107863

County of Erie

DENNIS T. GORSKI
COUNTY EXECUTIVE

DEPARTMENT OF ENVIRONMENT AND PLANNING

[redacted]
COMMISSIONER

[redacted]
ENVIRONMENTAL COMPLIANCE SERVICES

April 27, 1993

[redacted]
Bechtel National Inc.
151 Lafayette Drive
Oak Ridge, Tennessee 37831-0350

Dear [redacted]:

In accordance with your recent telephone request, please find enclosed two complete sets of "FUSRAP REVIEW", Volumes 1-9.

Should you have any questions or require additional information, please contact me at (716) 858-7762.

Very truly yours,

[redacted]
Asst. Env. Quality Engineer

MLS:ems
Enclosures

MLS307

200.1e

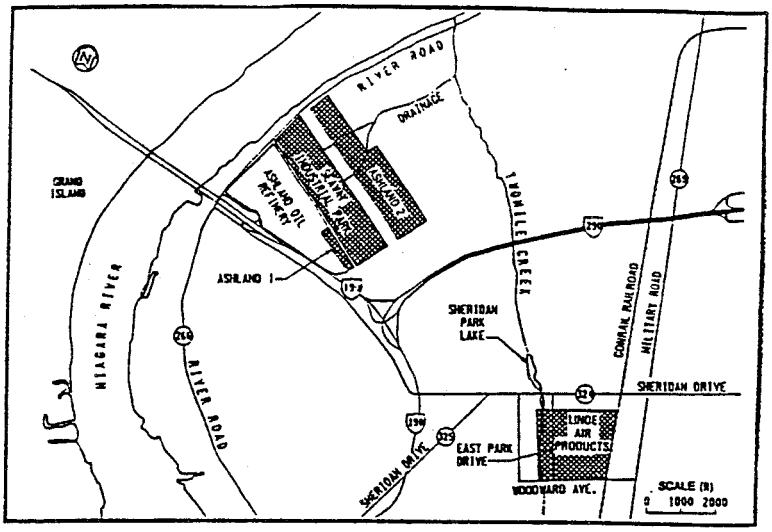
FUSRAP Review

ERIE COUNTY DEPARTMENT OF ENVIRONMENT AND PLANNING
DIVISION OF ENVIRONMENTAL COMPLIANCE WINTER 1990, VOL. 1

WELCOME

This is the first issue of the FUSRAP Review, a publication by the Environmental Compliance Services of Erie County. The purpose of this newsletter is to provide the residents of The Tonawandas and Erie County with current information on the Tonawanda Formerly Utilized Sites Remedial Action Program (FUSRAP) sites. In addition to producing information on the ongoing investigation and remediation process, this newsletter will also serve as a forum for questions you might have as well as notifying you of upcoming events. The FUSRAP Review will be published on a quarterly basis over the next four (4) years as the Remedial Investigation/Feasibility Study (RI/FS) continues toward completion.

In upcoming issues of FUSRAP Review, we intend to provide articles on Radiation, Health Effects, and community concerns. Of specific interest to us are those issues which the residents of The Tonawandas are particularly concerned with. In order to make this publication more responsive to the needs of the community, we need to get your comments on this publication. As part of this service, an information line is available to answer any of your immediate questions as well as any comments on our publication.



Site Locations

SITE HISTORY

As shown above, there are four (4) Formerly Utilized Site Remedial Action Program (FUSRAP) sites located in the The Tonawandas. These sites are all a result of contaminated ore tailings leftover from processing of radioactive ores from the Manhattan Engineer District (MED) project in World War II. These sites, while privately owned, all fall under the remedial action authority of the United States Department of Energy (USDOE). The four (4) sites are: 1) Linde Air Products; 2) Seaway Industrial Park; 3) Ashland 1; 4) Ashland 2.

These sites have all been identified as having received radioactive waste generated by the MED processing. The radioactive ore was originally processed at the Linde plant and the waste was then landfilled at what is now referred to as the Ashland 1 site. In 1960, the United States sold the land to the Ashland Oil Company after determining there was no risk from the buried ore tailings. Subsequent construction on the Ashland Refinery site resulted in some of the contaminated materials being moved to the Seaway Industrial Park and then to the Ashland 2 site. An estimated 8,000 tons of contaminated ore is estimated to have been spread on the original Ashland Refinery site

CURRENT STATUS

As radiological guidelines have been revised, the federal successors to the MED (the Atomic Energy Commission (AEC) and now the United States Department of Energy (USDOE)) have had to reassess many sites that had been originally given a clean bill of health. The objectives of the FUSRAP program are to reassess all former MED sites and to determine if further decontamination is necessary. Presently, there are 33 FUSRAP sites in 13 states. If a decision is made that further decontamination is necessary, the USDOE then must conduct an environmental review to determine the most appropriate remedial action to be taken. The environmental review process is required under the National Environmental Policy Act (NEPA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as revised under the Superfund Amendments and Reauthorization Act (SARA).

In April 1988, the USDOE published notice in the Federal Register of its intent to begin investigating three of the Tonawanda sites and a site in Colonie, New York. The DOE held a public scoping session in April 1988, at which time the public vehemently protested the inclusion of the Colonie site in the proposed study. After a second public meeting held in June 1988, a bipartisan coalition of area legislators formed a committee to oppose certain elements of the USDOE's plans. This group known as CANIT, the Coalition Against Nuclear materials In Tonawanda, has worked within the political system to change certain tenets of the USDOE's proposed plans in order that both the USDOE's and the Western New York Community's interest would be served.

To date, the USDOE has finished their investigation of the four Tonawanda Sites. The investigations consisted of soil borings, soil sampling, groundwater sampling, and radiation surveys being performed at each site. The soil and water samples taken are being analyzed for radioactive contamination to better define the problem at each site. The data from these investigations will be used in determining the final remedial alternative for the four sites. In addition to the onsite radiation survey, the USDOE also performed an area wide survey to search for any previously unidentified sites. This survey was completed in Spring 1990 by a special detection van provided by the Oak Ridge National Laboratory.

WHAT'S NEXT

In the next few months, the USDOE plans to publish the workplans and Health and Safety Plans for the Tonawanda FUSRAP Sites. The draft Remedial Investigation Report evaluating the sampling results is currently scheduled for completion in 1992.

CANIT

The Coalition Against Nuclear materials In Tonawanda (CANIT) was formed in June of 1988 by a bipartisan collection of local elected officials. The coalition formed in response to the USDOE's proposed remedial investigation/feasibility study (RI/FS) plan for the Tonawanda sites. The original plan included a possible option of transporting low level radioactive waste from Colonie, New York to Tonawanda for disposal. This option was considered unacceptable by both area populace and legislators. As a result of congressional support from New York senators and congressmen, DOE committed to remove the Colonie option from the planned study. DOE also provided a $50,000 grant to CANIT with which they hired their own consultant to review DOE operations and advise the coalition. In response to concerns raised by CANIT, local environmental groups, local governments, and the general public, DOE decided to include the Seaway Industrial Park in the environmental review process for the other Tonawanda sites. This last change insures that the Seaway Industrial Park will be included in the determination of a final remedial solution for the Tonawanda sites. The CANIT group is presently composed of the following members: (Alphabetically Listed)

Hon. [redacted]
Assemblyman - 142nd District

Hon. [redacted]
NYS Senator, 61st District

Hon. [redacted]
Erie County Executive

Hon. [redacted]
Mayor, (C) North Tonawanda

Hon. [redacted]
Assemblyman, 144th District

Hon. [redacted]
Congressman, 32nd District

Hon. [redacted]
Legislator, 11th District

Hon. [redacted]
Supervisor, (T) Grand Island

Hon. [redacted]
Supervisor, (T) Tonawanda

Hon. [redacted]
Mayor, (C) Tonawanda

Hon. [redacted]
Assemblyman - 140th District

Hon. [redacted]
Senator, 60th District

Hon. [redacted]
Legislator, 10th District

INFORMATION REPOSITORY

Environmental Compliance Services has established collections of all USDOE published documents at three local libraries in Tonawanda.

The repositories are located at the:

1. Kenmore Public Library
   160 Delaware Road
   Kenmore, NY 14127

2. Tonawanda Public Library
   333 Main Street
   Tonawanda, NY 14150

3. Parkside Village Library
   169 Sheridan Parkside Dr.
   Tonawanda, NY 14150

The materials are available for review during normal library hours at the front desk.

INFORMATION HOTLINE

The Erie County Department of Environment and Planning has established an information hotline to provide answers to area residents about the FUSRAP program and the Tonawanda sites. The number is 716-858-7583, Monday through Friday from 8:30 a.m. to 4:30 p.m. Anyone who wishes to contact the USDOE concerning the sites can contact Mr. [redacted], Department of Energy, Oak Ridge Operations, P.O. Box 2001, Oak Ridge Tennessee 37831-8723; telephone (615) 576-1830.

GLOSSARY

AEC - Atomic Energy Commission

CANIT - Coalition Against Nuclear materials In Tonawanda

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

ECS - Environmental Compliance Services (A Division of the Erie County Department of Environment and Planning)

MED - Manhattan Engineer District

NEPA - National Environmental Policy Act

RI/FS - Remedial Investigation/Feasibility Study

SARA - Superfund Amendments Reauthorization Act

USDOE - United States Department of Energy

FUSRAP Review is published quarterly by the Erie County Environmental Compliance Services under contract to the USDOE.

FUSRAP Review
Erie County Department of Environment and Planning
Division of Environmental Compliance Services
95 Franklin Street, Rm 1077
Buffalo, New York 14202

FUSRAP Review

ERIE COUNTY DEPARTMENT OF ENVIRONMENT AND PLANNING

DIVISION OF ENVIRONMENTAL COMPLIANCE SPRING 1991, VOL. 2

INTRODUCTION

Welcome to the second issue of FUSRAP Review. This publication is produced by the Division of Environmental Compliance Services of Erie County to provide information on the remedial investigation occurring on the four United States Department of Energy (USDOE) FUSRAP (Formerly Utilized Sites Remedial Action Program) sites located in Tonawanda. The purpose of this newsletter is to provide information on current developments of the investigation as well as pertinent background information on the issues involved.

In this issue, we are going to cover very briefly the subject of radiation. After reading this issue if you would like further information, please call our Hotline and we will send you additional material.

