M-330
120728 01

Formerly Utilized Sites Remedial Action Program (FUSRAP)

ADMINISTRATIVE RECORD

for Maywood, New Jersey

U.S. Department of Energy

0489-0613.1

DOE F 1325.8
(4/93)

120728 94-569

United States Government **Department of Energy**

Oak Ridge Operations

memorandum

DATE: September 19, 1994

REPLY TO ATTN OF: EW-93:Cange

SUBJECT: **MAYWOOD SITE - ACTION MEMORANDUM FOR THE REMOVAL OF CONTAMINATED MATERIALS FROM THE INTERIM STORAGE PILE**

TO: File

An Engineering Evaluation/Cost Analysis (EE/CA) for the removal of contaminated materials from the storage pile at the Maywood Site was issued to the public on July 19, 1994. This removal action is an interim action, and is consistent with the final remedy for the Maywood Site. The proposed action includes excavation of contaminated soil from the storage pile and disposal at a licensed commercial facility. There is also an option in the EE/CA for implementing volume-reduction treatment if it is feasible to do so at some time during the removal activities. The contaminated stream from the treatment operations would be shipped to a licensed commercial facility for disposal; the clean stream would remain onsite for use as backfill during implementation of the final remedy.

DOE published a display advertisement and issued a press release (attached) announcing a 30-day public comment period and requesting public comments on the proposed action. A letter from the Site Manager transmitting a copy of the EE/CA and requesting comments on the proposed action was also sent to individuals and members of organizations who had previously expressed interest in the Maywood Site (attached).

Public comments were received on the proposed action for which a responsiveness summary was prepared and made available to all persons submitting comments. This summary was also placed in the administrative record file for the Maywood Site. A notice of the availability of the responsiveness summary was placed in local newspapers.

Based upon the EE/CA and adequate notification of the public, the recommended action is considered appropriate and will be implemented in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (as amended).

Lester K. Price

Lester K. Price, Director
Former Sites Restoration Division

Attachments

cc w/attachments:
M. E. Redmon, BNI
S. M. Cange, EW-93
J. W. Wagoner II, EM-421, QO

Department of Energy

Oak Ridge Operations
P.O. Box 2001
Oak Ridge, Tennessee 37831—

MAY 12 1994

Ms. Liz O'Donoghue
Office of U.S. Senator Lautenberg
SH-506 Hart Senate Office Building
Washington,DC 20510

Dear Ms. O'Donoghue:

MAYWOOD SITE - PUBLIC RELEASE OF THE EE/CA TO REMEDIATE THE STORAGE PILE

The purpose of this letter is to inform you that the engineering evaluation/cost analysis (EE/CA) for remediation of the storage pile has been released for a 30-day public comment period. A copy of this report has been enclosed for your information. The public comment period is scheduled to end on June 13. A summary the comments received and their responses will be attached to the final EE/CA and placed in the administrative record file for the site.

Please feel free to contact me at (615) 576-5724, if you have any questions or comments.

Sincerely,

Susan M. Cange

Susan M. Cange, Site Manager
Former Sites Restoration Division

Enclosure

You are invited to attend . . .

U.S. Department of Energy

Drop-In Session

Wednesday, September 28
6:30 to 8:30 p.m.

Department of Energy
Public Information Center
43 West Pleasant Avenue
Maywood, NJ

The U.S. Department of Energy (DOE) invites you to attend a "drop-in" session to talk with the DOE site manager and technical personnel about the Maywood pile removal activities occurring this fall.

No formal presentation will be made. You are invited to come at your convenience to ask any questions you may have.

DOE has the responsibility for the cleanup of contaminated properties associated with the Maywood site under its Formerly Utilized Sites Remedial Action Program. For more information, or if you would like to be added to our site mailing list, please contact the DOE Public Information Center at (201) 843-7466.

4 1/4" x 8"

166 6145.2

MEETING LOCATION CHANGED

The U.S. Department of Energy

Drop-In Session

scheduled for
Wednesday, September 28
6:30 to 8:30 p.m.
will now be held at

Ramada Hotel
375 West Passaic Street
Rochelle Park

The U.S. Department of Energy (DOE) invites you to attend a "drop-in" session to talk with the DOE site manager and technical personnel about the Maywood pile removal activities occurring this fall.

No formal presentation will be made. You are invited to come at your convenience to ask any questions you may have.

DOE has the responsibility for the cleanup of contaminated properties associated with the Maywood site under its Formerly Utilized Sites Remedial Action Program. For more information, or if you would like to be added to our site mailing list, please contact the DOE Public Information Center at (201) 843-7466.

4 1/4" x 8 1/2" Shopper News

66 6145.2

DOE SEEKS PUBLIC COMMENT ON PROPOSED CLEANUP OF THE MAYWOOD INTERIM STORAGE SITE PILE

The U. S. Department of Energy (DOE) is seeking public comment on an Engineering Evaluation/Cost Analysis (EE/CA) report for the proposed removal of radioactively contaminated materials from the storage pile at the Maywood Interim Storage Site.

The EE/CA summarizes the cleanup alternatives and the reasons for selection of DOE's preferred remedy. Under this proposal, material in the storage pile would be excavated and shipped for offsite disposal with the option of implementing volume reduction treatment, if feasible. This action is consistent with the overall cleanup strategy for the site.

The EE/CA is available for public review in the administrative record file located at the Maywood Public Library, 459 Maywood Avenue; and the DOE Public Information Center, 43 West Pleasant Avenue. Copies of the EE/CA can be requested by calling the DOE Public Information Center at (201) 843-7466 or the public access number at 1-800-253-9759.

The public may comment on the proposed cleanup plan during the 30 day public comment period which begins May 13. Please submit comments in writing by June 13, 1994 to:

Susan M. Cange, Site Manager
U. S. Department of Energy
Former Sites Restoration Division
P. O. Box 2001
Oak Ridge, TN 37831-8723

4 1/4" x 8",

Bergen Record

4.158 4376.2

MAYWOOD SITE - COMMENTS RECEIVED ON EE/CA

Loretta Weinberg
George Stanton
Margaret Parks
Dorothy Zaorski
Debra Finch
Barton Knight
Keith and Sara Kozaryn
Margaret Keane
Cesare J. Parodi
Albert & Lynn D'ltuyvetter
Michael Nappi
P. Pacciani
Steven Mark
Barbara Cassidy
Angelo Caso
Martha DeYoung
Noah McDowell
William
Joan & Terry McNegary
Edward Myers
K. M. Lu
Joseph Brain
Karen Smith
Elizabeth & Joseph McKenna
Michael Doliton
Charles Prox
Jean Pelligan
Ken & Carol Petretti
Michael Nolan
Michael & Barbara Morris
Lynne & Don Lepore
Elaine Jakubcak
Mrs. Eodyn Lozier
Andrew Fede
Margarita Dillon
Robert & Ilene Cloughley
Jean & Don Ayerlee
Josephine Gioia

Angel Ojeda
Deborah Porta
Hannelore Farizyk
John Malessat
William Stawecki
Rose Samulha
Arlene Formisano
Mary Ann Donnely
Ethel J. Parodi
Barbara Johnson
Robert & Lisa Fiscina
A. M. Pacciani
David & Michele Holmes
Joseph Grines & Family
John Otto
Pat Schmitt
John Catal
Clara Green
D. Foy
Joan Fabjio
Christine Kodonaya
Helen Lowry
J. Mancium
Thomas Henkel
Josephine Keating
Gary Wells
Irima Ivanova
Lillian Signle
Steve Cooper
John Keper
Bernadette Parodi
Lenore Titus
Robert Belby
Sheena Buchans
Robert & Elizabeth Cloughley
Robert Holems
Debora & George Freescager
Peter & Louise Torell

Jeanette Zembower
William Schuber
Serena McDonald
Kathleen Donnelly
Evelyn Sieglen
Thomas Heninely
Doris & Richard Gehl
Norma Koeser
Joseph & Dorothy Ermilio
Rocco Finoate
Deanna Power
Annette Schmidt
Roberea & Rich Fritz
Robert Meyer
Dean Frenkian
Dawn Andrews
Mrs. Tomasella
Vicki Koeser
Merarleine Dezonis
David Wesst
Al Rettenberger
William
Patrick Fubaugh
H. Broad
Anna Garriton
Viola Elis
Patricia & Frank Dilorenzo
[illegible]
Frank Bieniek
Jo Liegh Kileshian
Ruthann Robinson
Rosemary Nevins
Elizabeth Georgette
Wayne Westworth
Jan & Tim Desmond
Mr. & Mrs. Pat Andrews
Nancy Neill
Chick Parodi

117688

JUN 20 1 34 PM '94

NEW JERSEY GENERAL ASSEMBLY

ASSISTANT MINORITY LEADER
LORETTA WEINBERG
ASSEMBLYWOMAN, 37TH DISTRICT
BERGEN COUNTY
545 CEDAR LANE
TEANECK, NJ 07666
(201) 928-0100
FAX (201) 928-0406

COMMITTEES
HEALTH AND HUMAN SERVICES
ECONOMIC AND COMMUNITY DEVELOPMENT, AGRICULTURE AND TOURISM

COMMISSIONS
N.J. HISTORICAL COMMISSION
N.J. ISRAEL COMMISSION

June 13, 1994

Ms. Susan M. Cange, Site Manager
U.S. Department of Energy
Former Sites Restoration Division
P.O. Box 2001
Oak Ridge, Tennessee 37831-8723

Dear Ms. Cange:

Please accept this letter as a strong protest to the environmental situation Maywood, a New Jersey town that I represent in the State Assembly.

A number of my constituents have spoken to me about having thorium removed from Maywood. I would like to go on record as favoring removal of the soil rather than remediation of the site. I feel this is most important to the health of the residents in this area.

Thank you in advance for your help in this matter.

Sincerely,

Loretta Weinberg

Loretta Weinberg
Assemblywoman, District 37

LW/jt
cange/B

ASSISTANT MINORITY LEADER
LORETTA WEINBERG
ASSEMBLYWOMAN, 37TH DISTRICT
BERGEN COUNTY
545 CEDAR LANE
TEANECK, NJ 07666

HACKENSACK, NJ 075
PM
14 JUN
1994

HACKENSA
300TH ANN
1893 -
Thomas Jefferson
USA 29

Ms. Susan M. Cange, Site Manager
U.S. Department of Energy
Former Sites Restoration Division
PO Box 2001
Oak Ridge, Tennessee 37831-8723

11768

117688

JUN 20 1 34 PM '94

NEW JERSEY GENERAL ASSEMBLY

ASSISTANT MINORITY LEADER
LORETTA WEINBERG
ASSEMBLYWOMAN, 37TH DISTRICT
BERGEN COUNTY
545 CEDAR LANE
TEANECK, NJ 07666
(201) 928-0100
FAX (201) 928-0406

COMMITTEES
HEALTH AND HUMAN SERVICES
ECONOMIC AND COMMUNITY DEVELOPMENT, AGRICULTURE AND TOURISM

COMMISSIONS
N.J. HISTORICAL COMMISSION
N.J. ISRAEL COMMISSION

June 13, 1994

Ms. Susan M. Cange, Site Manager
U.S. Department of Energy
Former Sites Restoration Division
P.O. Box 2001
Oak Ridge, Tennessee 37831-8723

Dear Ms. Cange:

Please accept this letter as a strong protest to the environmental situation Maywood, a New Jersey town that I represent in the State Assembly.

A number of my constituents have spoken to me about having thorium removed from Maywood. I would like to go on record as favoring removal of the soil rather than remediation of the site. I feel this is most important to the health of the residents in this area.

Thank you in advance for your help in this matter.

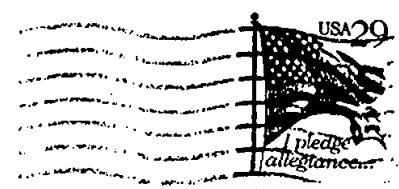
Sincerely,

Loretta Weinberg

Loretta Weinberg
Assemblywoman, District 37

LW/jt
cange/B

Cinnante
32 Parkway
Maywood, NJ 07607



Ms. Susan M. Cange, Site Manager
U.S. Department of Energy
Former Sites Restoration Division
P.O. Box 2001
Oak Ridge, TN 37831-8723

117688

117688

LAW OFFICES OF
ANGEL OJEDA
ABOGADO
(201) 223-1233

4614 KENNEDY BLVD.
UNION CITY, N.J. 07087

61 HUDSON ST.
HACKENSACK, N.J. 07601

Jun 17 1 38 PM '94

June 9, 1994

U.S. Department of Energy
Former Sites Restoration Division
P.O. Box 2001
Oak Ridge, TN 37831-8723

Re: Proposed Clean Up of
Maywood Thorium Storage Site

To Whom It May Concern:

I am a resident of Maywood, New Jersey. I live on East Hunter Avenue, approximately one city block from the thorium contamination. My wife and three minor children live with me.

We are very concerned with your plan for the removal of the thorium as recently published by your agency.

We are informed that your plans treat the thorium site as a commercial area. Furthermore, the method to be used in removing the thorium will further expose us to the well known and extremely dangerous health effects of thorium and the potential for monetary damages resulting from a loss of property values in our hometown.

Simply stated, we are concerned about our physical, mental, financial and educational future and fear depending on you to protect us. Our lives are in your hands!

Kindly reconsider your plans and expedite the clean up of the thorium site. We appreciate your cooperation and your recognition in this matter to us and all of the people in Maywood.

Very truly yours,

Angel Ojeda, Esq.

Angel Ojeda, Esq.
Hackensack Office
(201) 487-7299

AO/mrz

ANGEL OJEDA
[redacted] 61 HUDSON ST.
HACKENSACK, NJ 07601

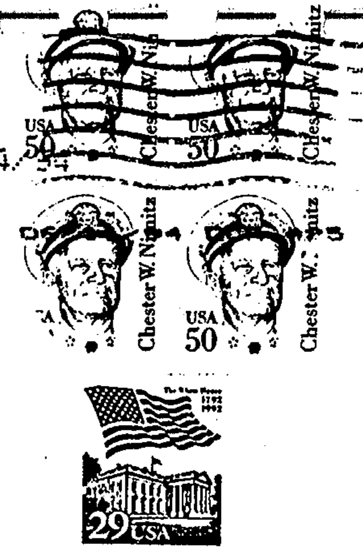
Fo... line ... to ... enve... to right of the return address.

CERTIFIED

P 730 320 350

MAIL

KNOX...LLE, TN CMF 37950 22:53 ... 14, 94



U.S. Department of Energy
Former Sites Restoration Division
P.O. Box 2001
Oak Ridge, TN 37831-8723

Return Receipt Requested

117688

To Site Manager -

Just like the residents in the Montclair area, Maywood's residents support only those actions that are final remedies and does not support partial excavation solutions. Just like the Montclair area - Maywood expect the EPA and DOE to provide the same excavate and disposal of a 5 Pci/g clean up. Your EE/CA for the Pile removal and soil washing is <u>not acceptable</u> nor health based.

Jun 17 1 35 PM '94

Sincerely,

Jeanette Zembower

cc: Gov. Whitman

Jeanette Zembower
54 East Fairmount Avenue
Maywood, New Jersey 07607

117688

Jun 17 1 37 PM '94

BOROUGH OF LODI
DEPARTMENT OF INSPECTIONS
ONE MEMORIAL DRIVE
LODI, N.J. 07644
(201) 365-4005 EXT 410

June 13, 1994

USDOE
Oak Ridge Operations
PO Box 2001
[illegible]

Att: Susan M. Cange
Site Manager
Former Sites Restoration Division

Re: Maywood Site EE/CA,
May, 1994

Dear Ms. Cange:

Many properties within the Borough of Lodi have been found to be contaminated with radioactive materials originating at the former Maywood Chemical. The above report states that eight residential properties in Lodi have been decontaminated, one partially remediated, and thirty remain to be dealt with.

