Pressure: evaporation ponds, air stripping, fractional distillation, electrostatics precipitation ET 110 Treatment Technologies

Title: SILICON RUN I & II

Description: Dopants: B, P, Ar /Glass plates etched/ Deposition of insulating & conducting materials/Clean silicon water in hot acids/HCL, H₂SO₄/H₂O₂/NH₄OH/Photoresist - a resin dissolved in solvents developing water - HF used to remove the photoresist. Free F atoms etch 2nd photoresist remaining nitride layer removed wet etching. All removed by wet or dry etching. In soapy streams of water drained saw, cuts ships/Plating process: chemical or water was baths, what is in the solder, bottom of the board coated with solder flux to clean lead, hot solder coated on leaders/Multichip design: epoxy, Flux, Solder ET 110 Printed Circuit Board Industry

Title: SAVING THE EARTH

Description: Melanoma (skin cancer) caused by exposure to UV radiation. The more UV, the more malignancy. O₃ layer concentrated in a layer 8 miles above the earth. O₃ attacked by 1) haglars 2) CFCs