RADIATION

What is radiation? Since World War II and the use of the atomic bomb, radiation and radioactivity have become ingrained in our vocabulary. Radiation has, however, been around since the beginning of the earth and is with us everyday. Radiation simply put is radient energy which travels at very high speeds through space and/or matter. This energy can manifest itself as either particles or waves. Radiation which manifests itself as waves can be measured by its frequency (the number of waves per second). Using frequency, we can classify radiation on a scale called the electromagnetic spectrum. The electromagnetic spectrum ranges from least energetic to most energetic radiation. Chart I shows where some common forms of radiation are found within the electromagnetic spectrum.

CHART I

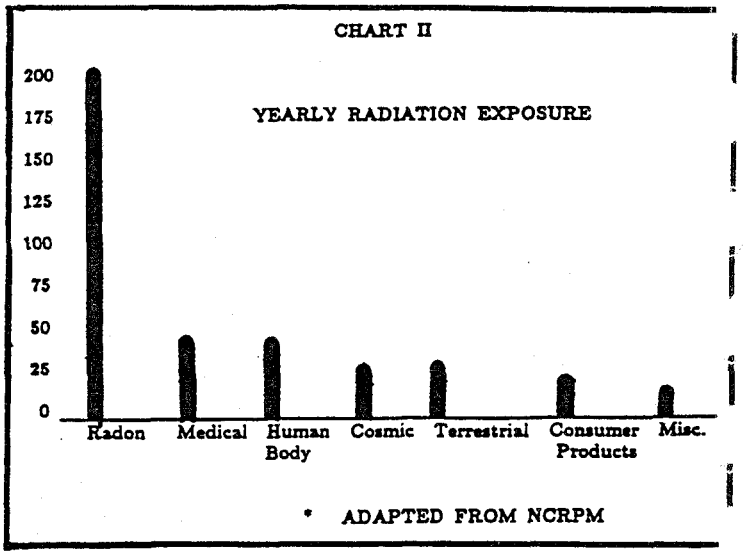
RADIO	MICRO-WAVES	VISIBLE LIGHT	ULTRA-VIOLET	X-RAY	GAMMA RAYS
Low Frequency					High Frequency

Radiation can generally be directed into two broad categories either ionizing or nonionizing. Ionizing radiation is defined as any radiation which removes electrons from atoms causing them to become electrically charged ions. Nonionizing radiation is simply defined as radiation which does not remove electrons from atoms. Most radiation falls into the nonionzing category. Examples of ionizing radiation are x-rays and gamma rays. Nonionizing radiation examples would be radio waves, microwaves, and visible light.

There are certain naturally occurring radioactive elements such as Uranium, Radium, and Radon that are present in the environment around us. These radioactive elements can be present in many

different forms or species called isotopes. Each specie or isotope has its own specific half life or rate of decay. Over time these radioactive elements and isotopes will decrease the amount of radiation they produce and will eventually transform into more stable elements. An example of this is Uranium, which over time will decay into lead. The half life of each isotope is the time it will take for the radioactivity of the material to be reduced to half of its original activity. Some elements have very long half lives, Uranium 238 has a half life of 4,468,000,000 years while Radon 222 has a half life of 3.8 days. All radioactive elements give off radiation as particulate and/or wave energy. The particulate energy is given off as alpha (α) or beta (β) particles. Radiation given off in wave form is given off as gamma (γ) rays. Particulate radiation for instance, will not penetrate as deeply as will gamma or x-rays. Typically, alpha and beta particles will not harm skin but can cause eye damage or internal organ damage if ingested or inhaled. Gamma and x-rays, however, can (but don't always) penetrate an organism and may cause damage to internal organs as well as the skin. It is the transfer of energy as the ionizing radiation is absorbed which damages living tissue and causes health problems. The amount of tissue damaged will be directly related to the strength of the radiation and the length of time an individual is exposed.

We are all exposed to a certain level or "background" radiation everyday of our lives. Background radiation is composed of radiation from space, and from the environment around us. The average U.S. citizen is exposed to between 150-350 mrems (millrems) of radiation a year. Differences in exposure amounts result from lifestyle, geography, even the type of home we live in. Chart II shows a breakdown of background radiation received by the average U.S. citizen.



In discussing radiation and its possible effects on living organisms, it is necessary to become familiar with the units in which radiation is measured. The amount of radiation produced by a substance can be measured by the amount of activity or rate of decay it experiences. This rate of decay is defined as a "Curie". The original term for defining radiation exposure or absorption was the "ROENTGEN". In order to more accurately reflect the amounts and effects of radiation on living organisms the term "ROENTGEN" was superseded by the terms "RAD" and "REM". A Rad is a unit of absorbed dose by any material. A Rem is a unit of the dose equivalent which measures the effect of radiation on living tissue. A Rem is determined by multiplying the Rad unit by a quality factor for the specific type radiation involved. In many cases because of the limited amount of radiation being absorbed the term "MILLIREM", which is 1/1000 of a REM, is used. For instance, an individual will receive approximately 20 millirems of radiation from each chest x-ray they receive. (Recently, the terms RAD, REM, and CURIE have been replaced with the

international system units "GRAY", "SIEVERT", and "BECQUEREL).

If after reviewing this newsletter, you are interested in learning more about radiation and its health effects, the following books are recommended and are available at the local public libraries:

1) Health Effects of Low Level Radiation
-- [redacted]

2) Living With Nuclear Radiation
-- [redacted]

3) Radiation and Human Health
-- [redacted], M.D.

In our next issue, we will be discussing the effects of radiation on human health.

CURRENT STATUS

On February 21, 1991, the United States Department of Energy released its draft scoping/planning documents for public review. These documents are the draft field sampling investigation plan, the work plan, the health and safety plan, the quality assurance plan, and the community relations plan that will be used for completing the remedial investigation on these sites. The plans have been placed in four of the public libraries in Tonawanda and Grand Island. The documents are available for review during normal library hours. The plans will remain at the libraries until the final documents are published.

On March 26, 1991, the USDOE held an availability session for residents having questions or concerns on the Tonawanda sites. The meeting was held at the Parkside Village Community Center from 10 am to 1 pm. This was not a public meeting, but a chance for individuals to come in and talk with USDOE staff on a one to one basis.

WHAT'S NEXT

While the USDOE has finished the field work portion of the investigation, work continues on the analysis of the samples and completion of the Remedial Investigation Report. They are also working on the feasibility portion of the project as more analytical information becomes available. The remainder of 1991 will see the USDOE complete any further field investigation to complete data gaps which may exist. The USDOE will also issue final scoping/planning documents after the evaluation of public comments on the draft documents.

INFORMATION REPOSITORY

A new repository has been established at the Grand Island Memorial Public Library at 1715 Bedell Road in Grand Island. There are now four locations available at which USDOE documents can be reviewed. The other three locations are:

1) Kenmore Public Library
160 Delaware Road

2) Tonawanda Public Library
333 Main Street

3) Sheridan-Parkside
Village Library
169 Sheridan-Parkside Dr.

INFORMATION HOTLINE

The Erie County Department of Environment and Planning has established an information Hotline to provide answers to area residents about the FUSRAP program and the Tonawanda sites. The number is 716-858-7583, Monday through Friday from 8:30 a.m. to 4:30 p.m. Anyone

who wishes to contact the USDOE concerning the sites can contact Mr. William Seay, Department of Energy, Oak Ridge Operations, P.O. Box 2001, Oak Ridge Tennessee 37831-8723; telephone 615-576-1830. The public is encouraged to use the hotline to comment on this newsletter as well as seek information on the four Tonawanada sites.

GLOSSARY

BECQUEREL - new international unit for measurement of radioactivity. (1 Becquerel = 27 pCi = 1 disintegration per second)

CURIE - unit of measurement for activity of radioactive substance. (1 Curie = 37 billion disintegration per second)

DOSE - amount of radiation in matter measured by energy per unit mass. (See Rad)

DOSE EQUIVALENT - the absorbed dose (Rad) multiplied by a quality factor for type of radiation in question.

FUSRAP - Formerly Utilized Site Remedial Action Program

GRAY - new international system unit used to replace Rad as absorbed dose unit (100 Rad = 1 Gray)

HALF LIFE - time it take for half the atoms of a specific radioactive substance to decay to a more stable form.

RADIATION - radient energy which travels through space or matter at very high speeds. Two types are Ionizing and Nonionizing radiation.

RAD - unit of absorbed dose (Radiation Absorbed Dose) for ionizing radiation

REM - unit of measure for the dose equivalent (Roentgen Equivalent Man)

ROENTGEN - unit measurement of radiation

SIEVERT - new international system unit for absorbed dose equivalent, used to replace Rem (100 Rem = 1 Sievert)

USDOE - United States Department of Energy

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Erie County Department of Environment and Planning
Division of Environmental Compliance Services
95 Franklin Street, Rm 1077
Buffalo, New York 14202

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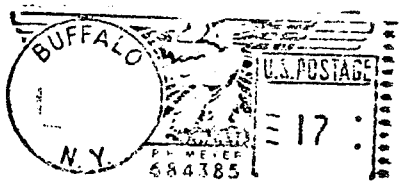

FUSRAP Review

ERIE COUNTY DEPARTMENT OF ENVIRONMENT AND PLANNING

DIVISION OF ENVIRONMENTAL COMPLIANCE SUMMER 1991, VOL. 3

INTRODUCTION

Welcome to the third issue of FUSRAP REVIEW. This publication is produced by the Erie County Division of Environmental Compliance Services to provide current information on the remedial investigations of the four Tonawandas FUSRAP (Formerly Utilized Site Remedial Action Program) sites. The purpose of this newsletter is to provide quarterly updates on the status of the investigation as well as pertinent background information on the issues involved.

In this issue, we are going to review the subject of radiation effects on Human Health. After reading this issue, if you would like further information, please call our Hotline and we'll forward you additional material.

RADIATION AND HEALTH

In our last issue, we discussed the basics of radiation, defining just what is radiation and some of its presence in on our everyday lives. The annual amount of radiation we received from background sources averages from 150-350 millirems depending on factors such as geographic location, type of house, and even the lifestyle we choose. The government has set safety limits for both the general public and for occupational workers. The permissible level of radiation the general public can be exposed to is 25-100 millirem/yr., while the occupational worker can be exposed up to 5 rem/yr.