For the Borough's administrative purposes, we need to know the addresses of each of these 39 properties and into which of these three groups it falls. Would you please send this information to us as quickly as possible.

Please fell free to call me if you have any questions.

Very truly yours,

George B. Stanton, Jr
PE,CSP,CIH,FRSH
Borough Chemical Engineer

117688

JUN 17 1 43 PM '94

Ms. Susan Cange, Site Manager
U.S. Department of Energy
P.O. Box 2001
Oak Ridge, Tennessee 37831-8723

Dear Ms. Cange:

I have seen the EPA letter to you of May 21, 1993, from Mr. Jeffrey Gratz.

In it he said: "It is EPA's position that if the intent of the proposed remedial action is to allow unrestricted access to the site, either in the current or future use scenario, then the appropriate soil concentration cleanup criteria should be 5-PCI/G through all soil layers regardless of depth."

He also said that 15 PCI/G is not a healthy based standard.

What other comment is needed? So cross off 5-15 PCI/G and soil washing for Maywood, NJ.

As for Lodi and Rochelle Park, their soils can be handled the same as Montclair and they can go to the same site in Utah not Maywood. You did it in Pequannock, NJ.

Apparently, with the DOE involved, money rather than the people's health is becoming a criteria in cleaning up the site.

The information I have seen from documents/letters that are motivating the Concerned Citizens of Maywood tells me that politics is taking precedence over our children's health.

Sincerely,

Deborah Porta
472 Lawrence Ave
Maywood, NJ
07607

cc: President Clinton
Governor Whitman
Attorney General Reno

117688

Jun 15 9 19 AM '94

June 6, 1994

Dear Ms. Cange,

Enclosed is a copy of the EPA Action Criteria for Superfund Removal Action in West Chicago, Illinois (November 1993). I received this information from the Concerned Citizens of Maywood when they were picketing several weeks ago.

Note that residential areas encompass not only residential properties but also institutional, commercial and municipal properties. Page 2 states the 15 pci/g is not a health based standard and 5 pci/g is, and appropriate for use at residential areas.

West Chicago is getting a 5 pci/g clean up but the EPA has flip flopped to allow the 15 pci/g for the Maywood residential area.

Enclosed are street maps of the West Chicago and Maywood areas. Maywood is also a residential area! Take all of the thorium now and ship it to Utah!!!

Sincerely,

Mrs. Margaret Parks

Mrs. Margaret Parks
170 Stelling Avenue
Maywood, N.J. 07607

November 1993

117688

ACTION CRITERIA FOR SUPERFUND REMOVAL ACTIONS AT THE KERR-McGEE RESIDENTIAL AREAS SITE WEST CHICAGO, ILLINOIS

Introduction

Under the provisions of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (commonly known as Superfund), as amended by the Superfund Amendments and Reauthorization Act of 1986, the United States Environmental Protection Agency (U.S. EPA) is authorized, among other things, to take response actions whenever there is a release or threat of a release of a hazardous substance into the environment. The National Priorities List (NPL) is a list of hazardous waste sites across the country that are eligible for U.S. EPA response actions under Superfund.

The U.S. EPA has listed four sites in the vicinity of the City of West Chicago, Illinois, on the NPL. The primary contaminants of concern at these sites are radioactive thorium and its decay products derived from ore processing operations at a factory in West Chicago, now known as the Kerr-McGee Chemical Corporation West Chicago Rare Earths Facility ("factory site"). Three of the NPL sites became contaminated when the processing wastes (thorium mill tailings) were removed from the factory and used primarily as fill material in and around the City of West Chicago. These sites are known as:

(1) Kerr-McGee (Residential Areas) site,
(2) Kerr-McGee (Sewage Treatment Plant) site, and
(3) Kerr-McGee (Reed-Keppler Park) site.

The fourth site became contaminated when discharges and runoff from the factory site traveled via a storm sewer into nearby Kress Creek and downstream to the West Branch of the DuPage River. This site is known as:

(4) Kerr-McGee (Kress Creek/West Branch of DuPage River) site.

It is important to note that the Residential Areas site may encompass not only residential properties, but also institutional, commercial and municipal properties. Although primarily contaminated because thorium mill tailings were used as fill, some of the properties may have become contaminated due to windblown material from the factory site.

The Kerr-McGee factory site from which the contamination originated has not been listed on the NPL; it is regulated under the licensing authority of the Illinois Department of Nuclear Safety (IDNS). Decommissioning, clean-up and closure of the factory site currently is being addressed under that authority.

Purpose and Intent

The purpose of this document is to establish criteria for U.S. EPA's response actions at contaminated properties ("Residential Areas") that are not part of the Sewage Treatment Plant, Reed-Keppler Park or Kress Creek/West Branch of DuPage River sites. Those three NPL sites will be addressed by U.S. EPA in separate actions.

(1)

14

decontaminated to the following limits prior to termination of the license:

> "Concentrations of radionuclides in soil above background concentrations for total radium, averaged over areas 100 square meters, shall not exceed:
>
> A) 5 picocuries per gram of dry soil, averaged over the first 15 centimeters below the surface; and
>
> B) 15 picocuries per gram of dry soil, averaged over layers of 15 centimeters thickness more than 15 centimeters below the surface."

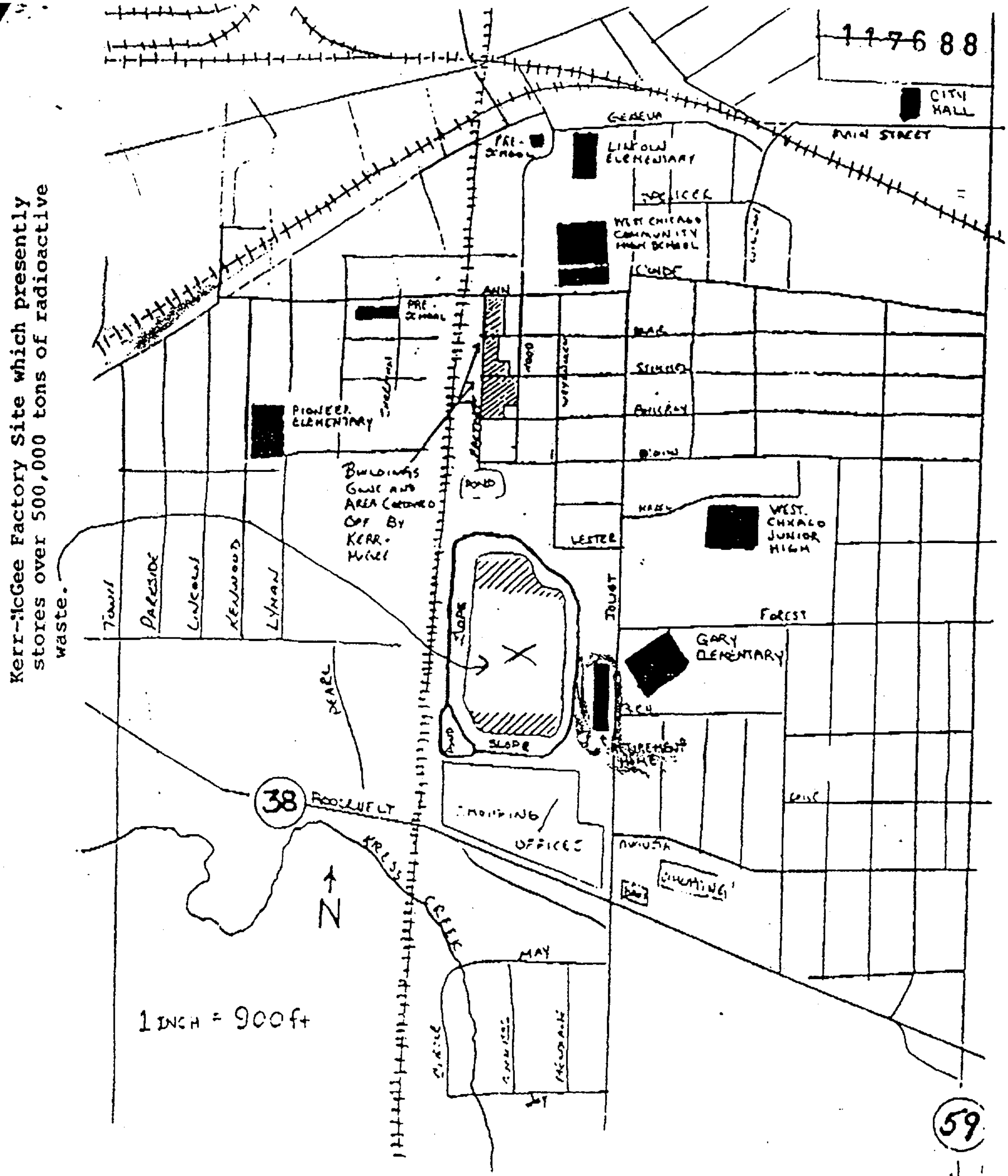
The State requirements in Section 332.150(b) of the Illinois Administrative Code were based on the federal standards in 40 CFR 192.12(a). When the federal standards in 40 CFR 192 were developed over a decade ago, the 5 picocuries per gram (pCi/g) standard was a health based standard, but the 15 pCi/g standard for subsurface soil was technology based, reflecting instrument limitations in locating subsurface deposits. The 15 pCi/g limit is not a health-based standard, and should not be applied to situations in which a health-based standard is appropriate, or to situations that differ substantively from those for which it was derived.

The 15 pCi/g limit was developed as a practical measurement tool for use in locating discrete caches of high activity tailings (typically 300-1000 pCi/g) that were deposited in subsurface locations at mill sites or at nearby properties. The subsurface soil standard in 40 CFR 192 was originally proposed as 5 pCi/g. The final standard was changed, not because the health basis was relaxed, but rather in order to reduce the cost to DOE of locating buried tailings - under the assumption that this would result in essentially the same degree of cleanup at the DOE sites as originally proposed under the 5 pCi/g criterion. The use of a 15 pCi/g subsurface criterion allowed the DOE to use field measurements rather than laboratory analysis to determine when buried tailings had been detected. It is only appropriate for use as a cost-effective tool to locate radioactive waste in situations where contaminated subsurface materials are of high activity and are not expected to be significantly admixed with clean soil. The 15 pCi/g subsurface criterion was not developed for situations where significant quantities of moderate or low activity materials are involved, such as at the Residential Areas site. Therefore, the 15 pCi/g subsurface criterion is not appropriate for use at the Residential Areas site, and thus is not an ARAR. The 5 pCi/g standard, on the other hand, was developed as a health-based standard and is appropriate for use at the Residential Areas site.

Although the soil concentration standard in the regulation is written in terms of an average over an area of 100 square meters, areal averaging will not be conducted during discovery and characterization. This approach is conservative and should minimize the chances of not identifying contamination during the discovery and characterization surveys.

(6.)

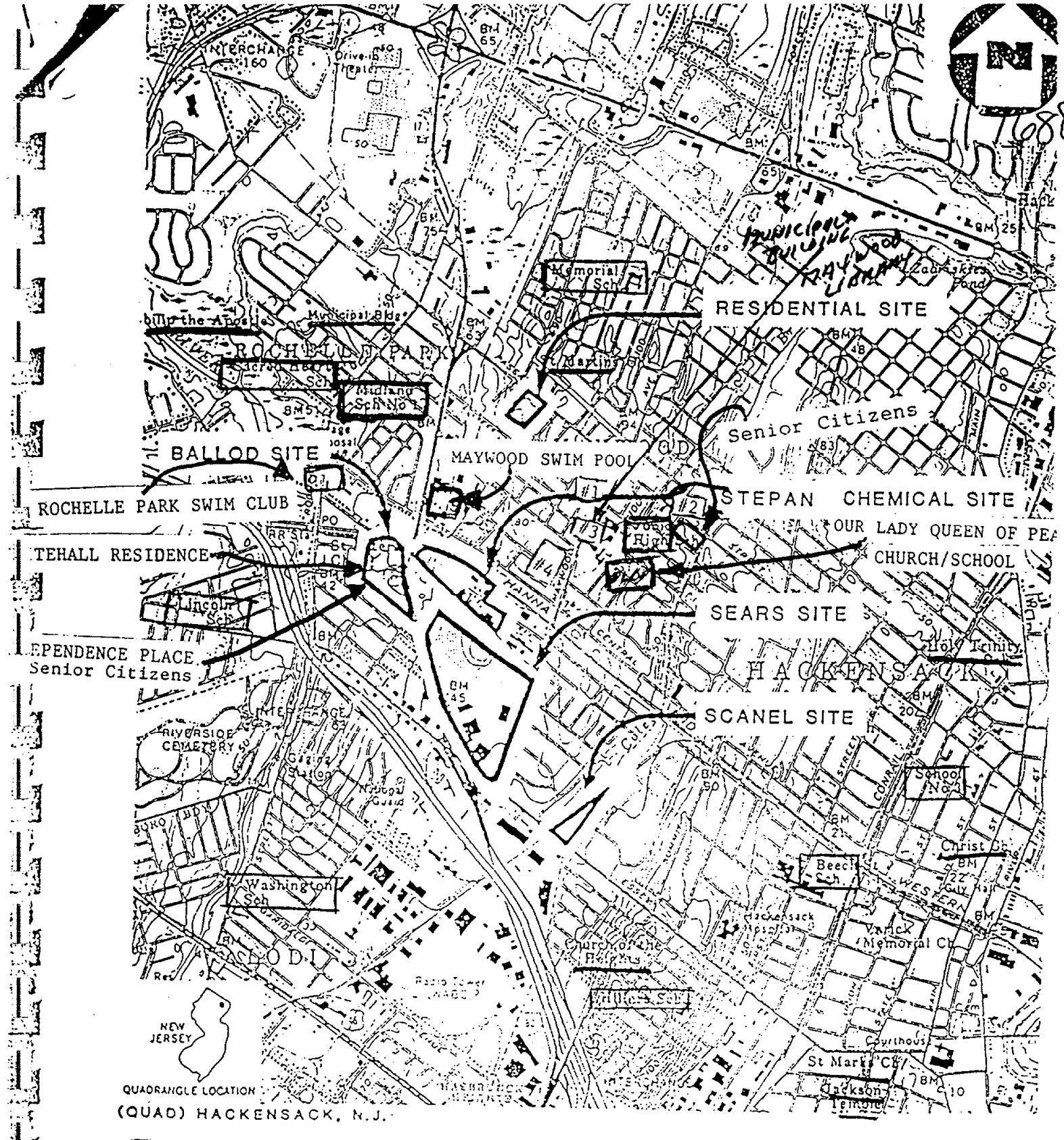
~~117~~688



WEST CHIGAGO. IL 60185

KERR-MCGEE PROPOSED DISPOSAL SITE

50



SCHOOLS
CHURCHES
AND
#1-2-3-4

SITE LOCATION MAP

MAYWOOD, N.J.

FIGURE 1

NUS CORPORATION
A Halliburton Company

SCALE: 1" = 2000'

LUTHERAN CHURCH OF REDEEMER

#2 - ZION LUTHERAN CHURCH

#3 - FIRST PRESBYTERIAN CHURCH

#4 - TEMPLE BETH ISRAEL

117688

Jun 15 9 26 AM '94

June 8, 1994

Dear Mrs. Cange,

Please include Senator Byron Baer's Senate Concurrent Resolution #66 (see attached copy) in your record of comments on the MISS. These are my feelings as well as other informed residents of Maywood, Rochelle Park, and Lodi.

IMMEDIATE REMOVAL!