What concerns people most is what effect radiation can have on them or their family. The effects of radiation are determined by the type of radiation, the amount of radiation, as well as the duration of exposure. In this article, we will discuss only the effects of ionizing radiation and its effects on human health. The exposure to very high doses of ionizing radiation over short periods of time, has been well documented. Chart I lists the exposures and the associated effects for very high doses of short duration. The effects of high dosage exposure have been grouped together under the heading "Acute Radiation Syndrome" (ARS). ARS symptoms can range from vomiting and diarrehea, to death depending on the level and duration of the exposure involved. Laboratory studies and A-Bomb survivor studies have shown the following progression of symptoms from high level (> 100 rems) exposures which are received all at once. The symptoms may appear from hours to weeks from the beginning of exposure. The first effects can be those of nausea and vomiting, these will subside after a short time, and

then more serious effects will occur. The second round of symptoms can include fevers, internal bleeding, hair loss, fluid loss, and breakdown of the central nervous system. Death is almost inevitable to those persons receiving > 600 rems at one time.

Chronic effects may occur in those persons surviving high level short term exposure or those having been exposed to a lower level of radiation over a long period of time. These chronic effects can express themselves as a greater percentage of risk in contracting cancer or chromosomal damage passed on to future generations.

A large amount of documentation has also been accumulated for workers who have been exposed to various amounts of radiation over the course of their careers. Uranium miners, radiologists, and nuclear power workers all experience higher than normal exposure to radiation due to their occupations. In dealing with nonfatal exposures, a general rule of thumb has been the higher the dose, the greater the risk of contracting cancer.

CHART I
RADIATION EFFECTS

10,000 REM	Death in Hours
1,000 - 10,000 REM	Death in Days
500 REM	50% Exposed Population Will Die in 30 Days
100 - 500 REM	Acute Radiation Sickness
400 - 500 REM	Sterility
200 - 500 REM	Cataract Formation

These figures represent single exposures of short duration.

Recent studies have begun to suggest that low levels of exposure may have a greater cancer risk than previously thought. The data on Japanese A-Bomb survivors was originally analyzed to show a linear relationship between exposure and cancer risk. However, with new modelling techniques and more data becoming available, a growing number of physicians and researchers feel that this linear relationship is not accurate at low levels of exposure. Estimates of cancer risk from exposure to one REM range from 125 per 1,000,000 persons to 3771 per 1,000,000 persons depending on the authority used.

Two recently published studies have also shown differing results. In a study published by the National Cancer Institute, it was reported that researchers found no evidence of increased cancer rates in people living near nuclear power plants. The study included 62 nuclear facilities in the United States and concluded that people living in the adjacent areas were at no greater risk of contracting cancer than the general populace. In a second study performed by the University of North Carolina researchers examined deaths of workers who had been examined at the Oak Ridge National Laboratory (a federal nuclear research facility) from 1943 to 1984. The study found that for every additional rem of occupational radiation to which a worker was exposed to their chances of contracting a fatal cancer increased by 5% over a twenty year period. Only 25% of the workers studied had been exposed to greater than one rem over the course of their employement. So in effect the two studies show that there is either little to no risk from low level exposures or that the risk of cancer from low level exposures may be ten times higher than previously calculated.

In general, the best rule of thumb is to avoid exposure to excess radiation when possible. Whereas the effects of high level exposure are well documented and agreed upon, the low level issue will continue to be debated for years to come. In the meantime, exposure to a certain amount of both natural and low level radiation is inevitable. Radiation is a daily part of our lives, from the cosmic and terrestrial

radiation we receive from the earth and stars around us to the amount we receive from consumer products and medical expenses.

Next issue, we will discuss the RI/FS process and some of the possible options for final disposal of these wastes.

CURRENT STATUS

The USDOE is presently preparing the draft version of the feasibility study. The Remedial Investigation/ Feasibility Study (RI/FS) documents which will also include the characterization report, are due for publication and comment by next Spring.

The USDOE will also be doing some further investigatory work this summer. The Oak Ridge National Laboratories (ORNL) investigation team is scheduled to return this August to our area to do some follow up work in the Tonawandas.

The ORNL investigation team was last here in October 1989 when they used a mobile scanning van to survey several areas in Tonawanda. The ORNL team is expected to complete its investigation by the end of August. They will be concentrating their efforts on the Tonawanda Landfill and Two Mile Creek area around the Linde-Union Carbide Plant.

As part of the follow up work being done, the USDOE has agreed to have a certain number of soil samples screened for Americum, as well as the expected Uranium, and Thorium. Americum contamination (of parts of Tonawanda) resulted from the disposal of this element from a smoke detector manufacturer located in Tonawanda. The New York State Department of Environmental Conservation (NYSDEC) wishes to utilize this opportunity to ensure all Americum contaminated areas have been identified and the USDOE have agreed to incorporate the additional sampling in their work plan. The USDOE will be coordinating the survey with the Erie County Department of Environment and Planning and Town of Tonawanda Officials.

Over the last few months, during the Occidental Chemical Trial, a great deal of information concerning the disposal of hazardous wastes by the US Army at Love Canal has been unearthed. One of the wastes reportedly disposed of by the US Army were wastes from Manhattan Project ore processing and refining which took place in our area.

The USDOE was recently asked if the discovery of these wastes could affect the progress of the Remedial Investigation/Feasibility Study currently underway in Tonawanda. The USDOE replied that they have previously investigated the Love Canal Area, and found no indication of any radioactive materials present. Any Manhatten Project wastes which may have been disposed of were not radioactive and therefore, would not be included in the current RI/FS underway in Tonawanda.

WHAT'S NEXT

The USDOE is presently devoting the major portion of its time to the preparation and publication of the draft RI/FS documents for publication and comment by next Spring. A second availability session is scheduled for later this fall.

INFORMATION REPOSITORIES

Document repositories have been established at four (4) public libraries in the Tonawanda and Grand Island municipalities. All current draft and final documents are available at the reference desks. The four repositories are located at:

1) Kenmore Public Library
   160 Delaware Avenue

2) Tonawanda Public Library
333 Main Street
3) Parkside Village Public Library
169 Sheridan-Parkside Drive

4) Grand Island Memorial Public Library -- 1715 Bedell Road

INFORMATION HOTLINE

The Erie County Department of Environment and Planning has established an information Hotline to provide answers to area residents about the FUSRAP program and the Tonawanda sites. The number is 716-858-7583, Monday through Friday from 8:30 a.m. to 4:30 p.m. Anyone who wishes to contact the USDOE concerning the sites can contact Mr. William Seay, Department of Energy, Oak Ridge Operations, P.O. Box 2001, Oak Ridge Tennessee 37831-8723; telephone 615-576-1830. The public is encouraged to use the hotline to comment on this newsletter as well as seek information on the four Tonawanada sites.

GLOSSARY

ARS - Acute Radiation Sickness

DOSE - amount of radiation absorbed in matter measured by energy per unit mass. (See Rad)

FUSRAP - Formerly Utilized Site Remedial Action Program

NYSDEC - New York State Department of Environmental Conservation

ORNL - Oak Ridge National Laboratories

RAD - unit of absorbed dose (Radiation Absorbed Dose) for ionizing radiation

RADIATION - radient energy which travels through space or matter at very high speeds. Two types are Ionizing and Nonionizing radiation.

REM - unit of measure for the dose equivalent (Roentgen Equivalent Man)

RI/FS - Remedial Investigation/ Feasibility Study

USDOE - United States Department of Energy

FUSRAP REVIEW IS PUBLISHED QUARTERLY BY THE ERIE COUNTY DIVISION OF ENVIRONMENTAL COMPLIANCE SERVICES UNDER CONTRACT TO THE USDOE.

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FUSRAP Review

ERIE COUNTY DEPARTMENT OF ENVIRONMENT AND PLANNING

DIVISION OF ENVIRONMENTAL COMPLIANCE FALL 1991, VOL. 4

INTRODUCTION

Welcome to the fourth issue of FUSRAP REVIEW. This publication is produced by the Erie County Division of Environmental Compliance Services to provide current information on the remedial investigations of the four Tonawanda FUSRAP (Formerly Utilized Sites Remedial Action Program) sites. The purpose of this newsletter is to provide quarterly updates on the status of the investigation as well as pertinent background information on the issues involved.

The last several issues of this newsletter have been devoted to the concepts of radiation and radioactivity. The next several editions will be devoted to the particular problems and possible solutions at the FUSRAP (Formerly Utilized Sites Remedial Action Program) sites in Tonawanda.

OVERVIEW

As we've previously reviewed, the four Tonawanda FUSRAP sites are: 1) Linde Air Products; 2) Seaway Industrial Park; 3) Ashland Oil Refining I and 4) Ashland II. All four sites were contaminated as a result of uranium ore processing done by Linde for the Manhattan Engineer District (MED) during the 1940's.

In 1943, Linde began processing of both foreign and domestic ores at their East Park facility in order to produce a concentrated form of uranium oxide for the war effort. The production of uranium oxide involved a 12 step process that created both liquid and solid wastes as by-products of the reactions. The solid wastes were divided into two categories: foreign and domestic wastes. The foreign waste, ore tailings, which had a high content of radium were, shipped to the Lake Ontario Ordinance works for storage. The foreign owners intended to process these wastes to remove the valuable radium. Eventually however, the market for radium decreased and these wastes were put in the DOE owned Niagara Falls Storage Site (a high level repository) in Lewiston, New York. The domestic wastes, which were initially low in radium, were used as fill material in what is now known as the Haist property in Tonawanda. The uranium concentrating process produced approximately 8,000 tons of solid waste and 137 million gallons of liquid waste. The solid waste was comprised of .54% uranium or approximately 2,200 lbs. which had a radioactive content of 13 curies.

In 1958, the Haist property was surveyed and released for use by the AEC. It was purchased by Ashland in 1960 and in 1974 Ashland constructed two oil storage tanks on top of the

fill material. Material excavated from the tank construction was then moved to the Seaway Industrial Landfill and to an adjacent site owned by Ashland now known as the Ashland II site. The excavation of the original waste material and subsequent disposal at the other two sites has resulted in an increased volume due to the mixing of the wastes with other fill materials. Table I shows the approximated volumes to be disposed of at each of the four (4) FUSRAP sites.

TABLE I
SOIL VOLUMES SUMMARY

Linde Air	37,000 yd^3	
Ashland I	74,000 yd^3	
Ashland II	32,000 yd^3	13 curies
Seaway Industrial Park	117,000 yd^3	

The liquid waste was disposed of by three methods. Originally, the liquid waste was disposed of in the sanitary sewer system. Later, due to process changes, the effluent's pH became too caustic for sewers to handle and seven injection wells were installed on the Linde property. Eventually the wells became blocked, and the effluent then was disposed of in a storm sewer which fed into Two Mile Creek. The liquid effluent contained 29,000 lbs. of Uranium with a radioactive content of 8.5 curies and up to 13.6 curies from the radium portion of the waste. Table II shows a breakdown for how much liquid waste was disposed of by each method and the total curie level.

TABLE II
SOIL VOLUMES SUMMARY

Sanitary Sewer	26 million	4.0 curies
Storm Sewer	56 million	8.5 curies
Injection Well	55 million	8.5 curies

The final fate of these liquid effluents has been one of the cornerstones of the present RI/FS project. The liquids that were originally disposed of through the storm and sanitary sewers have long since been flushed into the Niagara River, which has diluted them past any need for remediation or possibility of recovery. The materials that were injected into the disposal wells at Linde are thought to have immobilized in the rock strata. A large part of the current investigation has been devoted to the collection and analysis of groundwater samples from all four (4) FUSRAP sites.

So what does it all mean? Obviously, there has been an enormous amount of waste generated from the MED activities and left in Tonawanda. The AEC and its successor, the USDOE, have been back five times in the last four decades investigating and characterizing these wastes. The reason that the DOE and its predecessor keep returning to survey the materials is to insure the safety of the populace and environment. As more information and studies have become available on radiation, the protection guidelines have been revised to decrease the amount of extraneous radiation to which the public is to be exposed. Each study has helped insure that the materials present are not in violation of these guidelines. The last study began two (2) years ago. When complete, it will be the most definitive to date and will result in a final solution for these sites.

The main problem with the MED wastes is the presence of radioactive contaminants from the processing. The three main radioactive contaminants identified with the wastes are Thorium 230, Uranium 238, and Radium 226. A secondary problem with the wastes is the presence of heavy metals. Approximately 19 heavy metals, from Aluminum through Zinc have also been identified as coming from the waste stream from Linde. The RI/FS will also identify if these substances have been found above background levels. The DOE's concern is that the radioactive contaminants or other hazardous wastes associated with

MED processes not be released into the environment or expose the general public to increased risk.

The New York State Department of Environmental Conservation (NYSDEC) Phase II investigation of Ashland II and the DOE's draft work plans of the three (3) River Road sites show the primary problem with these sites is the runoff of radioactive contaminants into surface waters. The Linde Plant has had several areas identified as needing further remedial work. The DOE's preferred remedial action plan will determine how the waste from all four sites will finally be remediated. There are basically three (3) solutions which will be examined before the final determination is made for these sites. The three (3) solutions (and the dozen or so variations) are: 1) leave in place; 2) excavate and transport; or 3) excavate and landfill in the area. The solution chosen will depend on the results of the current remedial investigation. Whichever remedial measures are chosen, the wastes from all four (4) sites is estimated to total approximately 360,000 yd^3. This amount of waste would be equivalent to a football field size area that would be approximately 57 yards high. Next issue, we'll touch on what these investigations have found, and delve a little deeper into the possible remedial options for these sites.

CURRENT STATUS

The followup work that the Oak Ridge National Laboratory (ORNL) team was to finish this summer has been put off until this fall due to administrative problems. The team is expected to complete its work by the end of November 1991. The areas being looked at include the Tonawanda Landfill and Two Mile Creek from Linde to the Niagara River.

The DOE continues to devote the major portion of its time to the publication of the RI/FS documents due out in the Spring of 1992. The RI/FS reports will include characterization reports for all four sites.

The DOE recently conducted a recompetition for the FUSRAP contract. During this recompetition, the scope of work was split between two contractors. These two contractors have now been identified and their tasks are as follows.

Bechtel National, Inc. (BNI) will continue to serve as FUSRAP's Project Management Contractor (PMC). As PMC, Bechtel is responsible for implementing all field activities including remedial investigations, response actions, and site surveillances, maintenance, and operations.

Bechtel will also be responsible for environmental compliance activities, final remedial design and remedial action, and overall project management including cost and schedule control, record retention, and document control.

Science Applications International Corporation (SAIC) will serve as the Environmental Studies Contractor (ESC) for FUSRAP. In this role, SAIC will prepare all environmental documentation for FUSRAP with the exception of a few documents that Bechtel will retain to ensure smooth transition. SAIC will plan DOE's field investigations; perform data evaluation and reporting; com plete risk assessments, feasibility studies, and remedial alternative analysis; and conduct regulatory analysis.

A new site manager, Mr. Ron Kirk, will be joining DOE's FUSRAP staff in the near future. Mr. Kirk will be responsible for the Tonawanda and other New York FUSRAP sites.

WHAT'S NEXT

No other events are planned in the near future. The DOE continues to work towards their Spring 1992 publishing deadline.

INFORMATION REPOSITORIES

Document repositories have been

established at four (4) public libraries in the Tonawanda and Grand Island municipalities. All current draft and final documents are available at the reference desks. The four repositories are located at:

1) Kenmore Public Library
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333 Main Street

3) Parkside Village Public Library
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4) Grand Island Memorial Public Library - 1715 Bedell Road

INFORMATION HOTLINES

The Erie County Department of Environment and Planning has established an information Hotline to provide answers to area residents about the FUSRAP program and the Tonawanda sites. The number is (716) 858-7583, Monday through Friday from 8:30 a.m. to 4:30 p.m. After 4:30 p.m., anyone who wishes to contact the DOE concerning the sites can contact Mr. William Seay or Mr. Ron Kirk, Department of Energy, Oak Ridge Operations, P.O. Box 2001, Oak Ridge Tennessee 37831-8723; telephone 615-576-1830. The public is encouraged to use the hotline to comment on this newsletter as well as seek information on the four Tonawanada sites.

In addition to this local hotline, DOE has established a toll free telephone number for FUSRAP. Anyone wishing to communicate directly with DOE about FUSRAP sites can call 1-800-253-9759 to make comments or request information.

GLOSSARY

AEC - Atomic Energy Commission

FUSRAP - Formerly Utilized Sites Remdial Action Program

MED - Manhattan Engineer District

NYSDEC - New York State Department of Environmental Conservation

ORNL - Oak Ridge National Laboratory

Radioactivity - Spontaneous emission of particles or photons from the nucleus of an unstable atom.

RI/FS - Remedial Investigation/Feasibility Study

DOE - United States Department of Energy

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FUSRAP Review
Erie County Department of Environment and Planning
Division of Environmental Compliance Services
95 Franklin Street, Rm 1077
Buffalo, New York 14202

FUSRAP REVIEW

ERIE COUNTY DEPARTMENT OF ENVIRONMENT AND PLANNING

DIVISION OF ENVIRONMENTAL COMPLIANCE SERVICES WINTER 1991 VOL.5

INTRODUCTION

Welcome to the fifth issue of FUSRAP REVIEW.This publication is produced by the Erie County Division of Environmental Compliance Services to provide current information on the remedial investigations of the four Tonawanda FUSRAP(Formerly Utilized Sites Remedial Action Program)sites. The purpose of this newsletter is to provide quarterly updates on the status of the investigation as well as pertinent background information on the issues involved.

In our last issue,we summarized the history of the four (4) Tonawanda sites, the problems being considered in the remedial investigation and feasibility study. This issue will examine some of the possible options that will be considered for the final remediation of these sites.

OVERVIEW

In our last issue, we briefly mentioned that there are several basic options which will be looked at for a final solution for the four (4) Tonawanda sites. In this issue we will examine these options and some of the variations in greater depth.

As we examine some of the options available to the USDOE, bear in mind the objectives of the FUSRAP program, which are:

1) Identify all former MED/ AEC sites and assess their current condition.

2) If necessary, upgrade or remediate these sites to meet current radiological guidelines.

3) All work performed must be in accordance with federal laws and regulations as well as local and state environmental rules to the extent permitted by federal law.

4) Certify all sites for appropriate future use.

All sites should be remediated to as conservative standard as possible to ensure that any future use will pose minimal risk to the public.

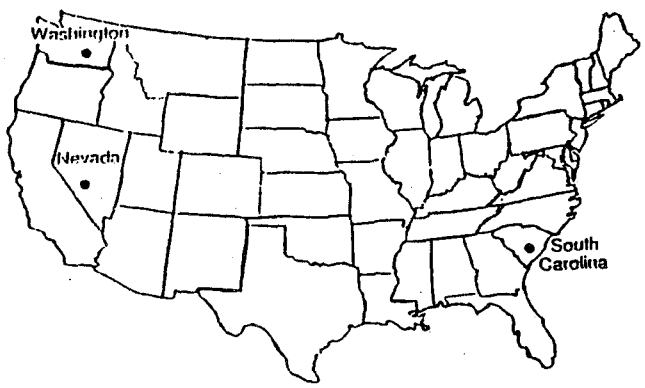
The first option we are going to examine is the "no action" scenario. As the name implies, no remedial action would be taken and the wastes would be left in place. This option could only be considered if the analysis of the radioactive wastes were found to be well below the USDOE guidelines. Unfortunately, this does not seem to be the situation for the four (4) Tonawanda sites. Preliminary results have shown that even though the wastes are low level, some form of remedial action will be necessary before the properties without radiological restrictions can be released for use.

The second option would involve excavation of material from the sites and transport to a

federal or private facility for permanent disposal. However, there are several problems inherent in this scenario. First is the volume involved. At last estimate, there is 260,000 yd3 that would need to be excavated. The next problem is where to send this material? Currently, there are no private nuclear disposal sites which are permitted to take this type of material. While there are three commercial facilities (WA, NV, and SC) and two DOE facilities (WA, NV) could take this type material, two of them are located out west (in Nevada and Washington) and the third is in South Carolina (See Figure 1). The cost of shipping and transporting this waste as well as the risks involved in transport are the major drawbacks to this option.

A third option to be examined is excavation and disposal in this area. This would involve finding a suitable site for construction of a permanent facility for disposal of the Tonawanda wastes. The construction of such a site would also entail perpetual maintenance and monitoring by the USDOE to ensure integrity of the facility and its contents. This option would have the advantage of minimizing the risk of transport but would leave the waste in the Western New York region.

A fourth option would utilize remedial measures such as capping of individual sites with liners and/or clay caps and using barriers such as slurry walls to prevent migration of the waste.