Sincerely,

Mrs. Hannelore Farczyk
200 Maywood Ave.
Maywood, NJ 07607

SENATE CONCURRENT RESOLUTION No. 66

STATE OF NEW JERSEY

INTRODUCED MAY 12, 1994

By Senator BAER

BE IT RESOLVED by the Senate of the State of New Jersey (the General Assembly concurring):

1. The United States Department of Energy, the Environmental Protection Agency, and the Nuclear Regulatory Commission are respectfully memorialized to take every expedient action, in conjunction with the officials of this State, to effectuate the immediate and permanent removal of all thorium-contaminated soil from the Maywood Interim Storage Site and other sites in Maywood Borough, Rochelle Park Township, and Lodi Township, New Jersey.

2. A duly authenticated copy of this concurrent resolution, signed by the President of the Senate and the Speaker of the General Assembly and attested by the Secretary of the Senate and the Clerk of the General Assembly, shall be transmitted to the United States Department of Energy, the Environmental Protection Agency, and the Nuclear Regulatory Commission, the presiding officers of the United States Senate and the United States House of Representatives, and to each of the members of the Congress of the United States elected from New Jersey.

STATEMENT

This concurrent resolution memorializes the United States Department of Energy, the Environmental Protection Agency, and the Nuclear Regulatory Commission to take every expedient action, in conjunction with State officials, to effectuate the immediate and permanent removal of thorium contaminated soil from the Maywood Interim Storage Site and other sites in Maywood, Rochelle Park, and Lodi, New Jersey.

Memorializes United States agencies to remove thorium contaminated soil in Maywood, Rochelle Park, and Lodi, New Jersey.

SENATE CONCURRENT RESOLUTION No. 66

STATE OF NEW JERSEY

117688

INTRODUCED MAY 12, 1994

By Senator BAER

A CONCURRENT RESOLUTION memorializing the United States Department of Energy, the Environmental Protection Agency, and the Nuclear Regulatory Commission to take every expedient action, in conjunction with the officials of this State, to effectuate the immediate and permanent removal of thorium contaminated soil from sites in Maywood Borough, Rochelle Park Township, and Lodi Township, New Jersey.

WHEREAS, The radioactive metallic element thorium, a waste byproduct of certain manufacturing processes that occurred on-site from 1916 to 1959 at the Maywood Chemical Company in Maywood, New Jersey, was mixed with other substances and used as fill in several locations in residential areas of Maywood Borough, and had contaminated some properties in Rochelle Park Township and in Lodi Township; and

WHEREAS, Because of the imminent danger this situation posed, the United States Department of Energy in 1984 began a cleanup that removed approximately 40,000 cubic yards of contaminated soil from several of the affected properties, and constructed the Maywood Interim Storage Site to hold the contaminated soil on the site of the former Maywood Chemical Company; and

WHEREAS, This contaminated soil is now stored on-site, shielded only by plastic coverings, which are not adequate to reduce the risk of injury to the health of the citizens residing in the vicinity of the Maywood Interim Storage Site and to reduce the risk of harm to the environment; and

WHEREAS, Thorium contaminated soil still must be removed at the site of the Maywood Chemical Company, which was purchased in 1959 by the Stepan Chemical Company, and at several other sites in Maywood, Rochelle Park, and Lodi that were contaminated by thorium waste from the Maywood Chemical Company site; and

WHEREAS, This widespread contamination threatens the public health, safety and welfare of the citizens of these communities; and

WHEREAS, Although the United States Department of Energy has been slow to develop a plan for the removal of this contaminated soil and the Environmental Protection Agency has not as yet decided on a final strategy for the removal of the thorium contaminated soil from these sites, the Nuclear Regulatory Commission has recently licensed a site in the State of Utah to accept this type of waste and the Department of Energy has made a commitment to remove all the contaminated soil to that site; and

WHEREAS, It is imperative that there be no further delay in the removal of the thorium contaminated soil from these sites and that immediate action be taken to permanently remove all thorium contaminated soil from the Maywood, Rochelle Park, and Lodi sites; now, therefore,

NEW JERSEY SENATE

BYRON BAER
SENATOR, 37TH DISTRICT
BERGEN COUNTY
125 STATE STREET
SUITE 205
HACKENSACK, NEW JERSEY 07601
(201) 343-3333
FAX (201) 343-1594

MAY 19 1994

11768

May 17, 1994

Hon. Mayor John A. Steurt and
Members of the Council
Borough of Maywood
459 Maywood Avenue
Maywood, NJ 07607

Dear Mayor Steurt and Council Members,

Enclosed is a copy of SCR 66 dealing with the removal of all thorium waste from Maywood and from your neighbors in Lodi and Rochelle Park. This matter has been a nagging problem for Maywood's citizens for too long and calls for immediate settlement.

I'd like to draw your attention to the fact that the resolution addresses contaminants that might be underground as well as those found in the pile.

My office remains ready to do everything possible to assist you to reach a satisfactory conclusion. I welcome your advice and help.

Sincerely,

Byron Baer

Byron Baer
Senator, District 37

117688

JUN 15 1 37 PM '94

6-8-94

Dear Mr. Cange,

I just don't believe how and why the DOE can continue to ignore Maywood's residents and our local officials insistence on a proper clean up of toxic wastes in this area.

Does the town have to go to court to stop you? I hope they do. I will help and the cheering and parading.

Teresa McDonald
96 Parkway
Maywood, N.J.
07607

~~176998~~

DOROTHY ZAORSKI
166 East Magnolia Avenue
Maywood, NJ 07607

Telephone: (201) 712-0063

Jun 3 10 33 AM '94

1171

May 18, 1994

Ms. Susan M. Cange, Site Manager
Former Sites Restoration Division
U. S. Department of Energy
West Pleasant Avenue
Maywood, NJ 07607

Dear Ms. Cange:

I was happy to receive your letter soliciting my comments. Most certainly I would like to be placed on the Maywood Site Mailing List.

I, like many others in my community, am concerned that the removal of the thorium-tainted soil may be delayed again. It is my feeling that the "washing" of soil is an uncessary, delaying process. Therefore, I am voicing my objection to the continued delay.

Very truly yours,

Dorothy Zaorski

cc: RTorricelli, Congressman

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

117688

Jun 15 1 38 PM '94

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

117688

Jun 14 2 11 PM '94

June 7, 1994

Dear Ms. Gorge,

I am totally against the idea of washing soil and cleaning soil with contamination on the Maywood properties.

A clean-up of this kind doesn't allow unrestricted use of the properties.

Your own definition of unrestricted use is, Quote " Unrestricted use means that the property can be used for any purpose without regard to the radioactivity which used to be on the property. These uses could include anything - Farming, a Residence, a Playground, Etc."; unQuote

This rules out soil washing and 5-15 PCI/G clean up levels.

Isn't time to give up?

Sincerely,
Debra Finch
70 Washington Ave.
Maywood, NJ 07607

Rare earths - Rare earths refers to various types of metals present in the monazite sands. These were extracted from the monazite for their value. Rare earth metals include cerium, lanthanum, praeseodymium, and neodymium.

Remedial action - Remedial action is a general term typically used to mean "cleanup of contamination." With reference to cleanup of the Davison and Latham properties, it means any action required to bring the property to a condition which will permit its release for unrestricted use. In practice, this may mean removing grass and soil, cutting trees, removing asphalt, etc.

Thorium - Thorium is a naturally occurring element which is recovered from monazite for commercial purposes. Monazite contains from 3 to 9 percent thorium oxide. The principal use of thorium to date has been in the preparation of gas lantern mantels because thorium oxide burns with a brilliant white light. Thorium oxide is also commonly found in high quality glasses and camera lenses because of its good optical characteristics.

Unrestricted Use - Unrestricted use means that the property can be used for any purpose without regard to the radioactivity which used to be on the property. These uses could include anything - farming, a residence, a playground, etc.

Uranium - Uranium is a naturally occurring, radioactive element. The principal use of uranium -- when refined -- is for the production of fuel for nuclear reactors. Uranium in its natural form (as it exists on the Davison and Latham properties) is not suitable for use as a fuel source.

Working level - Working level is a unit to measure the energy expended in air by radon or its radioactive decay products. The term was derived for use with uranium mine workers and has become the accepted unit for environmental measurements.

117688

JUN 15 1 38 PM '94

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

William J. Slowacki

741 Palmer Ave

Maywood NJ 07607

117688

Jun 15 1 37 PM '94

June 8, 1994

Dear Mrs. Cange, Site Manager:

I am totally against the proposed DOE plan for the cleanup of the Maywood pile because remaining soils left after soil washing (if it worked) would mean the use of the site would be subject to restriction, essentially forever, and probably result in a decrease in property values in our community. More importantly, 15 pCi/g is not a health based standard which is unacceptable for this town of approximately 10,000 persons in a square mile area. Please record my comments for your report on the proposed cleanup of the storage pile.

Sincerely,

Carol Singer

cc: Governor Whitman

Carol Singer
684 Coles St.
Maywood NJ
07607

117688

June 15 1 36 PM '94

June 7, 1994

Dear Mrs. Susan Cange-

The following are my comments on the proposed cleanup of the Maywood pile as sought by your office by June 13, 1994. Please make this part of your record of comments from the public.

1. I support the DEPE of New Jersey in their stance as stated in The Record article "NJ balks at thorium cleanup" which I have attached.

2. I am against the 15 pCi/g standard being applied in my town because it is not a health based standard.

3. Maywood's population is approximately 10,000 persons in a square mile area with potential to increase due to its location. A 15 pCi/g would have negative consequences for central Bergen County.

Ship the wastes to a storage site in Utah as proposed!

ALL OF IT!!! NOW!!!

Sincerely,

Burton C Knight

140 Lafayette Ave

11768

SATURDAY The Record

JUNE 4, 1994 *Friend of the People It Serves*

N.J. balks at thorium cleanup

By MICHAEL MOORE
Staff Writer

The state Department of Environmental Protection and Energy is refusing to approve the federal government's plan to remove thorium-tainted soil spread throughout Maywood and Wayne, a move that could further delay a cleanup first promised more than a decade ago.

Calling the federal Department of Energy's cleanup plan for 510,000 cubic yards of radioactive soil "dangerous to the public," the DEPE is withholding its needed approval until the federal agency agrees to meet stricter standards.

"We don't believe the DOE's cleanup plan either complies with state law or affords an acceptable

Asks U.S. to meet tighter standards

level of protection to the public," said Nick Martone, DEPE manager for the Maywood and Wayne sites. "We're not going to go along with this and give residents a false sense of security."

Trumpeted as one of the final obstacles to solving the radioactive soil woes of North Jersey, the DOE's long-anticipated cleanup proposal, hammered out with the federal Environmental Protection Agency, calls for contaminated dirt to be cleaned to a level of 5 picocuries of radiation per gram of soil in residential areas and 15 picocuries per gram in commercial districts.

But DEPE officials believe 15 picocuries is too high and want the 5 picocurie standard applied to both residential and commercial properties. Martone said cleanup cannot legally begin without DEPE approval.

A picocurie is a unit of radioactivity. Thorium is a radioactive element that breaks down into radon, a gas proven to cause lung cancer and other ailments.

Area officials support the DEPE's demand for a uniform 5 picocurie standard.

Wayne Mayor David Waks, who has been writing to the DEPE to push for stricter standards, ap-

See **THORIUM** Page **A-8**

THORIUM: State balks at U.S. proposal

From Page A-1

plauded the agency's decision. "I hail the DEPE," he said. "They are starting to see the light of day."

"At least the DEPE has taken a tough, protective stance. The federal agencies should get in line with the state's directive so we can clean this up quickly and safely," said Bergen County Executive William "Pat" Schuber. "I will be pressing Governor Whitman to intervene and push the federal agencies to adopt the standards of the DEPE."

Whitman spokesman Carl Gold said the governor is aware of North Jersey's thorium dilemma and is willing to intervene.

"The governor knows residents have a good cause for concern," he said. "This has to be cleaned up and, after consulting with DEPE commissioner [Robert Shinn], she will get things moving with the federal agencies."

But the DOE said New Jersey's apparent refusal to approve the plan could further delay the cleanup, first proposed in 1983.

"I don't know what will happen next and I'm not sure what the DOE or EPA's position is now," said Susan Cange, DOE site manager for Maywood and Wayne. "It's too early to say what we'll do. We're still waiting to get the state's position in writing."

The EPA, which originally supported a uniform 5 picocurie cleanup standard but later backed off after grappling with the DOE for a year, said the federal agencies may have to reconsider their positions.

"It's understandable why the state has misgivings," said Jeff Gratz, EPA site manager in Maywood and Wayne. "Our assumption of 15 picocuries being protective may have to be reevaluated. We may have to look at a lower criteria."

The thorium is a byproduct o the manufacture of gas lanterns a the old Maywood Chemical Work between 1916 and 1956, and at the former W. R. Grace & Co. plant in Wayne between 1948 and 1971.

Officials fear that the process of developing new standards, coupled with the possibility of disagreement negotiating a compromise, could further delay the cleanup of the soil, just as the DOE and EPA squabble delayed the existing plan for 13 months.

"I hope this doesn't turn out like it did a year ago between DOE and EPA," Cange said. "But I can't say for sure that it won't."

117688

Jun 15 1 35 PM '94

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

Rose Samulka
12 W. Magnolia Ave
Maywood, NJ 07607

117688

JUN 15 1 34 PM '94

June 6, 1994

Dear Mrs. Susan Cange:

For Your information on April 27, 1994 the Maywood Mayor and Council adopted Resolution #66-93 (attached) opposing the depositing of any comtaminated soil on any property in the Borough of Maywood which should be reflected in any EPA/DOE proposed cleanup plan.

Copy was sent to EPA and DOE to make them aware of the sentiments of the Maywood Mayor and Council and residents.

YOUR SOIL WASHING WOULD VIOLATE THIS RESOLUTION !!!

So either clean all the wastes out or clear yourself out. Maywood residents have had enough!!!

Yours truly,

Thomas Hennessy
73 Edgewood Place
Maywood NJ 07607

117688

CLERK
MARY ANNE RAMPOLLA, RMC
(201) 845-2900
FAX (201) 909-0673

BOROUGH OF MAYWOOD

459 Maywood Avenue, Maywood, NJ 07607

RESOLUTION #66-93
OPPOSING THE DEPOSITING OF CONTAMINATED SOIL IN THE BOROUGH OF MAYWOOD

WHEREAS, the Mayor and Council of the Borough of Maywood authorized a referendum in August of 1991. requesting voters of the Borough to express their opinion regarding the further storage of contaminated soil in the Borough of Maywood and requesting the expeditious clean-up of and removal of all contaminated soil from the Maywood interim storage site and vicinity properties; and

WHEREAS, on November 5, 1991, the voters of the Borough overwhelmingly indicated their support for the clean-up of the site, and vicinity properties and their opposition to any additional storage; and

WHEREAS, the Mayor and Council intend to emphasize to the appropriate authorities, including the Department of Energy and the Environmental Protection Agency, their continued opposition to the depositing of any contaminated soil on any property in the Borough of Maywood which should be reflected in any EPA/DOE proposed clean-up plan; and

WHEREAS, the Mayor and Council also intend to call again for expeditious clean-up and removal of the thorium contaminated soil and other contaminates from the Borough of Maywood;

NOW, THEREFORE, BE IT RESOLVED by the Mayor and Council of the Borough of Maywood that a copy of this Resolution expressing the intent of the Mayor and Council be forwarded to the Department of Energy and the Environmental Protection Agency to make the said authorities aware of the sentiments of the Mayor and Council and the residents of the Borough of Maywood; and

BE IT FURTHER RESOLVED that a copy of this Resolution be sent to Congressman Robert G. Torricelli and County Executive William P. Schuber to ask them to continue to use their good offices to protect the residents of the Borough of Maywood from the environmental concerns arising out of the contaminated soil referred to above; and

BE IT FURTHER RESOLVED that a copy of the within Resolution be on file in the Office of the Borough Clerk and be available for public inspection during regular business hours.