Current Federal LLRW Repositories

The longevity of the wastes involved versus the expected lifetime of clay caps and slurry walls is the major disadvantage to this plan. If this type action were selected it would have to be maintained for as long as the wastes remained at the site.

A fifth option may entail the combination of several different remedial actions as a final solution. For instance, one site, if sampling data confirmed below guideline levels, could be delisted for unrestricted use. If the total volume of wastes were found to be substantially less than anticipated, then shipping to a federal facility may be a more viable option. If available, new technology to sort out the radioactive constituents may be used to decrease the amount of waste needing to be disposed.

In the coming year, the USDOE will present a draft document which will show a much more detailed description of the options they are considering. The public comment they receive on this document will help to determine what final option will be chosen in the Record of Decision. As more information becomes available, we will try and present it in as brief and concise form as possible so that you the public will be able to make informed and effective comments when the USDOE opens the comment period.

CURRENT STATUS

As mentioned in our last issue, [redacted] has replaced Mr. William Seay as manager of the New York FUSRAP sites. Mr. [redacted]s background includes a BS in civil engineering, a MBA in management and more then five years experience managing design and environmental projects. Mr. [redacted] has assumed the responsibilities of the Deputy Director for the FUSRAP program. [redacted] were in town

on November 13, 1991, to meet with CANiT to discuss the status of the Seaway Landfill site.

The investigatory field work to identify other sites requiring remediation under the FUSRAP program was completed in November 1991 by the Oak Ridge National Laboratory (ORNL) field crew. The areas examined were Two Mile Creek from Sheridan Drive to the Niagara River and the Town of Tonawanda Landfill. No further investigatory field work is scheduled for the Tonawanda sites.

At the Seaway Landfill Site, BFI is proposing to relocate a portion of the radioactive waste into a temporary storage cell on their site so they can complete their landfill. Presently the NYSDEC permit restricts BFI from completing the front portion of its landfill because of the presence of the radioactive waste in that area. The restriction will remain until clearance is granted by the Regional Solid Waste Engineer. The USDOE has no regulatory authority over the relocation actions, but they have reviewed BFI's proposal and determined that it technically acceptable and it will provide an improvement over the current site conditions.

The Coalition Against Nuclear Waste in Tonawanda (CANiT), a bipartisan coalition of area politicians, is protesting the BFI proposal on the basis of health and safety of the community. CANiT would prefer no action on any of the sites until the completion of the RI/FS report which is due out in the Fall of 1992. At this time, the issue is being considered by the New York State Department of Environmental Conservation (NYSDEC) which has the responsibility for monitoring the Seaway Landfill and would issue the permit to construct the temporary storage cell.

In a related issue, the Linde Division on East Park Drive in Tonawanda has been undergoing an expansion of their operations that was begun this past summer.

Their expansion has involved areas which the USDOE has targeted for remediation, CANiT has noted their concern over this project also. [redacted] addressed this concern at the November 1991 meeting, stating the USDOE has no jurisdiction over the Linde property. He also stated that the USDOE has provided Linde with a full time health physcist to monitor the condition and ensure there is no danger to the public or the workers. He also stated that this construction activity would not adversely affect the final remediation of the radioactive waste on this site.

WHAT'S NEXT

The next deadline for the USDOE is the Fall of 1992 when the draft RI/FS report is due out for public comment. All field work has been completed; only sample analysis and write up of the report remains.

USDOE AVAILABILITY SESSIONS

The USDOE will hold an availability session at the Sheridan-Parkside Community Center, 169 Parkside drive, on February 19, 1992 from 10:00 am to 2:00 pm to answer questions from the community on the USDOE RI/FS process. This will be an opportunity for anyone with questions or concerns regarding the Tonawanda FUSRAP sites to meet with USDOE staff members on an informal, one to one basis.

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In addition to this local hotline, DOE has established a toll free telephone number for FUSRAP.

Anyone wishing to communicate directly with DOE about FUSRAP sites can call 1-800-253-9759 to make comments or request information.

GLOSSARY

BFI - Browning Ferris Industries

CANiT - Coalition Against Nuclear materials in Tonawanda

FUSRAP - Formerly Utilized Sites Remedial Action Program

NYSDEC - New York State Department of Environmental Conservation

ORNL - Oak Ridge National Laboratory

RI/FS - Remedial Investigation/ Feasibility Study

USDOE - United States Department of Energy

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FUSRAP REVIEW

ERIE COUNTY DEPARTMENT OF ENVIRONMENT AND PLANNING

DIVISION OF ENVIRONMENTAL COMPLIANCE SPRING 1992, VOL.6

INTRODUCTION

Welcome to the sixth issue of FUSRAP REVIEW. This publication is produced by the Erie County Division of Environmental Compliance Services to provide current information on the U.S. Department of Energy (USDOE) remedial investigations of the four Tonawanda FUSRAP (Formerly Utilized Sites Remedial Action Program) sites. The purpose of this newsletter is to provide quarterly updates on the status of the investigation as well as pertinent background information on the issues involved.

In our last issue we reviewed some of the options which will be considered under the feasibility portion of the RI/FS process. This issue will explain the USDOE organization, discuss the regulations that drive the cleanup process for Erie County sites, and give the present status of the process.

OVERVIEW OF USDOE RESPONSIBILITIES

Over the last year, we have examined such topics as the basics and health effects of radiation, and the particular problems of each of the four sites in Tonawanda.

In 1947, the Atomic Energy Act (AEA) established the Atomic Energy Commission (AEC). The AEC was given the responsibility for protecting human health and the environment from all nuclear facilities. As the AEC evolved into the Energy Research Development Administration and finally the USDOE, many non-nuclear regulatory responsibilities were added to their scope of responsibility.

Presently, the USDOE has the responsibility for nuclear material activities connected with the programs of the Defense, Nuclear Energy, and Energy Research programs. The USDOE's policy is to conduct its activities in compliance with all appropiate health, safety and environmental standards at the Federal, State, and local levels. The USDOE's regulatory compliance obligations are run through their Office of Environmental Restoration and Waste Management (EM). The EM office incorporates three distinct programs in order to fulfill its functions These programs are the Environmental Restoration, Waste Management, and Technology Development programs. Environmental Restoration deals primarily with remediation of sites and facilities across the United States. The Waste Management program deals with the treatment, storage, and disposal of all nuclear and mixed wastes produced by USDOE activities. Finally the Technology Development program helps support the Waste Management and Environmental Restoration programs by re-

search, development, evaluation, demonstration, and testing of new technologies that can be used in remedial or management efforts.

Environmental Restoration's primary goal is to ensure the safety of the environment and human health from any potential threat of radioactivity contaminated waste sites or facilities. The final goal of the program is to remediate the sites or facilities for radiologically unrestricted use by the community.

REGULATORY OVERVIEW

In pursuit of these goals the USDOE must also meet all appropiate Federal requirements. In the case of remedial actions such as in Tonawanda the three major laws are CERCLA, SARA, and NEPA. CERCLA is the Comprehensive Environmental Response Compensation and Liability Act, more commonly referred to as Superfund. SARA is the Superfund Amendments Reauthorization Act, and NEPA is the National Environmental Policy Act.

CERCLA addresses uncontrolled releases of hazardous substances to the environment and the cleanup of inactive hazardous waste sites. SARA provides guidelines for establishing cleanup standards, schedules, appropriate regulations, and potential remedial actions. NEPA requires that all Federal agencies, such as the USDOE, perform an environmental review for any proposed major Federal actions that have an impact on human health. This review can result in either an environmental assessment (EA) or an environmental impact statement (EIS) being produced.

STEPS IN THE REGULATORY PROCESS

USDOE has established a policy for integrating the requirements of NEPA and CERCLA for all environmental restoration projects. This type of integrated action is being used for the Tonawanda sites.

Under the environmental restoration process, a six (6) phase process is initiated once a site has come to the attention of the USDOE for remediation. This process corresponds to the same type of remedial process as used by CERCLA (See figure 1).

CERCLA	GOAL
PRELIMINARY ASSESSMENT INSPECTION	IDENTIFY PROBLEM
REMEDIAL INVESTIGATION	CHARACTERIZE WASTES
FEASIBLITY STUDY	EVALUATE REMEDIAL OPTIONS
PROPOSED SELECTED PLAN	PROPOSE REMEDIAL ACTION
PUBLIC COMMENT	PUBLIC PARTICIPATION
RECORD OF DECISION	AUTHORIZATION OF OPTION
REMEDIAL DESIGN AND ACTION	DESIGN AND IMPLEMENATION

DOE and CERCLA Investigation Framework

Figure 1

The six phases or steps are:

1) Preliminary Assessment - This consists of a review of all records for the site to determine if any hazard is present. This review will determine if an inspection of the site is needed and what further information should be collected.

2) Site Inspection - This step consists of collecting more information on the site and may generate limited field sampling data.

3) Site Characterization - This step results in a full investigation of the site in order to determine the extent of contamination. Activities include sampling, monitoring, and analysis of soil, water and air media. It is meant to provide sufficient information necessary for analyzing cleanup options. The Remedial Investigation (RI) Report is produced in this stage.

4) Evaluation of Remedial Options - All data generated during the characterization phase is then analyzed and used to develop cleanup options for the site. Many different scenarios are devised and are published in a document called the Feasiblity Study (FS). Together the remedial investigation and feasibility study reports are produced and put out for public comment. After public comments, a final remedial action is decided upon. The final remedial solution is issued as a Record of Decision (ROD). Factors which help determine a final solution are public acceptance, technical feasiblity, inherent risk, and cost.

5) Cleanup Action - After the record of decision has been issued, a remedial design is produced. The design encompasses all details of the work to be done, such as plans for health and safety and engineering specifications. After review and approval, the remedial design is used to complete the cleanup action.

6) Verification - This step entails such actions as monitoring, inspections, or site reports that ensure all cleanup criteria have been met.

CURRENT STATUS

At this point in the Tonawanda investigation, site characterization has been completed and the evaluation of remedial options has begun. The draft RI/FS document is scheduled to be published at the end of 1992 and the final document in the Fall of 1993. Public hearings will be held to gather local reaction to the report. A final ROD would not be expected until the end of 1993, and any remedial actions would not be expected to commence until sometime in 1994.

On February 19, 1992, the USDOE held an availability session from10:00 am to 2:00 pm at the Sheridan Parkside Community Center. The turnout was sparse, but several media representatives did attend the session.