Date: April 27, 1993 APPROVED: John A. Steuert, Jr., Mayor

ATTEST: Mary Anne Rampolla
Mary Anne Rampolla, Borough Clerk

Keith & Sara Kozaryn
607 Oak Avenue
Maywood, NJ 07607

Jun 15 9 22 AM '94

117688

June 6, 1994

Ms. Susan M. Cange, Site Manager
US Department of Energy
Former Sites Restoration Division
PO Box 2001
Oak Ridge, TN 37831-8723

Re: Proposed Cleanup of Storage Pile

Dear Ms. Cange

We do not share your happiness. The proposal to use soil washing as an option for cleaning up the Maywood Interim Storage Site (MISS) is not encouraging. The cleaning method is unproven. As stated in preliminary laboratory experiments, soil washing may only clean to between 5 and 15 picocuries. The EPA supports an established "health based" level not to exceed 5 picocuries.

We cannot understand the thoughtlessness shown by the DOE towards the residents of Maywood. This is a public health hazard. It is situated near a community pool and residential housing. Anything short of excavation and disposal to a permanent site will be unacceptable.

A secondary issue is the potential reduction in property value. The devaluation of our house does not sit well. There is no way we will sit idly by while our community is destroyed by non-resident individuals.

Permanent disposal just might be far less expensive in the long run.

Sincerely,

Keith and Sara Kozaryn

117688

Jun 15 9 22 AM '94

June 7, 1994.

Susan Cange, Site Manager
U. S. Dept. of Energy
Former Sites Restoration Division
P. O. Box 2002
Oak Ridge, Tennessee 37831-8723

Dear Ms. Cange:

I was under the impression that all the Thorium that is stored in Maywood was going to be removed. I was very upset and concerned to find out that this is not the case. From what I understand, the DOE cleanup plan will be leaving a 15 picocuries per gram at the Maywood dump site, thus making Maywood a permanent dump site for this hazardous material.

My concerns first are of a medial nature. Within my neighborhood of Belle/Edel Ave. there have been at least 6 adults with cancer. Four have died and 2 are undergoing cancer therapy. There also 4 children born with birth defects and one child has died from SIDS. My son Brian was born with a congenital heart defect in 1981. It is very alarming that within a 2 block area of about 20 homes there has been 10 incidences of cancer or birth defects.

Maywood is a very nice community to live in and raise a family. It is definitely your typical small town community. It is be no means a commercial town. With the DOE's method of removing the Thorium, leaving 15 PCI's per gram it will make Maywood seem like it is a commercial area. This waste that will be left behind will have a negative effect on our community when it is time for a home owner to sell his home.

I feel very strongly that it is the chemical company's responsibility to pay for the total cleanup of the Thorium in Maywood and other communities where they dumped this hazardous material. The local towns and the State of New Jersey should not have to pay for this cleanup. I feel that the families have suffered enough by losing a relative or friend to cancer or having a child born with a birth defect.

Very truly yours,

Arlene Formisano

Arlene Formisano
608 Edel Avenue
Maywood, N. J. 07607

117688

JUN 15 9 21 AM '94

June 1, 1994

Dear Ms. Cange:

We reject your desire to be allowed to "clean" only to a level of 15 pci/g but you will make a best effort to approach the 5 pci/g where possible. From Maywood's experience with DOE we cannot trust you for a best effort if it would cost more than you like.

Also we reject having 15 pci/g material remain since it means the site properties will be subject to restrictions probably forever which is certain to also have an effect on adjoining property values.

We reject also any need for delay to do a 5 pci/g clean up if you are directed to stop manufacturing any more delays.

Yours,

Doris + Richard Stehl
590 Grant Ave
Maywood NJ
07607

cc: Carol Browner, EPA Administrator
Hazel O'Leary, DOE Secretary
Governor Christie Whitman

117688

Jun 15 9 21 AM '94

Margaret M Keane
100 Lenox Ave
Maywood NJ 0760

June 4, 1994

Dear Ms. Carge,
When does the D.O.E. fuckery stop.

You really do not mean it when you say the Maywood file will be shipped out sometime in October. You really want to leave as much dirt sitting as you will be allowed. You want to soil wash it which you can't have works. You want to delay for several years while you play the game.

We say no! You are going to play games again, as you did with the Dade stuff a few years ago!!

Either take the stuff out or take yourself out. Either way let's have the clean truth.

Sincerely,
Margaret M Keane

117688

Jun 15 9 19 AM '94

U.S. Department of Energy
Former Sites Restoration Division
P.O. Box 2001
Oak Ridge, Tennessee 37831-8723

I am a resident of Maywood and I am totaly against soil washing. If this occurs Maywood will become a permant dump site. This is a residential community not an industrial waste dump and I am apalled that this could even be an option. We have Children growing up here! I think the DOE should remember who they work for.

Mary Ann Daniels
754 Spring Valley Road
Maywood, New Jersey

Dear Mrs Cange,

Enclosed is a flyer I received at the Maywood Sidewalk Sale several weeks ago.

First let me say I object to your soil washing and pile removal plan instead of a 5 pCi/g clean up which seems to have been conducted at other superfund sites.

The flyer quotes your Mr. Seay that EPA could come in and continue the DOE's efforts without interruption and DOE would not fight to keep the project and would do what Congress tells you.

Since you are pleading shortage of funding, let EPA take over the project with funding from their superfund and the responsible party.

Yours truly,

Norma Koeser (NORMA KOESER)

220 Maywood ave, Maywood, N.J. 07607

cc: Governor Whitman

The Shopper News February 26, 1992

DOE: EPA could lead thorium clean-up

By CHRIS NEIDENSERG
Of The Shopper News

MAYWOOD — A U.S. Department of Energy (DOE) official has indicated that the DOE would not oppose any effort to legislatively remove the thorium project from its hands and hand it back to the U.S. Environmental Protection Agency (EPA) — if that is what lawmakers and residents want.

"We do exactly what Congress tells us," said William Seay, with the DOE's Oak Ridge, Tenn. operations office.

"We didn't fight against taking this project and I'm sure the DOE is not going to fight to keep a project like this because we have no basis to do so.

"I could not imagine that the DOE's feelings would be hurt at all," he added.

Seay seemed to suggest that the EPA could come in and continue the DOE's efforts without interruption, since it has all of the department's information pertaining to the thorium study, and oversees the process.

117688

QUESTIONS AND ANSWERS EXCERPTED FROM TAPED MEETING BETWEEN MAYWOOD CONCERNED CITIZENS AND N.J. DEP OFFICIALS HELD ON OCTOBER 24, 1985 IN OUR LADY OF QUEEN PEACE SCHOOL, MAYWOOD, N.J.

AMONG THOSE ALSO PRESENT: BOB ATKINS (DOE) — BECHTEL's MR. CROTWELL - MAYWOOD's ADVISOR: DR. VAN PELT, HEALTH PHYSICIST

VOICES ANSWERING QUESTIONS ARE THOSE OF ARNOLD SCHIFFMAN AND DR. JORGE BERKOWITZ of DEP

- - - - - - - - - - - - - - -

NOLAN: "If DOE tries to make the site permanent, what do you do? What does the State do?

BERKOWITZ: "If DOE tries to make the site permanent - I think the State of NJ proceeds to pursue what actions if feels is responsible action that would be consistent with its position, and that basically means that it doesn't accept it - it fights it."

NOLAN: "Can it fight the government?"

BERKOWITZ: "It sure can."

NOLAN: "If DOE leaves and they have threatened that they would leave, we - at least our officials have told us that..."

SCHIFFMAN: "What happens to the clean up activity?"

NOLAN: "What does the State then do, as far as..."

SCHIFFMAN: "I think the State's position is..."

Interruption By:

BERKOWITZ: "It will have to be cleaned up.

It is a Superfund site as well as a FUSRAP site and as such, it has it be cleaned up.

Not only does it say that - the DEP says it has to be cleaned up - the United States EPA (says it) has to be cleaned up. And it is our responsibility to clean up the site irrespective of what funds clean it up."

SHIFFMAN: "That's right - that's the answer.

* * * * *

June 6, 1994

Dear Miss Cange,

Last year DOE'S proposed alternative was phased action and offsite disposal, but EPA said your clean-up should be 5 pci/g, not 5-15 pci/g. After almost a year, EPA was "persuaded" to agree to the non-health based 5-15 standard.

EPA reviewed your April 1993 draft proposed plan-feasibility study and enviornmental impact statement. I read Mr. Gratz's May 21st 1993 letter to you.

So where is the proposed plan for clean up? Now it's on the back burner. Now it's the pile and soil washing.

We say No Thank You. It's time to start digging and dump all the wastes in Utah.

Sincerely,

Cesare J. Parodi
Ethel J. Parodi

Cesare J. Parodi

Ethel J. Parodi
57 Belle Avenue
Maywood, N.J. 07607

578 Palmer Avenue
Maywood, New Jersey 07607

June 6, 1994

U.S. Department of Energy
Former Sites Restoration Division
P.O. Box 2001
Oak Ridge, Tennessee 37831-8723

Attn: Susan Cange, Site Manager
Former Sites Restoration Division

Gentlemen:

As residents and home owners in Maywood, New Jersey, we are very concerned about the health not only of our family but of all residents of Maywood.

We are not interested in any soil washing. We feel the only step to be taken is to remove the thorium and soil below the thorium pile. It should be taken to a permanent dump site OUT OF MAYWOOD.

Sincerely,

Joseph V. Ermilio
Dorothy Ermilio

117688

June 4th 199

Jun 15 9 11 AM '94

Dear Susan M. Cange, Site Manger
Former Sites Restoration Division

I Don't like the compromise the DOE is trying to push over on the homeowners of Maywood. The site is to close to residential areas to allow soil to be cleaned to 15 pci/g. This is too high and standards should be 5 pci/g in all areas.

Better yet complete removal is the Best choice it is also the Healthest choice for Residents of Maywood. Too much damage has been done and more is still un founded, So start excavating now!!

Sincerely
Albert + Lynn D'Huyvetter
53 Washington Ave
Maywood NJ 07607

117688

JUN 15 9 06 AM '94

June 6, 1994

Dear Mr. Cange,

The soil-washing process proposed by the Department of Energy for the removal of thorium in Maywood does not solve the problem. This is merely an attempt to reduce the costs of excavation and transportation but short changes the health and future of Maywood's residents.

The only solution is obvious to all Maywood residents. The excavation and shipment of all thorium materials to Utah must be approved by the DOE and EPA. Anything else would be a travesty to the people of Maywood.

Sincerely,
Barbara Johnson
351 Golf Avenue
Maywood, N.J

117688

June 1, 1994

Dear Ms. JUN 15 9 26 AM '94 M Cange,

Wayne, N.J. does not want soil washing. They want excavate + disposal off site.

Maywood NJ. wants the same thing and opposes soil washing which Mr Gratz of the E.P.A. stated leaves residuals thus creating a permanent disposal area.

The Mayor of Wayne publicly proclaimed he will go to court against a 15 pe-g soil washing removal action.

I hope our mayor will do the seem since we had a town referendum which clearly showed that the townspeople of Maywood wants the toxic waste out!!!

Maybe we need more runs, priests + townspeople picketing with T.V. coverage.

An angry citizen

Rocco Ferrato
113 Stone St
Maywood NJ 07607

622 Maywood Avenue
Maywood, New Jersey 07607

117688

JUN 15 9 07 AM '94

June 4, 1994

U.S. Department of Energy
Former Sites Restoration Division
Att: Susan M. Cnage, Site Manager
P.O. Box 2001
Oak Ridge, Tennessee 37831-8723

Dear Ms. Cange,

I am enclosing a copy of a letter to the Editor of the Our Town Newspaper, March 31, 1994, writted by Louise Torell.

I believe every paragraph should be included in your report of citizen's comments made on what you call an EE/CA for the contaminated pile of soil in Maywood.

I totally agree with Ms. Torell so consider them my comments as well.

Is it not long overdue for Maywood to finally be Hazardous free?

How could the E.P.A. agree to a 15 Pci/G when they have yet to find out how it could effect the residents in the community. How could the D.O.E. do the same?

I do not want any of the soil left in my town. The entire pile should be excavated and removed <u>permanently!</u>

Sincerely,

Michael Nappi

Michael Nappi

Jun 15 9 11 AM '94

117688

June 6, 1994

U.S. Department of Energy
For Sites Restoration Division
P.O. Box 2001
Oak Ridge, Tennessee 37831-8723

Re: Maywood Site - Proposed Cleanup of the Storage Pile

Dear Sir/Madam:

We have been residents of Maywood for 6 years. We have a small child and are deeply concerned about this so called interim storage site. In reading various articles and hearing various conversations within the town, we were under the impression that this storage pile was going to be removed. We have recently learned that there is a proposal to wash the soil. We are completely against this for the fear of endangering our health and also for our home depreciating in value because of this.

Maywood is nothing but a residential area, there are no high-risers, no big businesses or factories, therefore we totally disagree when we are told that Maywood is not a residential area. We think it is inexcusable that our health and our childrens health be put in danger.

Sincerely,

Robert & Lisa Fiscina
47 West Grove Avenue
Maywood, New Jersey 07607

Deanna K. Towers
62 Belle Ave.
Maywood N.J.
07607

June 3, 1994

Dear Mr. Cange:

Please allow me to use the April 2nd, 1994, enclosed letter to the editor as my comments. Also, against your pile plan and especially your soil washing.

Mr. Parodi's letter certainly tells it like it is: NJDEPE + USEPA clearly proved 15 PCT-6 is not a health based standard + cancer risks are involved. Mr. Torricelli said concerns of Maywood citizens should be reflected in the final plan.

It should reflect - "Excavate + dispose at Utah - no unproven soil washing delay - no more interim or permanent disposal sight - shipment of all waste direct to Utah."

Why do you ask for comments and then ignore them.

Sincerely
Deanna K. Towers

Letters to the Editor . . .

Parodi . . .

Dear Editor –

By waiting a week on your thorium birthday present article, you could have saved Congressman Torricelli from extreme embarrassment and asked him what's going on? Who is pressuring whom?

You quoted him on March 21, standing by the pile that he created, on the Maywood Interim Storage Site (MISS) he helped create via an agreement between the Department of Energy (DOE) and Stepan Company. Without a MISS, the hazardous wastes would have been shipped elsewhere just like at Montclair, Glen Ridge, West Orange, etc. Yes, excavate and dispose out of state. The NJ Department of Environmental Protection and Energy (NJDEPE) plan for Maywood was used for Montclair instead. You stated that Torricelli said the pile removal will take two to three years and DOE will release its plans in May for all the wastes beneath the MISS and at various residential and commercial properties in Maywood, Rochelle Park, and Lodi.

Also, that DOE plans to use a "soil washing"process to separate and reduce volume of contamination from clean soil. A process that *did not* work at the Montclair area sites and Maywood has *higher* concentrations of radioactive material than Montclair!

Finally, you said Torricelli made assurances that it is both the DOE and his intention to see to it that the clean up be carried out to the highest Environmental Protection Agency (EPA) standards. But three days later, on March 24, Senator Lautenberg announced that EPA and DOE had now agreed on "strict" cleanup guidelines of 5 pci/g above background for residential properties and 15 pci/g for commercial/government areas of the site. The residentials are in Lodi and Rochelle Park. Then there will be "inaccessible" properties, like under buildings, which will be ignored until they are demolished in the future or otherwise. If soil washing worked, the soil left behind can be contaminated as high as 15 pci/g, with no limits under the buildings. Thus along with unremediated soils under buildings, Maywood will be changed from an Interim Storage Site to a Permanent Disposal Site. But they promised five-year reviews to insure human health remains "protected"?