No further progress has been made on the Seaway Landfill expansion proposal, but BFI is still addressing New York State Department of Environmental Conservation (NYSDEC) requirements on this issue.

AVAILABILITY SESSION

The USDOE will hold an availability session at the Sheridan- Parkside Community Center, 169 Parkside Drive, on Wednesday, June 3, 1992, from 5:00 p.m. to 9:00 p.m. to answer questions from the community on the USDOE RI/FS process. This will be an opportunity for anyone with questions or concerns regarding the Tonawanda FUSRAP sites to meet with USDOE staff members on an informal, one-on-one basis.

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GLOSSARY

AEA - Atomic Energy Act

AEC - Atomic Energy Commission

BFI - Browning Ferris Industries

CERCLA - Comprehensive Environmental Response Compensation and Liability Act

FUSRAP - Formerly Utilized Sites Remedial Action Program

NEPA - National Environmental Policy Act

NYSDEC - New York State Department of Environmental Conservation

RI/FS - Remedial Investigation/ Feasibility Study

ROD - Record of Decision

SARA - Superfund Amendments Reauthorization Act

USDOE - United States Department of Energy

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FUSRAP REVIEW

ERIE COUNTY DEPARTMENT OF ENVIRONMENT AND PLANNING

DIVISION OF ENVIRONMENTAL COMPLIANCE SUMMER 1992, VOL.7

INTRODUCTION

Welcome to the seventh issue of FUSRAP REVIEW. This publication is produced by the Erie County Division of Environmental Compliance Services to provide current information on the U.S. Department of Energy (USDOE) remedial investigations of the four Tonawanda FUSRAP (Formerly Utilized Sites Remedial Action Program) sites. The purpose of this newsletter is to provide quarterly updates on the status of the investigation as well as pertinent background information on the issues involved.

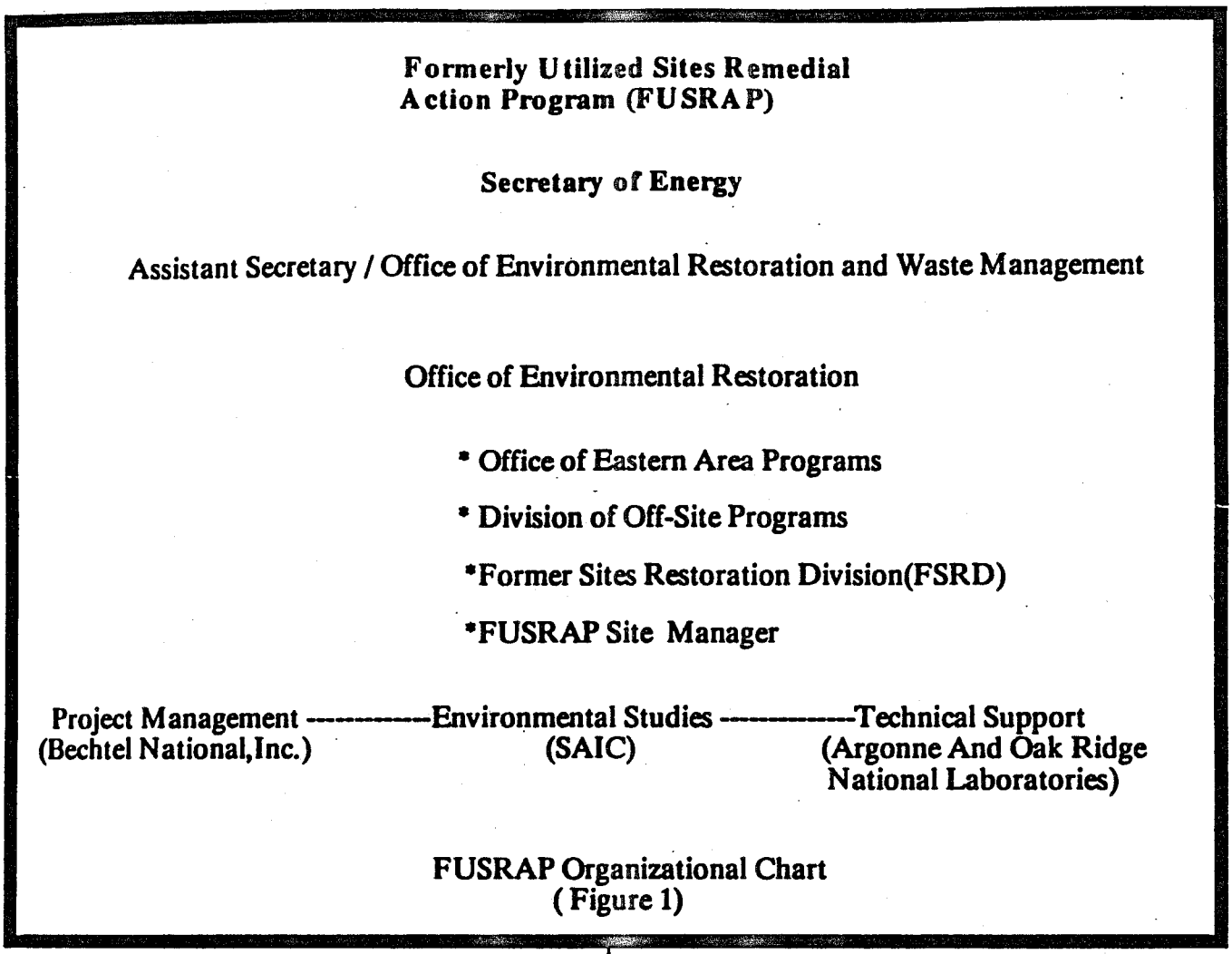
In our last issue , we reviewed the regulatory processes that drive the FUSRAP programs as well as steps involved in the investigatory and decision process. In this issue we will review what happens once a final decision for remediation has been reached, and how it is implemented. We will also examine how the USDOE is organized and where the FUSRAP program is administered .

OVERVIEW

As we showed last issue once the investigation work has been completed the USDOE and its contractors assemble a series of options for remediation of the site. The results of the investigation and the USDOE's remedial options are presented to the public in the RI/FS report along with a proposed plan that presents a recommended solution. After solictation of comments on the report by the public and concerned agencies the USDOE incorporates the comments into its final report and decides which of the options reviewed best applies to the site. The final solution is released to the public in a ROD (Record of Decision) .

The process by which a ROD is reached begins in the local community and eventually ends in Washington, D.C. It is during the period of public comment that follows the publication of the RI/FS document and the proposed plan that the community can have its greatest impact.

In any decision the USDOE must consider community acceptance for the final remedial solution. Other factors that will affect the selection process involve economic cost ,health risks, transportation risks , availability of disposal sites, and site characteristics. The USDOE Oak Ridge Field Office personnel will evaluate all data and comments and then recommend the solution they feel will best fit the site. The final decision for any FUSRAP site ultimately rests in Washington D.C. with the administrative branch of the DOE. The final Record of Decision (ROD) must be



FUSRAP Organizational Chart
(Figure 1)

signed off by the Deputy Assistant Secretary for Environmental Restoration. It is within his authority to overide the recommended ROD if he feels there is sufficient reason to do so. Once the ROD has been signed the USDOE will then allocate funding for the necessary remedial work.

The USDOE is a presidential cabinent post such as the treasury department and the department of defense. The current Secretary of Energy is James D. Watkins, Adimiral, U.S. Navy (retired).

The FUSRAP program is administered through the Office of Environmental Restoration and Waste Management. The FUSRAP Program Manager is located in the Off-Site Division of the Office of Eastern Area Programs. The responsibility for all field activities under FUSRAP falls to the Director of the Former Site Restoration Division (FSRD) who is located in Oak Ridge, Tennessee. The FSRD is supported by a program management contractor, an environmental studies contractor, and by a technical support contractor. Presently the program management contractor is Bechtel National, Inc. and the environmental studies contractor is Science Applications International Corporation (SAIC). The Technical support contractor is provided by four different organizations Argonne National Laboratories, Oak Ridge Associated Universities, Oak Ridge National Laboratories, and the Office of Technical Services (comprised of Roy F. Weston Inc. and H & R Technical Associates).

Figure 1 shows the organizational chart for the administration of FUSRAP sites within the USDOE.

CURRENT STATUS

Recently, the USDOE released an updated timeline for the Tonawanda sites. The draft RI/FS report is now slated for release in November of this year. A public hearing on this document would probably be set for the Spring of 1993. The final RI/FS would be expected in the Summer of 1993, with the ROD expected in the Fall of 1993.

On June 3, 1992, the USDOE held an availability session from 5:00 pm to 9:00 pm at the Sheridan- Parkside Community Center. The turnout was sparse, probably due to the fine spring weather that day.

In a new development involving the BFI/Seaway Landfill on River Road, the NYSDEC announced on May 27,1992 that they would require a Part 380 permit for any excavation or movement of radioactive materials within the present landfill boundaries. In a letter to BFI, the NYSDEC stated that prior to any future excavation or movement of the FUSRAP materials on this site, a Part 380 permit and a Draft Environmental Impact Statement (DEIS) will need to be submitted by BFI. Under official compilation of the New York Codes, Rules, and Regulations (NYCRR) Part 380 addresses the prevention and control of environmental pollution by radioactive materials.

BFI had previously submitted a proposal to NYSDEC that would have involved the movement of the FUSRAP materials on their site to allow completion of their landfill. BFI had proposed construction of a temporary cell to hold the FUSRAP wastes until a final ROD had been reached by the USDOE.

USDOE SPEAKER AVAILABILITY

[redacted] USDOE SITE MANAGER, has announced that the USDOE will be available to any public or private organization wishing to learn more about the FUSRAP program and the USDOE activities in Tonawanda. Anyone wishing more information should contact Mr. [redacted] at 615-576-7477 or 1-800-253-9759.

AVAILABILITY SESSION

The USDOE will hold an availability session at the Sheridan-Parkside Community Center, 169 Parkside Drive, on Wednesday, September 30, 1992, from 4:00 pm to 7:00 pm to answer questions from the community on the USDOE RI/FS process. This will be an opportunity for anyone with questions or concerns regarding the Tonawanda FUSRAP sites to meet with USDOE staff members on an informal, one-on-one basis.

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The Erie County Department of Environment and Planning has established an Information Hotline to provide answers to area residents about the FUSRAP program and the Tonawanda sites. The number is (716) 858-7583, Monday through Friday from 8:30 a.m. to 4:30 p.m. After 4:30 p.m., anyone who wishes to contact the USDOE concerning the sites can contact [redacted] Department of Energy, Oak Ridge Operations, P.O. Box 2001, Oak Ridge Tennessee 37831-8723; telephone 615-576-7477. The public is encouraged to use the hotline to comment on this newsletter as well as seek information on the four Tonawanada sites.

In addition to this local hotline, USDOE has established a toll free telephone number for FUSRAP. Anyone wishing to communicate directly with USDOE about FUSRAP sites can call 1-800-253- 9759 to make comments or request information.

GLOSSARY

BFI - Browning Ferris Industries

CANIT -Coalition Against Nuclear Waste in Tonawanda

DEIS -Draft Environmental Impact Statement

FSRD -Former Sites Restoration Division

FUSRAP - Formerly Utilized Sites Remedial Action Program

NYCRR -New York Codes, Rules,and Regulations

NYSDEC - New York State Department of Environmental Conservation

RI/FS - Remedial Investigation/ Feasibility Study

ROD - Record of Decision

SAIC -Science Applications International Corporation

USDOE - United States Dept. of Energy

THE FUSRAP REVIEW IS PUBLISHED QUARTERLY BY THE ERIE COUNTY DIVISION OF ENVIRONMENTAL COMPLIANCE SERVICES UNDER CONTRACT TO THE USDOE.

FUSRAP REVIEW
ERIE COUNTY DEPARTMENT OF ENVIRONMENT AND PLANNING
DIVISION OF ENVIRONMENTAL COMPLIANCE SERVICES
95 FRANKLIN STREET, RM 1077
BUFFALO, NEW YORK 14202

FUSRAP REVIEW

ERIE COUNTY DEPARTMENT OF ENVIRONMENT AND PLANNING

DIVISION OF ENVIRONMENTAL COMPLIANCE FALL 1992, VOL.8

INTRODUCTION

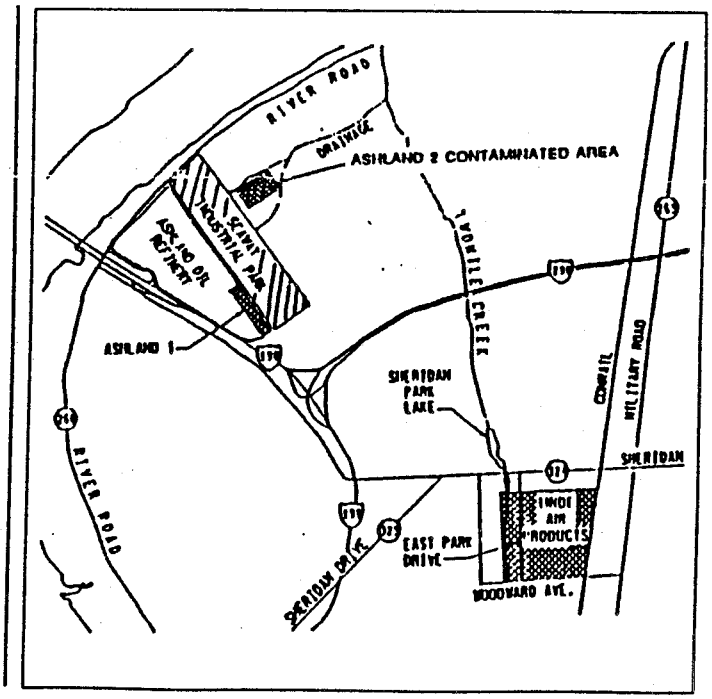
Welcome to the eighth issue of FUSRAP REVIEW. This publication is produced by the Erie County Division of Environmental Compliance Services to provide current information on the U.S. Department of Energy (USDOE) remedial investigations of the four Tonawanda FUSRAP (Formerly Utilized Sites Remedial Action Program) sites. The purpose of this newsletter is to provide quarterly updates on the status of the investigation as well as pertinent background information on the issues involved.

In our last issue , we examined the administrative structure of the USDOE and how a Record of Decision (ROD) is reached. In this issue we will discuss some of the issues brought up at the last public meeting . We will also examine how the USDOE obtains its funding for all the activites under its authority.

OVERVIEW

At our last public availability session held on September 30, 1992 several people had questions about where exactly the four FUSRAP sites are located and what exactly is the problem on these sites. Some people were also concerned about not having received any of the previous newsletters. So to start this issue I'd like to quickly recap where the sites are and what exactly has been found.

The four FUSRAP sites are : 1) The Linde Air Products plant on East Park Drive , 2) The Ashland Oil Refinery on River Road, 3) The BFI/Seaway Landfill on River Road, and 4) The Ashland II site also on River Road. A location map showing all four sites is shown in the opposing column.



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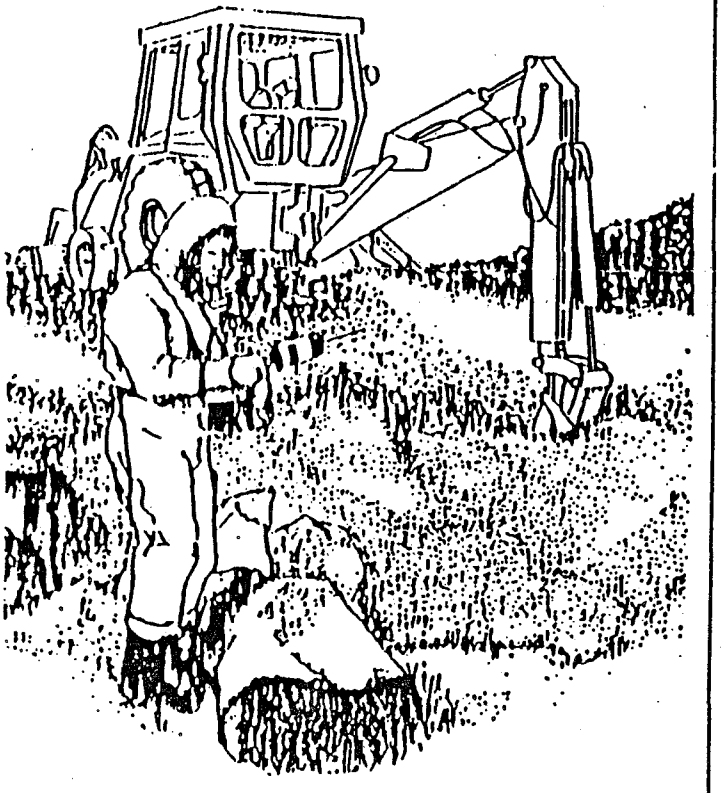
All four of these sites are the result of the processing of radioactive ores by Linde for the Manhatten Engineer District(MED) during World War II and the disposal of the contaminated ore tailings.

The Linde Site

The Linde site has been found to have over 5 acres of contaminated soils totaling approximately 37,000 cubic yards. Two buildings on the site have also been identified as exceeding USDOE guidelines and will need some remedial work. Sampling and analysis of groundwater and surface water have shown no radionuclides in excess of USDOE levels. Sediment samples taken from onsite sewer sumps have shown radionuclide levels in exceedance of USDOE regulations.

The Ashland I Site

The Ashland (I) refinery site has been found to have soil contamination totaling approximately 74,000 cubic yards. Groundwater and surface water were found to be within federal guidelines however, there was one instance of sediment contamination above recommended guidelines.



BFI/Seaway Landfill Site

The characterization of this site has been completed but the draft report has not yet been released. Contaminated soil on this site has been estimated at 117,000 cubic yards.

The Ashland II Site

This site has been found to have contaminated soil totaling approximately 32,000 cubic yards. The groundwater and surface water on this site have shown no exceedance of USDOE guidelines. There has been one sediment sample in exceedance of USDOE guidelines taken from a drainage ditch between the BFI/Seaway Landfill and this property.

In summation, the RI/FS for these sites must address the disposal of 260,000 cubic yards of soil as well as some small amount of contaminated sediments. No remedial work will be necessary regarding either surface water or groundwater as there has been no excessive contamination found at any of the four sites. The RI/FS will address all remedial options from no action to out of state disposal culminating in the selection of a preferred remedial alternative and the reasons for its selection by the USDOE.

Another subject brought up at the Availability Session was that of who receives the newsletter? Several people were unaware this publication exists and wanted to be put on the mailing list. Our mailing list was originally comprised from the Board of Elections lists for portions of Tonawanda and Grand Island. However anyone wishing to receive the REVIEW should call our hotline number to register.

USDOE BUDGETARY PROCESS

Our next topic concerns how the investigatory and remedial work is being paid for. Congress has authorized the USDOE to perform all necessary investigation and remediation work to be paid for by the USDOE. The USDOE obtains its funding to perform this work as do all federal agencies through the federal budget process.

The federal budget is set on a fiscal year that begins every October first and ends on September thirtieth. Each USDOE fiscal budget is in effect a three year cycle that encompasses a plan-

ning year, a budget year, and an operating year. All budgeting is initiated through the USDOE headquarters. The planning year begins each December/January when headquarters send out budgeting guidelines to all the field offices requesting their budgets for the operating year two years in the future. The field offices then assemble their budget based on their activites for the next year. USDOE headquarters then reviews the individual field office activities and budgets, and then submits a total Department budget to the Office of Management and Budget (OMB) for review in September.

The budget year then commences on October first and runs throuh the following September 30. The USDOE budget request is reviewed and analyzed by the OMB, the President and the United States Congress. After much discussion and tinkering a final budget will be submitted to Congress in late summer or early fall by the President for approval. Once approved this becomes the operating budget for the USDOE and goes into effect on October first. So in this process the USDOE is always budgeting and planning for work two years in advance.

The establishment of a national trust fund for nuclear cleanups that would ensure a dedicated source of funding has been proposed but Congress has taken no action at this time. The fund would act much like the Social Security, Transportation, and Bank funds in order to provide for the remediation of all federal nuclear contaminated sites.