The state cleanup standard is 5 pci/g and NJEPA and USSEPA had clearly proven that 15 pci/g is *not* a health based standard and cited cancer risks involved.

As late as November 1993, six months after the Maywood dispute started, the EPA issued the action criteria for a West Chicago site, with the same kind of waste. They cited the law to prove 5 pci/g is a health based standard for cleanup of the residential areas *including* commerical, institutional and municipal properties. And that 15 pci/g is not a health based standard! But on March 24 the New York EPA acting administrator caved in by ignoring the EPA's own health based facts. Who is responsible? An investigation is in order. Let's call it "Backwater."

Our state officials must stand firm. Our local officials must urge the NJDEPE to insist on a 5 pci/g cleanup of all contaminated soil wherever it is, and the County and State Boards of Health as well! Mr. Torricelli said, "I will be working closely with both departments to ensure that the concerns of the citizens of Maywood are reflected in the final plan."

So be it. Excavate and dispose at Envirocare, Utah. No unproven soil washing delay. No more interim or permanent disposal site. Shipment of all wastes direct to Utah!

Maywood officials should insist now that these positions be reflected in the DOE proposed plan unless they disagree with Mr. Torricelli as Senator Lautenberg does.

Sincerely,
Chuck Parodi
48 West Grove

Eustace . . .

Dear Editor –

This letter is to urge Maywood Citizens to attend the April 27th meeting on the proposed new borough hall. This is a chance for us to ask questions and present our views about what we think Maywood should spend our future on.

An interested group of taxpayers could effectively sway our representatives to do just that, represent us!

Sincerely,
Timothy J. Eustace, D.C.
140 West Pleasant

117688

Jun 15 9 06 AM '94

June 6, 1994

U.S. Department of Energy
Former Sites Restoration Division
Att: Susan M. Cange, Site Manager
P.O. Box 2001
Oak Ridge, Tennessee 37831-8723

Dear Ms. Cange:

Enclosed is a flyer I received at the Maywood Sidewalk Sale.

First, I would like to object totally to your plan of soil washing and pile removal instead of getting on with a full cleanup.

The flyer quotes Mr. Seay claiming that the EPA could come in and continue the DOE's efforts without interruption and DOE would not fight to keep the project and would do what Congress mandates.

Since you are pleading a shortage of funding, let EPA take over the project and use money from the Superfund.

Sincerely,
P. Paccian
618 Maywood Ave

618 Maywood Avenue
Maywood, New Jersey

117688

Jun 15 9 06 AM '94

June 1, 1994

U.S. Department of Energy
Former Sites Restoration Division
Att: Susan M. Cange, Site Manager
P.O. Box 2001
Oak Ridge, Tennessee 37831-8723

Dear Ms. Cange;

I am opposed to your plan of soil washing and tests. If the soil washing works, it is logical to assume that the contaminated soil would be left in Maywood. Some of that soil is from Lodi and Rochelle Park and I sure you are aware that Maywood strongly opposes this. Still you ask for comments.

In a copy of Hazardous Waste News #371, it reports "A higher prevalence of birth defects and liver disease among persons living near a thorium waste disposal site in Wayne, New Jersey". You want to **wash** and leave the soil in Wayne, too. Maywood has the same kind of waste. I can't help but wonder what the consequences for the people of Maywood will be. Has a proper study of possible health risks ever been conducted? In my opinion, there are no acceptable levels of radioactivity.

It also says "There is a move afoot now in Washington and in the mass media to divert attention away from the problem of toxic wastes. The goal seems to be to cut funding for the Federal Superfund Program of toxic waste cleanup. It seems clear that such a move, if successful, will result in increased health costs for the American people." What will be Maywood's costs be?

Is President Clinton in favor of this? Maywood and Wayne ARE **NOT**. Move all the soil out as promised and promised, or move the D.O.E. out land let E.P.A. or the state manage it.

Very truly yours,

A. M. Pacciani

A. M. Pacciani

C/C President Clinton
Governor Christine Whitman

June 5, 1995

117688

JUN 15 9 04 AM '94

Susan Cange, Site Manager
U.S. Dept. of Energy
Former Sites Restoration Division
P.O. Box 2001
Oak Ridge, Tennessee 37831-8723

Dear Ms. Cange:

I am pleased that the Department of Energy is committed to removing the contaminated soil in Maywood. However, I am quite displeased with the option of soil washing possibly to be undertaken in such a densely populated region. There is only one safe alternative and that is the removal by excavation and shipment to a permanent storage site.

The people of Maywood deserve the safest removal . Maywood cannot take any more risk to the health of its citizens .

Sincerely,

Annette Schmidt

Annette Schmidt
97 Belle Avenue
Maywood, NJ 07607

June 8, 1994 117688

Jun 14 9 06 AM '94

Susan M. Cange
U.S. Department of Energy
Former Sites Restoration Division
P.O. Box 2001
Oak Ridge, Tennessee 37831-8723

Re: Maywood Interim Storage Site

Dear Ms. Cange:

In Response to the proposed soil washing of the contaminated soil located in Maywood, New Jersey, GIVE US A BREAK !!! The figures and ideas represented as to the soil washing are nothing short of a scam. Any person associated with this type of situation and a reasonable intellect can see that. This is nothing more than a pacifying maneuver in which a feeble attempt is being made to silence the people who are directly affected by this. What they are doing is risking human lives to save few dollars.

Years ago, they said that the site was not a problem. Then they said if they bury it, it wouldn't be a problem. Then after determining how dangerous it really is, they came up with the correct answer. Remove it in it's entirety and dispose of it. Now they say, it's not that bad, if we wash it we can make it safe and in the mean time save some money. How absurd ! With all the time and effort spent on this issue so far, if they would have just removed it as origanlly planned it would be gone and done with instead of wasting more time and money. We could use the resources for more practical ideas. As has been shown in the pass, these new "revelations" of safety limits in regards to the soil washing proposed, will again be found to be erroneous and once again we will be right back where we started wasting more time and finances but more importantly exposing and risking human lives needlessly. I say why not just dispose of it and be done with it. It's the only logical way and the only RIGHT thing to do.

Ms. Cange, it is easy for people who are not directly affected by this nuclear poison to sit back and say "don't worry, everything will be fine". As a life-long resident of Maywood, not only is my physical health, livelihood and property value under a direct assault, most importantly my childrens futures and their childrens futures are at risk. For less money than they waste on bogus government studies and programs, you can dispose of and be done with once and for all with this most dangerous situation for which there is ultimately only one solution, REMOVE AND DISPOSE OF COMPLETELY !!! We all know this is the RIGHT thing to do.

Respectfully,

Steven Y. Mark
83 Belle Avenue
Maywood, N.J 07607

cc: Carol Browner (EPA)
Hazel O'Leary (DOE)
Governor Whitman
Senator Lautenberg

David & Michele Holmes
605 Oak Avenue
Maywood, NJ 07607-1515

117688

Jun 14 9 06 AM '94

June 4, 1994

Ms. Susan M. Cange, Site Manager
U.S. Department of Energy
Former Sites Restoration Division
P.O. Box 2001
Oak Ridge, TN 37831-8723

Re: NOT "HAPPY"
Proposed Cleanup of the Maywood Interim Storage Site

Dear Ms. Cange

Firstly, we do not share your happiness regarding the DOE's proposal to consider volume reduction treatment as an option.

The volume reduction is nothing more than "soil washing" which is an unproven cleaning method. As you well know in preliminary experiments, performed by your department in conjunction with the EPA, there is no guarantee that a level of 5 picocuries can be achieved. The soil washing, at best, may clean to a level between 5 and 15 picocuries. It is unconscionable that the DOE would permit such a site to exist so close to a community recreational facility frequented by children, let alone residential homes. The EPA supports the established "health based" level of less than or equal to 5 picocuries. Why should we accept anything less?

Secondly, the value of real estate will decrease in Maywood as a result of the site having gone through an "approved" DOE remediation. I believe you are aware of the "No Further Action" (NFA) sites being published in the Comprehensive Site List. We do not appreciate the "American Dream" being tampered with or destroyed.

Thirdly, we are positive that if the hazardous material was excavated and disposed of from the onset the cost would have been far less than the mismanaged tab currently being run up. We assure you this is one cause worth fighting.

Cordially,

David & Michele Holmes
Maywood Residents

117688

51 West Grant Ave
Maywood, MO
June 4, 1994

Jun 15 9 03 AM '94

US Dept of Energy.
PO Box 2001
Oak Ridge, Tenn.

Dear Ms. Cange:

I am writing this letter in response to the proposed cleanup of Maywood. My wife and I have lived in Maywood over 50 years. We have raised our children in this residential town.

Please be advised that we are 100% against storage in our small town of 2 miles. It is hazardous material to our health. Has devalued our homes, and may have untoward effects on all our fellow Maywoodians. I think a more desolate, unpopulated area is located in this vast country of ours.

Very truly yours.
Roberta Rich Fretz

117688

Jun 15 8 59 AM '94

June 5, 1994

Dear Ms. Cange,

I am against your soil washing plan for the following reasons:

1. Noise levels will probably be higher than Maywood's noise code

2. Your "cleaned soil" after soil washing can't be placed back into the pile immediately, meaning more piles being formed and more contaminated dust getting into the air,

3. Most likely, Maywood would become a soil washing regional center for other surrounding towns (if soil washing worked) due to the size of the soil washing machine needed for this site and because of the DOE's attempt to cut costs.

In closing, please record my comments in the public comment section of your report. You can also send me a written reply to these questions,

Sincerely,

Barbara Cassidy
Bob Cassidy
170 Ward St.
Maywood NJ 07607

117688

JUN 15 8 54 AM '94

6/6/94

Dear Ms. Susan Cange,

Your FUSRAP Update flyer says you seek public comment for your MISS pile clean-up plan. This flyer says:

> Data reviewed have shown that 5 pCi/g level was met in the majority of cleanup efforts where the standard was 15 pCi/g.

Please mail me this data you based this statement on. I believe the only way this could have been achieved is by removal- not soil washing.

Did you reach this health based standard of 5 pCi/g in your Montclair cleanup?

I feel, after speaking with members of the Maywood Concerned Citizens, that your statements have been misleading in the past and that this is another example via this slick public relations flyer. The costs of this flyer should have gone to paying for ...

COMPLETE & IMMEDIATE PILE REMOVAL!!!

Please make this letter part of your public comments section in your report.

Sincerely,

Joyce C. Dries + Family
92 E. Magnolia Ave.
Maywood NJ 07607

A Note from Lee Woods, Information Coordinator

The DOE Public Information Center and I are celebrating our second year as part of the Maywood community. A lot has happened for me and the Information Center during that short time.

The opening day was April 9, 1992; I had no idea what to expect. It was a slow start. In the beginning, the questions asked most often by visitors were "What is this place?" and "What do you do here?" When I explained the administrative record, the information repository, available fact sheets, and the history of the Maywood Interim Storage Site, they were amazed at the amount of information that was available. Some have sent their children to the Information Center to do their term papers. Many residents have come in with questions and concerns that are serious and important to them. They want answers right away, and the Information Center offers them someone to speak to. Some visitors have other concerns—they ask for bus schedules, doctors' addresses, state agency phone numbers, and even a glass of water.

My two years at the Information Center have exceeded my expectations. It is satisfying when college students who come in to work on a term paper are surprised at the information available, and it's very rewarding to help people find answers to questions of great concern to them. And helping the historical committee prepare a presentation for the Maywood Sidewalk Sale helped me to learn a lot about the history of Maywood.

If you haven't had a chance to visit the Information Center yet, I hope you will!

Site Cleanup Criteria Resolved

In March, DOE and EPA agreed on the cleanup criteria to be used for radioactive contamination at the Maywood site.

After much discussion and analysis, the agencies agreed that cleanup criteria will be determined based on site-specific risk analysis for different land uses.

Residential properties will be cleaned to 5 picocuries per gram (pCi/g) above the naturally occurring level of background radiation in the area. Soils greater than six inches deep on commercial and government properties will be removed to attain a level of no more than 15 pCi/g above background, with a further goal of 5 pCi/g above background to be met where possible. Data reviewed have shown that the 5 pCi/g level was met in the majority of cleanup efforts where the standard was 15 pCi/g. Risk analysis, using very conservative assumptions, has shown that these levels are protective of human health and the environment.

Data reviewed have shown that the 5 pCi/g level was met in the majority of cleanup efforts where the standard was 15 pCi/g.

With these criteria, cleanup efforts at the Maywood site should proceed in a timely, safe, and cost-effective manner.

117688

JUN 15 8 53 AM '94

480 Hill Street
Maywood, NJ 07607
June 7, 1994

Susan M. Cange, Site Manager
U.S. Dept. of Energy
Former Sites Restoration Division
P.O. Box 2001
Oak Ridge, TN 37831-8723

Dear Ms. Cange:

I was glad to read that the State of New Jersey refused to approve your so called clean-up Plan.

I also oppose your plans including this soil washing business and especially not cleaning up to the State standard.

Robert Meyer

ROBERT MEYER

June 3,1994

Ms. Susan Cange:

I am a 76 year old senior and have lived in Maywood for over 41 years. I lost my wife 2 years ago and my son takes care of my home for me.

This home is all I have and I don't want it poisoned by this Thorium pile anymore. You have promised it's disposal for as long as I can remember and I want it removed.

My home is my only investment and by leaving contaminated soil in Maywood under 15pCi/g, you make Maywood a permanent waste site and hence lower my home value.

Thank you for your attention.

Mr.Angelo Caso
428 Poplal Ave.
Maywood, N.J.

117688

JUN 15 8 44 AM '94

June 8, 1994

Ms. Susan Cange, Site Manager
U.S. Department of Energy
Former Sites Restoration Division
P.O. Box 2001
Oak Ridge, Tennessee 37831-8723

Dear Ms. Cange,

As a homeowner and resident of Maywood I am writing with regards to the cleanup of the storage pile located at the Maywood Interim Storage Site. The recent statements attributed to Mr. Nick Martone, the state Department of Environmental Protection and Energy site manager calling the DOE's cleanup plan "dangerous to the public" as reported in The Record newspaper has me deeply concerned. As you are aware, Maywood is mostly a residential community, not a commercial district, and as such, the 15 picocuries of radiation per gram standard used for commercial areas should not apply to the proposed cleanup program for Maywood. I would hope that the DOE, together with the EPA, could formulate a process and procedure for the removal of thorium-tainted soil in Maywood taking care to protect the safety and health of the citizens they serve.

Sincerely,

John M. Otto
77 Lenox Avenue
Maywood, N.J. 07607

117688

JUN 15 9 28 AM '94

23 Stelling Avenue
Maywood, N.J. 07607
June 6, 1994

Susan M. Cange
Site Manager
U.S. Department of Energy
Former Sites Restoration Division
P.O. Box 2001
Oak Ridge, Tennessee 37831-8723

Dear Ms. Cange:

As a life long resident of Maywood who has chosen to raise my children in the same town in which I grew up, it is with much alarm that I have read of your agency's recent proposed solution regarding the contaminated thorium soil stored at the Maywood Interim Storage Site.

Your tentative plan to implement volume reduction treatment (soil washing) as a means to solve Maywood's thorium problem is totally unacceptable. There is no guarantee that soil washing will effectively remove all the contaminants from the site. There is no doubt, however, that shipping the entire pile to the Utah storage site will. When carcinogenic materials are involved, every citizen has the right to expect his government to guarantee their total removal. This is the only way to ensure the elimination of the potential health risks associated with these deadly materials. Thank you for your consideration in this matter.

Sincerely,

Dean Frenkian

11768

JUN 15 9 26 AM '94

June 5, 1994

Dear Ms. Cange:

I am enclosing a picture from the newspaper showing how property in Glen Ridge, New Jersey, is cleaned.

There is no reason you cannot do the same for the Lodi properties and no need for years of delay with your soil washing plan.

Just bag it and start getting it out. You are not going to dump some of your surrounding contaminated soils from nearby towns in Maywood.

Sincerely,

Martha DeYoung
8 Richard Place
Maywood, NJ 07607

Photo by Joe Gigli

:m an environmental cleanup concern removing radioactive soil from the yard of a home on Lorraine Street in Glen Ridge

36 E Magnolia Ave
Maywood, NJ 07607
June 4, 1994

Ms. Susan Cange
U.S. Dept of Energy
Former Sites Restoration Div.
P.O Box 2001
Oak Ridge, Tennessee 37831-8723

Dear Ms. Cange:

These are my comments which say No to your proposed plan to remove soils and debris from the waste pile in Maywood.

Last year you were supposed to show us the clean up plan for the whole project. Instead you started the 6 to 15 game. After a year you changed nothing.

Except instead of the whole clean up plan, you now want to play laundry with the pile only until 1996. NO WAY!

More than that you want to leave wastes in Maywood permanently! NO WAY - NO WAY!

What is the timetable for this project anyway and not just the fill? Let's talk clean up or state take over of site.

A Concerned citizen,
Pat Schmitt

117688

JUN 15 9 23 AM '94

June 2, 1994

Ms. Cange:

I have seen page 34 in your book about the pile removal and soil washing.

Surely you are aware that our mayor and council have notified you and the EPA that they oppose soil washing and leaving wastes behind and want a 5 pci/g clean up.

Your page 34 states the removal with option would be conducted only with the approval of the affected local authorities. That kills soil washing!

What about removal with the 5-15 level? Are you going to again defy Maywood officials and residents? We will not roll over to your arrogance. It is 5 pci/g or say good by!

Yours truly,

Dawn M. Andrews
504 Maywood Avenue
Maywood, NJ 07607

cc: President Clinton
Governor Whitman

4.2.2 Availability of Services and Materials

Availability does not apply to Alternative 1, the no-action alternative. The services and materials required to implement Alternatives 2 and 3 are readily available.

4.2.3 Administrative Feasibility

Administrative feasibility considerations include the potential of a proposed action to achieve response objectives and to satisfy state and local concerns. These concerns include permitting and interagency cooperation, public and occupational safety, transportation factors, impacts on land use and values, compliance with policies and requirements, and public acceptance. The NCP specifies that a formal community relations plan be developed to provide information to the public and to obtain public comment. A site-specific community relations plan has been developed for the Maywood site (BNI 1992).

State and local authorities and citizens have indicated a strong preference for removal of the MISS waste storage pile. Since Alternatives 2 and 3 achieve this objective, they are expected to have favorable administrative feasibility. Alternative 1 would not address these concerns. Short-term negative impacts on the community would include traffic and noise associated with removal, treatment, and transportation of the contaminated materials under Alternatives 2 and 3; these impacts would be minimized by conducting all activities according to pertinent regulatory requirements, by using good engineering practices, and through an active community relations program.

No administrative feasibility issues are anticipated with respect to commercial disposal of the waste. The waste volume associated with this proposed removal action would be a small fraction of the total waste capacity of the commercial disposal facility.

Removal activities conducted under Alternatives 2 and 3 would be conducted only with the approval of the affected local authorities. All response activities at the Maywood site are coordinated with EPA Region II and state and local government authorities. Active communications would be maintained with the public, local media, EPA, and state and local officials, as specified in the community relations plan for the site (BNI 1992).

4.3 COST

The costs of alternatives are considered only in a comparative manner to determine if the cost of one alternative is much greater than that of another alternative of similar effectiveness. General estimates of potential costs for each alternative can be compared to permit a screening according to relative costs. Funds from DOE, not from EPA's Superfund, would be used to implement the proposed removal action. Because the proposed action would be completed within a short time, present value considerations would not appreciably affect cost estimates; cost estimates for this analysis assume no discount or escalation.

117688

Jun 15 9 23 AM '94

June 1, 1994

Dear Mrs. Cange:

If you were allowed to soil wash, would you include the chemical wastes in building 76? Tell us what kind of chemicals and the locations where they were found. (See attached memo from Mary Carton).

Why was waste removed from the 560 drums and the drums disposed of?

Did you label the LSA boxes the same as the drum labels before disposal of the drums?

Do you think anybody is going to believe your ALARA pitch? With the D.O.E. it is A-L-A-R-M!

Just dig up the wastes and ship it out like the state of New Jersey says!

I seriously wonder if we are living in a safe area due to this pile. Maybe a cancer study should be conducted to see if our health is being threatened. Thank God for the Concerned Citizens!

Sincerely,

Noah Dowell
and family
160 East Fairmount Ave
Maywood Ave. N.J.
07607

cc: Mr. Shinn, NJ EPA
Gov. C. Whitman

11768

Jun 14 9 07 AM '94

June 2, 1994
Susan M. Cange, Site Manager
Maywood MISS

Dear Mrs. Cange:

Your DOE has said it has not decided whether to pursue the responsible party or parties in Maywood and Wayne, New Jersey. However your 1994-1998 five year plan report states, " another law that DOE must comply with is the Comprehensive Environmental Response, Compensation and Liability ACT (CERCLA), or "Superfund." Its goals are to identify and clean up sites contaminated with hazardous waste and see that the responsible parties pay for damages and cleanup."

I want to know from the DOE Secretary how and why the DOE can ignore the law cited in their own report and switch the costs to the taxpayer funds?

Then they have the nerve to say soil washing and a 5 - 15 less strict, clean up level will save the taxpayers money???

So I am opposed to your EE/CA plan and your 5 - 15 plan and I demand an investigation as to why taxpayers are paying for the Thorium clean up instead of the responsible party.

Sincerely,

John C [illegible] 36 orchard Pl Maywood NJ

cc: Hazel O'Leary (DOE)
Sen Lautenberg
Gov. Whitman
U.S. Attorney General Reno

11768

476 Bergen Ave
Maywood, N.J. 07607

JUN 14 2 06 PM '94

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

[signature]

117688

JUN 14 2 11 PM '94

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

William [signature]

735 EDEL AVE
MAYWOOD, NJ 07607

6/7/94

Jun 14 2 10 PM '94

Ms. Cange,

We received a copy of a paper called Hazardous Waste News #371 from the Concerned Citizens of Maywood. What does DOE say or do about this?

Persons living near a thorium waste site are at higher risk and the government wants to cut funding for clean ups. That is what is going on in Maywood with your soil washing business that does not take out all the wastes.

You still would leave wastes but you would cut the costs of moving wastes out at the expense of the health level of the clean-up site.

What Maywood wants is the Government Agency that <u>can</u> <u>and</u> <u>will</u> clean up the area. That is not the Dept. of Energy!

Mary A. Green

Joyce Green

158 Van Clave St
Maywood, NJ 07607

117688

JUN 14 2 10 PM '94

June 3, 1994

Dear Miss Camge,

I am opposed to your soil washing tests and pile removal. Especially if your soil washing worked! You would leave part of the contaminated soils in Maywood. You would even try to do this with soils from Lodi and Rochelle Park and you know for a fact Maywood strongly opposes this. Yet still you ask for comments!

In a copy of Hazardous Waste News #371 it reports "A Higher prevalence of birth defects and liver disease among persons living near a thorium waste disposal site in Wayne, N.J." I believe you want to soil wash and leave contaminated soils regardless of what the nearby residents and local authorities desire.

It also says- "There is a move afoot now in Washington and in the mass media to divert attention away from the problem of toxic wastes. The goal seems to be cut funding for the federal superfund program of toxic waste clean up. It seems clear that such a move, if successful will result in increased costs for the American people."

Is President Clinton in favor of this? Maywood and Wayne are not! Move it out as promised and promised, or move DOE out and let EPA or state manage the site.

Sincerely,

Vicki Koeser (Vicki Koeser)

220 Maywood Ave. Apt. 2
Maywood N.J. 07607

cc: President Clinton
Governor Whitman

CHEMICALS AND HEALTH--Part 3

Several studies of industrial dumps and contaminated water supplies during the last decade have reported adverse health effects among exposed human populations.[1] The principal health findings include:

- Significantly reduced stature (height) for a given age among children who lived near Love Canal, the chemical waste dump in Niagara Falls, N.Y., compared to a control group of children living further from the dump.[2]
- A higher prevalence of birth defects and liver disease among persons living near a thorium waste disposal site in Wayne, New Jersey, compared to persons living further away from the site.[3] (Thorium is a naturally-occurring radioactive element processed on this site by a private firm under contract to the old Atomic Energy Commission, now called the Department of Energy.)
- Low birth weight and birth defects in California children born in census tracts having waste disposal sites.[4]
- Enlargement of the liver (hepatomegaly) and abnormal liver function tests reported in residents exposed to solvents from a toxic waste dump in Hardemann County, Tenn.[5]
- Dermatitis, respiratory irritation, neurologic symptoms and pancreatic cancer at 7 waste disposal sites.[6]
- Significantly elevated rates of illness, including chronic kidney disease, stroke, hypertension [high blood pressure], heart disease, anemia, and skin cancer in a population exposed to toxic metals (cadmium and lead) from mine wastes in Galena, Kansas.[7]
- Leukemia (cancer of the blood-forming cells) among a group of children drinking water contaminated with industrial solvents in Woburn, Mass. In addition, a study of 4936 pregnancies and 5018 residents of Woburn aged 18 or younger revealed significant positive associations between intake of contaminated water and birth defects of the central nervous system, eye, ear, and face (e.g., cleft palate), as well as abnormalities of the chromosomes.[8]
- In Lowell, Mass., a group of 1049 people living 1200 feet from a large chemical waste dump was higher in self-reported complaints of wheezing, shortness of breath, cough, and persistent colds; irregular heart beat; constant fatigue and bowel dysfunction, compared to people living 2 and 3 times as far from the dump.[9] This study examined the possibility of recall bias (people selectively remembering health problems, or chemical exposures) and concluded that recall bias did not explain the findings.
- In Hamilton, Ontario, a study of people who lived and/or worked near an industrial dump revealed significantly elevated rates of the following conditions: bronchitis; difficulty breathing; cough; skin rash; arthritis; heart problems (angina [chest pain], and heart attacks); muscle weakness in arms and legs; tremors, cramps, and spasms; headaches; dizziness; lethargy; balance problems; and mood symptoms (anxiety, depression, insomnia, irritability, and restlessness) compared to populations living further from the site.[10] Recall bias was examined and rejected as the source of these problems.
- A survey of 2039 persons in 606 households living near the Stringfellow Acid Pits in Riverside County, California revealed significantly elevated rates for the following conditions: ear infections; bronchitis; asthma; angina [chest pain]; skin rashes; blurred vision; pain in the ears; daily cough for more than a month; nausea; frequent diarrhea; unsteady gait; and frequent urination.[11] Recall bias was examined and rejected as the cause of these problems.
- In Tucson, Arizona, a study of 707 children born with heart defects revealed that 35% of them were born to parents living in a part of the city where the water supply was contaminated with industrial solvents (trichloroethylene [TCE], and dichloroethylene). The rate of birth defects of the heart was three times as high among people drinking the contaminated water, compared to people in Tucson not drinking contaminated water.[12]
- A study of 296 women experiencing a spontaneous abortion during the first 27 weeks of pregnancy, compared to 1391 women having live births, revealed an association between spontaneous abortion and drinking water contaminants (detectable levels of mercury, or high levels of arsenic, potassium and silica).[13]
- Residents of Bynum, North Carolina, drinking raw river water contaminated by industrial and agricultural chemicals, have developed cancers 2.4 to 2.6 times more often than expected.[14]

To summarize: Epidemiological studies cannot prove a cause and effect relationship. Nevertheless, available information indicates that hazardous waste dumps can harm, and have harmed, humans living nearby. Likewise, contaminated water supplies have harmed people.

The problem of waste dumps is continuing to grow. As the National Research Council of the National Academy of Sciences said in 1991, "A limited number of epidemiologic studies indicate that increased rates of birth defects, spontaneous abortion, neurologic impairment, and cancer have occurred in some residential populations exposed to hazardous wastes. We are concerned that other populations at risk might not have been adequately identified." And the Council said, "Millions of tons of hazardous materials are slowly migrating into groundwater in areas where they could pose problems in the future, even though current risks could be negligible."[15]

There is a move afoot now in Washington, and in the mass media, to divert attention away from the

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

837 Lincoln Ave
Maywood NJ

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

Madeline DeBoris
30 E Magnolia Av
Maywood

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

JUN 14 2 09 PM '94

June 5, 1994

Dear Ms. Cange, Site Manager,

I am enclosing a copy of a letter to the editor from the OUR TOWN newspaper of March 31, 1994, and was written by a Louise Torell. I believe every paragraph should be included in your report of comments made on what you call an EE/CA for the pile in Maywood.

I totally agree with Mrs. Torell so consider the comments made by her mine as well. Isn't it long overdue for the people of Maywood to be free of this hazardous waste pile?

How could the EPA agree to 15 pci/g clean up standard when they have yet to find where it could be used in residential communities?

How could the DOE do the same?

Sincerely,

Joan Fabyio & David West
66 E Fairmount ave
Maywood N.J.
07607

MAYWOOD - ROCHELLE PARK, N.J.

11768

46th Year, No. 26 (2343-94) Thursday, March 31, 1994 30 cents

Letters to the Editor . . .

Torell . . .

Dear Kathy --

Your article last Thursday read "Thorium Removal To Begin in Fall" and reported Congressman Torricelli gave assurances that both the Department of Energy (DOE) and his intention is to see that the cleanup be carried out to the highest environmental protection agency standards.

That would mean a cleanup to 5Pci/G above background. The site managers Jeffrey Gratz, Environmental Protection Agency (EPA), and Nick Marton, NJ Department of. Environmental Protection and Energy (NJDEPE), have both clearly established that 5 Pci/G is the health-based standard and 15 Pci/G is not applicable and not protective enough!!!

Also Ronald T. Corcory (11/10/93) replying for Acting Commissioner Jeanne Fox (NJDEPE) said the NJDEPE has gone on record stating support for the 5 Pci/G cleanup and on record also for all wastes generated by the cleanup be disposed of at an out-of-state facility.

A NJDEPE, July 15, 1993 letter stated the same positions for the Wayne site cleanup.

Later Vincent Pitruzzello, USEPA Region II, wrote on October 15, 1993, and assured the Concerned Citizens of Maywood that the remedial action for the Maywood site will be as protective as the clean up at Montclair that called for excavation, transportation and offsite disposal of all wastes exceeding the 5 Pci/G criteria. Soil washing did not work, so let's get to excavating -- not delaying!!!

The EPA in April, 1993, said their agency has yet to identify situations in residential communities where the 15 Pci/G could be considered appropriate.

In November, 1993, Congresswoman Roukema wrote to DOE Secretary O'Leary over the cleanup process. She cited the densely populated localities of Maywood, Lodi and Rochelle Park and urged safeguarding public health and that the concerns of the local residents be addressed.

I hope all our officials will loudly and publicly demand a 5 Pci/G cleanup standard of all contaminated soils. A permanent cleanup is necessary to get off the NPL Superfund List.

A Maywood that is finally hazardous waste free will be of benefit to all. After 14 years we deserve a cleanup -- not a political compromise.