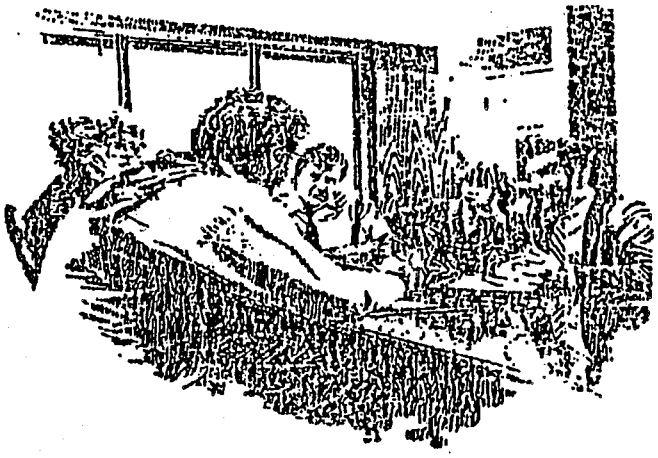
CURRENT STATUS

The draft RI/FS report is now slated for release in April 1993. A public hearing on this document would probably be set for the May of 1993. The final RI/FS would be expected in September of 1993, with the ROD expected in the summer of 1994.

On September 3, 1992, the USDOE held an availability session from 4:00 pm to 7:00 pm at the Sheridan- Parkside Community Center. The attendance was the largest so far and resulted in substantial dialog between the USDOE and the community.

USDOE SPEAKER AVAILABILITY

[redacted] USDOE SITE MANAGER, has announced that the USDOE will be available to any public or private organization wishing to learn more about the FUSRAP program and the USDOE activities in Tonawanda. Anyone wishing more information should contact [redacted] at 615-576-7477 or 1-800-253-9759.



AVAILABILITY SESSION

The USDOE will hold an availability session at the Sheridan-Parkside Community Center, 169 Parkside Drive, on Wednesday, December 16, 1992, from 4:00 pm to 7:00 pm to answer questions from the community on the USDOE RI/FS process. This will be an opportunity for anyone with questions or concerns regarding the Tonawanda FUSRAP sites to meet with USDOE staff members on an informal, one-on-one basis.

INFORMATION REPOSITORIES

Document repositories have been established at four (4) public libraries in the Tonawanda and Grand Island municipalities. All current draft and final documents are available at the reference desks. The four repositories are located at:

1) Kenmore Public Library
160 Delaware Avenue

2) Tonawanda Public Library
333 Main Street

3) Parkside Village Public Library
169 Sheridan-Parkside Drive

4) Grand Island Memorial Public Library
1715 Bedell Road

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GLOSSARY

BFI - Browning Ferris Industries

FUSRAP - Formerly Utilized Sites Remedial Action Program

MED - Manhatten Engineer District

OMB -Office of Management and Budget

RI/FS - Remedial Investigation/ Feasibility Study

ROD - Record of Decision

USDOE - United States Dept. of Energy

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FUSRAP REVIEW

ERIE COUNTY DEPARTMENT OF ENVIRONMENT AND PLANNING

DIVISION OF ENVIRONMENTAL COMPLIANCE WINTER 1993, VOL. 9

Welcome to the ninth issue of **FUSRAP REVIEW.** This publication is produced by the Erie County Division of Environmental Compliance Services to provide current information on the U.S. Department of Energy (USDOE) remedial investigations of the four Formerly Utilized Sites Remedial Action Program (FUSRAP) Tonawanda properties. The purpose of this newsletter is to provide quarterly updates on the status of the investigation as well as pertinent background information on the issues involved.

The last issue of **FUSRAP REVIEW** reviewed the current status of the Tonawanda FUSRAP properties and provided interesting information on the USDOE budgetary process.

IMPORTANT PUBLIC NOTICE — The USDOE will hold an **AVAILABILITY SESSION** on Wednesday, March 10, 1993 from 4:00 P.M. to 7:00 P.M. at the new Tonawanda Site USDOE Information Center located at 810 Sheridan Drive to answer questions from the community. The public is welcome to come anytime between the hours of 4:00 P.M. and 7:00 P.M. Representatives from the USDOE will be available to answer questions and welcome community comments.

Look for upcoming announcements in the Ken-Ton Bee, and the Tonawanda News. This is your opportunity to meet the players, one on one in an informal, congenial setting.

WORK UNDERWAY AT FUSRAP SITES

Nationally, there are more than 40 FUSRAP sites in 14 states. Since 1979, 11 sites have been completely remediated and cleanup work is in progress at 11 other sites. The remaining 20 sites are in various states of investigation.

In New York State there are nine FUSRAP sites. In Tonawanda four FUSRAP properties have been identified. The four FUSRAP properties are the Linde Center, Ashland 1, BFI/ Seaway Landfill, and the Ashland 2 property. All four of these properties are a result of the processing of radioactive ores by Linde for the Manhattan Engineer District (MED) during World War II and the disposal of the contaminated ore tailings.

ANOTHER FUSRAP PROPERTY HAS BEEN IDENTIFIED

In September 1991, a radiological survey was performed at the Town of Tonawanda Landfill. The results of the survey suggest that radioactive materials associated with previous processing activities at Linde may have been deposited in the landfill. The Tonawanda Landfill is being evaluated under the FUSRAP program and may be determined to require remediation.

COMMUNITY SUPPORT IS SOLICITED

For those following the **FUSRAP REVIEW** during the last two years and are familiar with the history and status of the Tonawanda FUSRAP properties, 1993 will be a significant year. Information will be made available to you through the **FUSRAP REVIEW** and the quarterly availability sessions.

THE DECISION-MAKING PROCESS

Although contamination at the Tonawanda site is of low concentrations and does not appear to pose an immediate threat to public health, the Tonawanda properties are to be cleaned up to ensure future unrestricted radiological use of the properties. To cleanup or remediate the four Tonawanda properties, the USDOE is complying with procedures established by federal laws and regulations. The draft Remedial Investigation/Feasibility Study-Environmental Impact Statement (RI/FS-EIS) which is the investigative, characterization and analytical segment of the process coupled with Proposed Plan should be released for public comment in **April 1993**. The Proposed Plan will examine the various alternatives and present the preferred alternative. The minimum time allowed for public comment on the RI/FS-EIS and the Proposed Plan is 30 days. A public meeting will be scheduled to solicit public input.

The Tonawanda site-wide alternatives being evaluated are:

- No Action
- Complete Excavation* with Offsite Disposal
- Complete Excavation* with Onsite Disposal
- Partial Excavation** with Offsite Disposal
- Partial Excavation** with Onsite Disposal
- Containment with Institutional Controls

* Complete Excavation: All MED-contaminated soils including material within the Seaway Landfill

** Partial Excavation: MED-contaminated soils that are accessible excluding the material within the Seaway Landfill

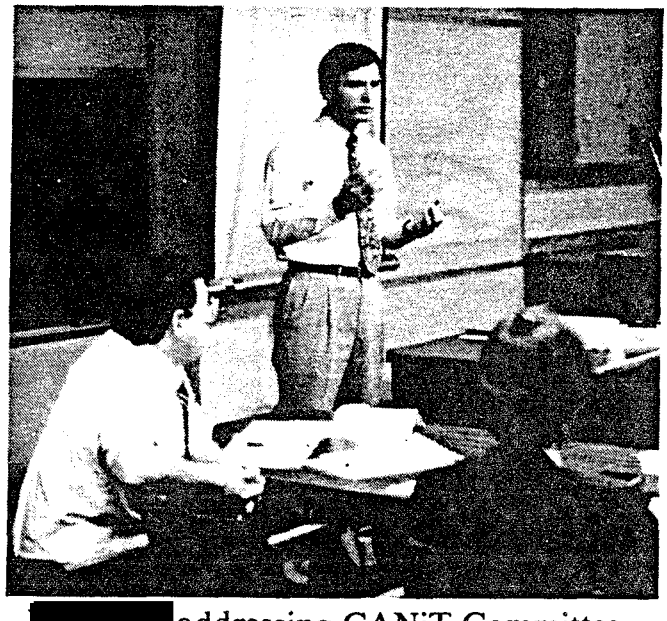
Once public comments have been received and incorporated into a final report, a final remedial solution is selected and released to the public as a Record of Decision (ROD). The ROD for the Tonawanda properties is expected to be issued in the Fall of 1993. The remedial design and remedial action that ultimately follows are influenced by the ROD.

DOE CONDUCTS WORKSHOPS FOR CANiT MEMBERS

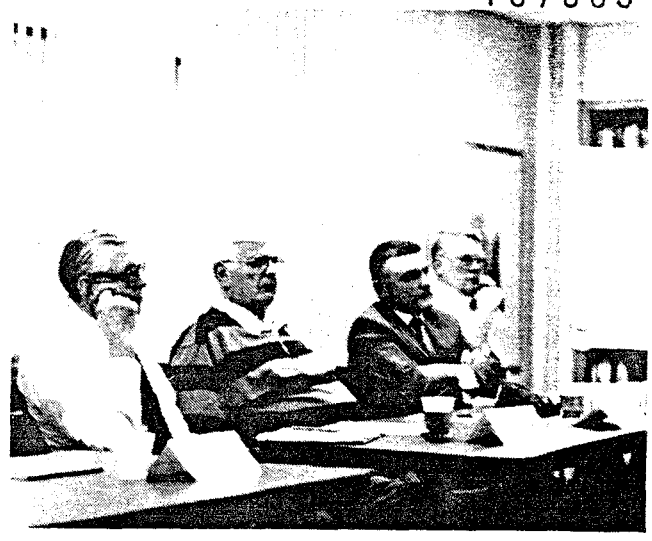
A meeting of the Coalition Against Nuclear materials in Tonawanda (CANiT) committee was held on December 16, 1992, at the Sheridan-Parkside Community Center. [redacted] USDOE Site Manager, discussed the decision making process with the CANiT membership. Three CANiT workshops were conducted by USDOE in January and February 1993, to familiarize the CANiT members with the decision process and the results of the USDOE investigation and evaluation of alternatives.

USDOE SPEAKER AVAILABILITY

[redacted] is available to any public or private organizations wanting to learn more about the FUSRAP program and the USDOE activities in Tonawanda. Small groups wishing more information should contact him at 615-576-7477 or by calling USDOE's 24 hour toll free number 1-800-253-9759. Please see insert in newsletter.



[redacted] addressing CANiT Committee.



CANiT Workshop Participants

Small work groups will be invited to meet with USDOE staff in the near future. Information on the environmental restoration process, specifically for the Tonawanda properties, will be presented.

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Ron Kirk may be contacted at: Former Sites Restoration Division U.S. Department of Energy, Oak Ridge Operations, P.O. Box 2001, Oak Ridge, Tennessee 37831-8723.

GLOSSARY

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MED — Manhattan Engineer District

RI/FS-EIS — Remedial Investigation/ Feasibility Study - Environmental Impact Statement

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