Louise Torell
475 Bergen

JUN 14 2 09 PM '94

178 Van Cleve Street
Maywood, NJ 07607
June 10, 1994

Susan M. Cange, Site Manager
U.S. Department of Energy
Former Sites Restoration Division
P.O. Box 2001
Oak Ridge, TN 37831-8723

Dear Ms. Cange:

In response to your notice seeking public comment on proposed cleanup of the Maywood Interim Storage Site pile, I am writing my comments below:

(1) The cleanup plan must adhere to the 5 Pci/g standard, which is the EPA long-established "health based" standard, regardless whether they are residential or commercial properties. I have a letter written to me by an EPA official last year attesting to 5 Pci/g as the absolute health requirement. Subsequently, I quoted paragraphs of that letter in my letter to the editor of our town paper, "Our Town".
In commercial properties where employees are working 9 AM to 9 PM in many instances and there is a constant flow of customers, it is conceivable the same standard should be applied. After more than a year of arguing over the cleanup standard, EPA later caved in to DOE demand under political pressure rather than on the basis of scientific justification.

(2) As the majority of Maywood residents do, I strongly oppose the method of "soil washing" as a means to reduce radioactivity. The "soil washing" method has no successful record of reducing radioactivity to below 5 Pci/g. Instead of cost-saving, it is only a further waste of time and of taxpayers' money.

(3) All soils above 5Pci/g, no matter how deep it is, should be excavated and shipped to Envirocare in Utah in accordance with the New Jersey State Plan.

(4) All thorium-contaminated soilsabove 5 Pci/g in Lodi and Rochelle Park should be shipped directly to Envirocare in Utah. They should not be allowed to be transported into the MISS.

Thank you for your attention.

Sincerely yours,

K. M. Lu

cc: New Jersey Governor Whitman
New Jersey Senate and Assembly
New Jersey DEPE Commissioner
Bergen County Executive Schuber
Maywood Mayor and Council

June 9, 1994

Dear Ms. Susan Cange:

Please note that for years the town of Lodi use to get its water from the aquifer under the MISS. In recent years as more information was revealed about the site became public, the town officials closed their wells and were forced to purchased water because of the comtamination. The State still classifies the site ground water as potable. However, to use it and site and aquifer would have to be cleaned.

In your plans, you would soil wash and leave contamination behind and leave probably worse contamination under buildings on contaminated sites.

How could the aquifer be cleaned?

Most importantly, 15 pci/g is not a health based standard. Our health does not seem to be a priority with the DOE.

Please put me on record as being opposed to your propsed plan.

Sincerely,

Christine Kadonaga

HOMETOWN

Some residents want Stepan to pay more for clean-up

By CHRIS NEIDENBERG
Of The Shopper News

While the federal government has consistently balked at the request, some citizens in Maywood and Lodi are urging authorities to take enforcement action against Stepan Company to pay more toward cleaning up area groundwater and thorium contamination.

The federal Environmental Protection Agency has cleared Stepan of polluting Lodi's municipal wellfield. Meanwhile, in Maywood, Rep. Robert Torricelli (D-9) is holding steadfast to his position that Stepan should not be held financially liable for footing the bill to clean thorium-tainted soil, even though the EPA already cited the firm as a potentially reponsible party (PRP) for the tainted soil several months before Torricelli and Sen. Bill Bradley intervened legislatively to make the federal government the PRP in 1983. To secure cleanup funds, U.S. Public Law

Torricelli's refusal to change also comes despite the fact that Kerr-McGee Chemical Corporation is committing some $140 million to clean similar 11(e)2 thorium sites in West Chicago, Ill. under an order from that state. Illinois, unlike New Jersey, does not have its hands tied in taking enforcement action by federal elected officials. Kerr-McGee, like Stepan, inherited the West Chicago property from a predecessor firm, Lindsey Chemical and Light, in 1967. Yet Kerr-McGee has no protection from state and federal enforcement action.on came after Stepan had already consented to pay for a remedial investigation feasibility study regarding thorium, which is scattered throughout the region and in eight burial pits on grounds surrounding the site. After refusing to cooperate for over three years, Stepan since October 1991 has been working under EPA orders to study and eventually remediate chemical pollutants using company funds.

"Everything leads back to Stepan," complained Mayor Phillip Toronto of Lodi, where municipal wells will stay polluted under EPA's "no action" findings. "They polluted the aquifer and I believe they are still polluting it. If it looks like a duck, walks like a duck and sounds like a duck, then it's got to be a duck."

For some reason, Toronto speculated, government authorities do not want Stepan to pay more toward helping to clean groundwater contamination, as well as thorium-tainted soil contamination, which has polluted a portion of his community as well as Maywood and Rochelle Park.

In defense of Stepan, Katz cited a report on the Lodi wellfield from Ebasco Services Corporation, which pointed out that the radioactive isotopes found in a test well differ from those which emananted from the old Maywood Chemical Works site (acquired by Stepan in 1959). Stepan has also denied liability for thorium.

Toronto said the borough intends to retain ownership of the dormant wellfield. He said he envisons that it will someday again be a viable watersource. Councilman Walter Curioni, a Toronto supporter, agreed.

"It would be tremendous if they could pinpoint the source," Curioni said. "But I think it will only be a matter of time before new technology is developed to clean up the site."

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

44 W. Central Ave,
Maywood N. J.

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

117688

JUN 14 2 03 PM '94

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

Helen A. Lowry
70 Grove Ave.
Maywood, NJ.
07607

117688

JUN 14 2 02 PM '94

June 9, 1994

Dear Ms. Cange,

My concern with the DOE soil washing plan that you are hoping to implement in Maywood are the many operational problems that could possibly arise. Loading and moving the soil around, noise from the soil washing machine that may be violating our noise level ordinace, and the production and storage of contaminated water as a result of the soil washing process are all problems that could arise.

More importantly, the continuation of 15 pCg/ level wastes stored and located near residences and our municipal pool gives me the impression that the residents' health has taken a back seat to costs incurred due to storage/movement of wastes to Utah.

Please make my comments part of your record on the proposed cleanup of the pile.

Sincerely,

William J. Cuneo(?) Jr.
32 Parkway
Maywood NJ 07607

117688

JUN 14 2 02 PM '94

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

Karen M. Amer[?]
[illegible] Edil Ave,
Maywood, NJ
07607

117688

Jun 14 2 02 PM '94

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

J Mancini
120 E DELAVE
MAYWOOD NJ 07607
(201) 488-6868

117688

Jun 14 2 02 PM '94

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

117688

Jun 14 2 02 PM '94

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

Patricia Furbank

784 Branch A Ave

Maywood, NJ 07607

117688

Jun 14 2 01 PM '94

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

117688

JUN 14 2 01 PM '94

Dear Ms. Cange,

After reading in the Star Ledger today (see attached article), I see Wayne residents have the same concerns as the people from Maywood:

1. property values dropping
2. harmful effects on peoples' health

Please record my opposition to soilwashing for these reasons. Take out all the contamination as previously promised and ship to Utah.

Sincerely,

Thomas W. Henkel
135 Lafayette Ave
Maywood, NJ

THE STAR-LEDGER, Wednesday, June 8, 1994

Klein gains thorium cleanup funds

By ELIZABETH MOORE

Rep. Herb Klein has announced he has secured $4 million from the Department of Energy (DOE) to clean up thorium-contaminated soil in Wayne.

Klein (D-8th Dist.) said yesterday he wants the money and an upcoming meeting of township, state and federal representatives to hasten the cleanup of the site.

"Ever since I started my term of office, people have been talking to me in frustration, that it's been there for so long and it's affected their lives and property values, and they want it cleaned up," he said.

An estimated 115,000 cubic yards of soil became contaminated during 23 years when two companies processed monazite sand at the site on Black Oak Ridge Road to extract chemicals to be used in lighting devices and optics. Monazite sand naturally contains radioactive thorium.

Rare Earths Inc. processed the sand beginning in 1948 until the Davidson Chemical Division of W.R. Grace Co. acquired the site in 1957. The plant closed in 1971.

The DOE was given the responsibility of handling the contamination in 1983. In March, federal officials said they would consider a soil-washing process rather than containment to clean up the site.

Federal officials said a soil washing machine developed by the Environmental Protection Agency will be sent to Wayne this summer to conduct a test run of the washing process.

117688

Jun 14 2 00 PM '94

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

H. Broad
275 Eccleston Pl
Maywood
NJ 07607

117688

Jun 14 2 00 PM '94

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

Michael Dolton
275 Eccleston Pl.
Maywood, NJ 07607

117688

JUN 14 2 00 PM '94

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

117688

JUN 14 1 59 PM '94

June 7, 1994

Dear Mrs. Susan Cange-

The following are my comments on the proposed cleanup of the Maywood pile as sought by your office by June 13, 1994. Please make this part of your record of comments from the public.

1. I support the DEPE of New Jersey in their stance as stated in The Record article "NJ balks at thorium cleanup" which I have attached.

2. I am against the 15 pCi/g standard being applied in my town because it is not a health based standard.

3. Maywood's population is approximately 10,000 persons in a square mile area with potential to increase due to its location. A 15 pCi/g would have negative consequences for central Bergen County.

Ship the wastes to a storage site in Utah as proposed!

ALL OF IT!!! NOW!!!

Sincerely,

Anna J. Garritano
153 Strang Ave,
Maywood. N.J.
07607

SATURDAY
The Recor
JUNE 4, 1994
Friend of the People It Serves

N.J. balks at thorium cleanup

By MICHAEL MOORE
Staff Writer

The state Department of Environmental Protection and Energy is refusing to approve the federal government's plan to remove thorium-tainted soil spread throughout Maywood and Wayne, a move that could further delay a cleanup first promised more than a decade ago.

Calling the federal Department of Energy's cleanup plan for 510,000 cubic yards of radioactive soil "dangerous to the public," the DEPE is withholding its needed approval until the federal agency agrees to meet stricter standards.

"We don't believe the DOE's cleanup plan either complies with state law or affords an acceptable

Asks U.S. to meet tighter standards

level of protection to the public," said Nick Martone, DEPE manager for the Maywood and Wayne sites. "We're not going to go along with this and give residents a false sense of security."

Trumpeted as one of the final obstacles to solving the radioactive soil woes of North Jersey, the DOE's long-anticipated cleanup proposal, hammered out with the federal Environmental Protection Agency, calls for contaminated dirt to be cleaned to a level of 5 picocuries of radiation per gram of soil in residential areas and 15 picocuries per gram in commercial districts.

But DEPE officials believe 15 picocuries is too high and want the 5 picocurie standard applied to both residential and commercial properties. Martone said cleanup cannot legally begin without DEPE approval.

A picocurie is a unit of radioactivity. Thorium is a radioactive element that breaks down into radon, a gas proven to cause lung cancer and other ailments.

Area officials support the DEPE's demand for a uniform 5 picocurie standard.

Wayne Mayor David Waks, who has been writing to the DEPE to push for stricter standards, ap-

See THORIUM Page A-8

THORIUM: State balks at U.S. proposal

From Page A-1

plauded the agency's decision. "I hail the DEPE," he said. "They are starting to see the light of day."

"At least the DEPE has taken a tough, protective stance. The federal agencies should get in line with the state's directive so we can clean this up quickly and safely," said Bergen County Executive William "Pat" Schuber. "I will be pressing Governor Whitman to intervene and push the federal agencies to adopt the standards of the DEPE."

Whitman spokesman Carl Gold said the governor is aware of North Jersey's thorium dilemma and is willing to intervene.

"The governor knows residents have a good cause for concern," he said. "This has to be cleaned up and, after consulting with DEPE commissioner [Robert Shinn], she will get things moving with the federal agencies."

But the DOE said New Jersey's apparent refusal to approve the plan could further delay the cleanup, first proposed in 1983.

"I don't know what will happen next and I'm not sure what the DOE or EPA's position is now," said Susan Cange, DOE site manager for Maywood and Wayne. "It's too early to say what we'll do. We're still waiting to get the state's position in writing."

The EPA, which originally supported a uniform 5 picocurie cleanup standard but later backed off after grappling with the DOE for a year, said the federal agencies may have to reconsider their positions.

"It's understandable why the state has misgivings," said Jeff Gratz, EPA site manager in Maywood and Wayne. "Our assumption of 15 picocuries being protective may have to be reevaluated. We may have to look at a lower criteria."

The thorium is a byproduct c the manufacture of gas lanterns a the old Maywood Chemical Work between 1916 and 1956, and at the former W. R. Grace & Co. plant in Wayne between 1948 and 1971.

Officials fear that the process o developing new standards, coupled with the possibility of disagreement negotiating a compromise, could further delay the cleanup of the soil, just as the DOE and EPA squabble delayed the existing plan for 13 months.

"I hope this doesn't turn out like it did a year ago between DOE and EPA," Cange said. "But I can't say for sure that it won't."

117688

JUN 14 1 59 PM '94

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

Charles L. Post

681 Oak Ave

Maywood NJ 07607

117688

Jun 14 1 58 PM '94

June 6, 1994

Ms. Cange:

I understand your soil washing has not worked yet on waste soils like in Maywood or over in Montclair.

Also that soil washing if it did whatever it is supposed to do would save taxpayers' money.

What I don't understand is why the taxpayers' money is being used to clean up the situation caused by an identified, responsible party. I want to know why the government is making the people incur the costs for a known polluter.

Soil washing would not be necessary if the identified responsible party was made to clean up the site.

Yours truly,

Jay Wells
120 E Magnolia Ave
Maywood, NJ
07607

117688

JUN 14 1 58 PM '94

Dear Mrs. Cange:

I am totally against soil washing because if contaminated soil under 15 pCi/g is left after soil washing in Maywood, our properties would likely decrease in value. Remember, Bergen County is among one of the nation's highest priced real estate markets. Is the federal government going to reimburse property owners for the likely drop in real estate prices?

Please make this part of your record of comments.

Yours truly,

Viola D'Elia
698 Colfax Street
Maywood NJ.

117688

Jun 14 1 58 PM '94

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely

Jean Pelligra
819 Edel Ave
Maywood, NJ 07607

117688

Jun 14 1 57 PM '94

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

Irina Ivanova
910 Maywood
Spring Valley Rd

117688

Jun 14 1 54 PM '94

June 8, 1994

Ms. Susan M. Cange
Site Manager
Former Sites Restoration Division
PO Box 2001
Oak Ridge, TN 37831-8723

Dear Ms. Cange:

Regarding the Maywood Interim Storage Site – Hasn't it been an interim site long enough? I want the thorium tainted soil gone! I am outraged that the Dept. of Energy is considering "soil washing". By making Maywood a permanent waste site, this will effect property values which means my house value will decline. I use this as a form of savings.

The state requires a 5pCi/g, why are we not following this health standard? I will urge my politicians to follow N.J. health standards and urge complete excavation and shipment to Utah as promised by politicians.

The information about this facility is limited because of the limited readership of the local town newspaper. Many people are unaware of the crisis. Is there a cancer cluster in Maywood as their seems to be surrounding the thorium pile in Wayne?

I hope the Governor will involve herself in making this issue a state's rights vs. federal control. I will urge my politicians to follow N.J. health standards and urge complete excavation and shipment to Utah as promised by politicians.

Sincerely,

Patricia DiLorenzo
Frank E. DiLorenzo

11768

JAN 14 1 54 PM '94

KEN & CORAL PETRETTI
33 Parkway • Maywood • New Jersey • 07607

Dear Ms. Cange,

We are concerned over the status of the Maywood, New Jersey Thorium site. The New Jersey DEPE has said that the proposed plan for clean up is "Dangerous to the public". We request that no action be taken until we are guaranteed of a safe and complete cleanup.

In addition many rumors of cancer deaths continue to circulate in our community which we find extremely alarming. Many of these rumors cancer cases and deaths are in the site area.

Sincerely,

Ken + Coral Petretti

Ken & Coral Petretti
Concerned parents, citizens of Maywood.

117681

Engineering Evaluation
U.S. Dept. of Energy; D.O.E.
Attention:
Ms. Susan Cange

(P.O. Box 2001
Oak Ridge, Tenn
37831-8723)

June 10, 1994

Dear Ms. Cange,

I recently read that the State of New Jersey is clearly opposed to the Federal Government's plans to "wash" the deadly Thorium stored in my community for too many years.

I thoroughly oppose the "wash plan" and any other plan that would further delay the complete removal of this insidious threatening cloud looming over my hometown.

I understand that the State told you to use the Utah location as far back as 1989 - five years ago! Your office refused! Why?

I don't believe that your office is truly concerned about further delays. I also read that "you" were using the Utah site since 1984 to clean up other U.S. locations. At the same time we were told that there were other sites available! Why have you (D.O.E.) deliberately mislead us?

I can't believe that both my representatives whom I've trusted (Sen Lautenberg + Rep Torricelli) have been part of this scheme.

II

117688

Montclair has been using the Utah site for four yrs, since 1990! Why not Maywood?

Enough is enough!

I suggest that your office cooperate with the State of N.J.! Immediately! I, and many other Maywoodians are contacting the Governor, Christie Whitman and urge her to take a "hands on" interest in this dangerous situation and protect her constituents in Maywood from forces that do not appear to have our safety and best interests at heart.

We, the People of Maywood, (I know I can speak for my neighbors) will not give up! Our mission is to protect and preserve our Hometown from present and future dangers.

Please reconsider your position and evacuate!

Sincerely

Mrs. Lillian A. Stingle

55 West Passaic St.
Maywood, N.J. 07607
phone - 201-843-7862
R.S.V.P.
Mon. 6/13/94

117688

COUNTY OF BERGEN

Administration Building • Court Plaza South • 21 Main St. • Room 300E • Hackensack, N.J. 07601-7000
(201) 646-3630

William P. Schuber
County Executive

June 13, 1994

JUN 16 1 36 PM '94

Ms. Susan M. Cange, Site Manager
Former Sites Restoration Division
Department of Energy
Oak Ridge Operations
P.O. Box 2001
Oak Ridge, Tennessee 37831

Re: Maywood Site - EE/CA to Remediate The Storage Pile

Dear Ms. Cange:

This letter will serve as my comments regarding the engineering evaluation/cost analysis (EE/CA) for the remediation of the Maywood storage pile.

I concur with your proposed recommendation of Alternative #2 -- "Expedited removal of the contaminated material from the waste storage pile, followed by transport of the wastes for off-site commercial disposal..". The uncertainties of the soil washing technology, contained in Alternative # 3, which has been raised by the community, municipal and county officials; indicates that total excavation of all materials from the MISS is the only viable alternative. The DOE and EPA have been on record indicating the uncertainties in the performance of this treatment technology. Your proposal to conduct the treatability study in 1994 of the proposed soil washing technology for the Maywood soils, provides a reasonable plan of action.

While I am pleased by your recommendation, I do have several reservations. First, the 5-15 pCi/g cleanup standard has not received universal support and endorsement. Community, municipal, county and state officials have not endorsed the negotiated policy between the EPA and the DOE. Determining the appropriate cleanup standard continues to be a major stumbling block and halts the cleanup process. Further discussions to resolve this discrepancy need to take place prior to commencing the cleanup.

My second reservation involves the process in which it is determined that the soil washing technology can reliably achieve significant reduction in the volume of waste requiring off-site disposal. As the 5 - 15 pCi/g cleanup debate has garnered considerable institutional obstacles, we may revisit the same paradox of determining whether one option is more preferable over another. Quite frankly, I envision the same debate and extended negotiation process between all environmental agencies. Therefore, I am recommending that comprehensive coordination

amongst all interested parties take place to ensure that we are not subjected to another prolonged mediation phase.

Third, I have great concerns with respect to the protection of human health and the environment during the actual soil removal activities. I will be expecting the DOE, and its contractors, to ensure the following: that contaminated dust will not be generated; that you will employ the most stringent safeguards to ensure that no spillage of soil will occur during transport to the MISS; and that wind and water erosion will not occur. The community expects appropriate measures will be utilized to reduce these and all other potential adverse environmental impacts and human risks.

Thank you for this opportunity to provide comments to your EE/CA report. I look forward to continuing my dialogue with you regarding the Maywood Superfund site.

Sincerely yours,

William "Pat" Schuber
Bergen County Executive

WPS/as

cc: Borough of Maywood
Borough of Lodi
Borough of Rochelle Park
Bergen County Department of Health Services

117688

COUNTY OF BERGEN

Administration Building • Court Plaza South • 21 Main St. • Room 300E • Hackensack, N.J. 07601-7000
(201) 646-3630

William P. Schuber
County Executive

FAX (201) 646-3101

DATE: 6/13/94

TO: SUSAN CANGE 615-576-0956

FIRM: DOE

FROM: ADAM STROBEL

SUBJECT: MAYWOOD
EE/CA

COMMENTS: _____

OF PAGES (INCLUDING COVER) 3

Operator AB

117688

JUN 13 1 51 PM '94

June 9th 1994

Susan M. Cange, Site Manager
U.S. Department of Energy
Former Sites Restoration Division
P.O. Box 2001
Oak Ridge, Tn 37831-8723

Dear Ms. Cange:

Your EE/CA report for removal of contaminated materials from the Miss Storage Pile is unacceptable. One reason is we cannot believe DOE reports or statements based on our past experiences with you. Another reason is DOE's current attempts to avoid excavation and disposal of all wastes offsite as directed by Congress, reported in the June 1st 1994 DOE memo of Franklin E. Coffman, director (OTWDRA) enclosed.

Carefully note that the DOE secretary included the project in FUSRAP, not Congress. Maywood is and never was a FUSRAP site.

As a result Maywood and Wayne are caught up in a diversionary, delaying, unproven soil washing scenario to mask the fact "That Congress is underfunding the FUSRAP Program."

So is Tonawanda N.Y. where DOE's Richard Guimond let the cat out of the bag as per the 4/27/94 news article enclosed.

Note what else he said: The program can't write checks without congress money - The public will be involved as long as people can "Come up with some alternative other than shipping everything to Clive, Utah", the location most often cited for proper storage of the waste.

In other words give him the alternative he wants.

He also says DOE has to do what is the least expensive and the most protective. But he opposes the 5 PCI/G level for Maywood and Wayne called for by the State and wants to try soil washing and doesn't know what it would cost if it worked.

If it does not work he may call Wm. J. Muszynski (EPA) and say forget about what we said at our little meeting.

On top of that I received a memo from a Tonawanda N.Y. Official quoting Guimond as saying soil washing worked in New Jersey and on more highly radioactive materials than Tonawanda. He did not identify where. This is DOE's concept of truth in reporting.

Now read carefully " He referred to New Jersey's attempt to transport off-site stating that the objections by other states to the dangers of transporting through them made it unacceptable." When do we find out about this? This is not unbelievable. This is DOE at its best. Like there is no Montclair waste going to Utah? Or Colonie, N.Y.?

He also said what's done here would reflect on other decisions? Sound familiar? Capping the N.Y. site was so opposed by residents he talks about soil washing instead.

Just like his letter of April 19th 1994 to Congressman Klein he says DOE withdraws Capping plan for Wayne and talks soil washing. Also that if it did not work it would take much longer to excavate and ship offsite. He has blamed underfunding by Congress.

As in West Chicago, funds should be sought from the responsible parties for Wayne and Maywood. That's not FUSRAP. EPA could ignore DOE's "Draft" 5-15 comments as they did not in New York.

Maywood and Wayne should be excavated and shipped out of state as was directed and promised. The 5 PCI/G standard is in and soil washing is out.

An investigation is certainly in order to correct the actions described above. Mr. Guimond is also out as far as we are concerned.

We would also expect some explanations and actions by our Congressional Officials.

Michael J. Nolan

Michael J. Nolan
69 Lenox Ave.
Maywood, N.J. 07607

CC:Vice President Gore
Hazel O'leary (DOE)
Carol Browner (EPA)
Governor Christie Whitman
Congressmen Torricelli, Klein
U.S. Senators Lautenberg, Bradley
Mayor and Council, Maywood, Wayne
Bergen County Executive Schuber
Tonawanda, N.Y.
Robert Shinn
NJDEPE
State Senator
Byron Baer
West Chicago,
Illinois
TAG

United States Government

Department of Energy

Memorandum

117688

DATE: JUN 1 1984

REPLY TO ATTN OF: NE-20

SUBJECT: Action Description Memorandum (ADM) Review: Proposed Remedial Action of Vicinity Properties, Maywood, New Jersey

TO: File

After reviewing all of the pertinent facts including the attached Action Description Memorandum (ADM), I have determined that the remedial action described in the subject ADM is an action which in and of itself will have a clearly insignificant impact on the quality of the human environment within the meaning of the National Environmental Policy Act (NEPA), 42 U.S.C. 4321 et seq.

The Conference Report accompanying the Energy and Water Appropriation Act for FY 1984 directed the Department of Energy (DOE) to give priority to the undertaking of a decontamination research and development project at the Stepan Company site at Maywood, New Jersey, and the vicinity properties which became contaminated from the site. The Conference Report directed $2,000,000 to be used to initiate the work in fiscal year 1984. The Secretary has included the project in the Formerly Utilized Sites Remedial Action Program.

The general approach to the project at this site is, in the initial phase, to decontaminate the vicinity properties and store the waste on the Stepan site. During the first phase DOE will take corrective actions as necessary to prevent further offsite contamination from the site. DOE will also restore the vicinity properties to a physical condition equivalent to that before the remedial action. In a second phase, subject to congressional direction and funding, the waste buried on the site and the stored vicinity property waste would be removed and transported to a permanent disposal site in New Jersey.

Separate environmental reviews will be prepared to support future decisions on remedial action at other vicinity properties, permanent disposition of the contaminated materials or other remedial actions that may impact the quality of the human environment within the meaning of the NEPA, 42 U.S.C. 4321 et seq.

/s/ Coffman

Franklin E. Coffman, Director
Office of Terminal Waste Disposal
and Remedial Action
Office of Nuclear Energy

Attachment

cc: w/attach.
R. Stern, PE-25
S. Greenleigh, GC-30

UI 2/2

bcc:

Feds want cooperation

(Continued from page one)

He said a problem the DOE faces is that Congress is underfunding the Formerly Utilized Sites Remedial Action Program. Eventually, the cost of taking all the FUSRAP waste to one storage location, such as the one in Clive, Utah, would cost a total of nearly $5 billion. The program can't "write checks without Congress money."

"Realistically, if we're to move this waste in Tonawanda to Utah, then why not for all of the sites? If the policy is going to be universal, we need the financial support," Guimond said. "And we're dealing with different levels of radioactivity and population densities for each site. This is a very complex situation."

For the 50 or so people who crowded into the DOE office, FUSRAP's money woes garnered no sympathy. Erie County Legislator Charles M. Swanick, one of the DOE's most vocal critics, said the residents need to be involved in the new review, as does the Coalition Against Nuclear Material in Tonawanda.

"We don't want to go back to the same situation. There are a lot of options but only one has been pushed by the DOE," Swanick said. "We don't want the DOE pushing its agenda. There has to be further outside input this time."

Swanick mentioned that CANIT has received substantially lower numbers in terms of transportation costs to the Utah location for the waste and feels there are many more areas where the problem can be simplified, including new soil cleansing technology and other ways to reduce the waste stream. Guimond said CANIT may be the principal group to help the DOE in the new review process.

"In the 1940s we did the nation a favor by taking this stuff," Swanick added. "We're owed the cleanup."

"You have to remember this is a national problem and we need to create that kind of budget," Guimond countered.

Tonawanda Town Supervisor Carl J. Calabrese pointed to the dire consequences the storage cell would have on plans for waterfront redevelopment.

"I've met with four major developers interested in this project," Calabrese said. "I asked each of them what the waterfront storage cell would do to their interest and they all said it was a deal killer. Maybe it's not scientifically correct but it's a question of perception and that will stop us from advancing our plans."

Public comment continued to flow against the project and Guimond said that each argument was another reason for looking at the situation and developing further alternatives.

"We feel we can come up with a solution that meets both your needs and our needs," he said.

No timetable has been set for the new review process. Comments and considerations from the last review will basically be scrapped and the entire process will start over again.

Ken Ton Bee 4/27/94

Feds want cooperation in waste storage review

by PATRICK KEYES

Federal officials want to make one thing clear regarding the radioactive waste situation in the Town of Tonawanda: a cooperative effort is needed to come to a conclusion acceptable to all sides.

Following last week's availability session at the U.S. Department of Energy's Sheridan Drive information office, a new tact seems to be coming to the fore. Cooperation is the new buzzword and federal officials said it would be the key to a new answer for the storage of the more than 350,000 cubic yards of radioactive material left in the town from the 1940s Manhattan Project.

Richard Guimond, an admiral with the U.S. Public Health Service who is working with the DOE on environmental matters, said he realizes the local storage option has not received any public support.

He said the public will be involved as long as people can "come up with some alternative other than shipping everything to Clive, Utah," which is the location most often cited for proper storage of the waste.

"We've agreed to take a fresh look at the alternatives being considered and those that may come up during the process," Guimond said. "Our problem is we have to do what is the least expensive and also the most protective."

(Please turn to page two)

Steve Cooper
276 Hamilton Place
Hackensack, New Jersey 07601

117688

Jun 13 9 01 AM '94

June 9, 1994

Ms. Susan M. Cange
Department of Energy
Oak Ridge Operations
Post Office Box 2001
Oak Ridge, Tennessee 37831

Dear Ms. Cange:

As a resident of the City of Hackensack, New Jersey, I am concerned about what is happening in the neighboring town of Maywood. I am writing to you to express my deep concern, no outrage, at the proposed plans put forward by U.S. Representative Robert Torricelli, (NJ-9th CD), at the behest of his corporate sponsor Quinn Stepan [Stepan Chemical], to raise the acceptability level of the thorium tainted soil in and around the "Mount Torricelli-Stepan Chemical Toxic Waste Dump" from 5 pci/g to 15 pci/g, as was reported in newspaper accounts in "The Shopper News." That Torricelli and Stepan would put our children and our communities at risk for corporate profit, the "bottom-line," does not speak too well of them.

One suspects that if the soil in question were in their backyards they would soon lose their cavalier attitudes about its removal. Enclosed are newspaper accounts from the June 1, 1994 edition of "The Shopper News", for your edification. I assure you, this is not going to be the last you hear from me on this matter.

Sincerely,

Steve Cooper

encl.

cc. Amy Goldsmith
Chuck Parodi
David Pringle

1176

Price 25¢

the shopper NEWS

Zone 3: Lodi ▼ Hasbrouck Heights ▼ Wood-Ridge ▼ Maywood ▼ Rochelle Park

June 1, 1994

'Soil washing' plan rejected

By CHRIS NEIDENBERG
of The Shopper News

MAYWOOD — While Rep. Robert Torricelli (D-9) and federal authorities seek to force an unwanted pilot "soil washing" program on the borough, the Illinois Department of Nuclear Safety (IDNS) has rejected using the unproven technology in a program to start removing 80,000 tons of similarly-tainted soil from West Chicago, Ill. later this year.

Meanwhile, representatives of the U.S. Department of Energy (DOE), Environmental Protection Agency (EPA) and state attorney general's office are scheduled to meet in Edison today (June 1) to discuss the federal government's cleanup plan. Nicholas Marton, the state Department of Environmental Protection and Energy's (DEPE's) liaison to the DOE, said legal avenues to possibly challenge the plan are being explored by the office of State Attorney General Deborah Poritz.

Prospects to begin a similar, sweeping "excavate and dispose" program in Maywood currently appear bleak, since Torricelli and a former councilman are insisting that the community has no choice but to accept plans by the U.S. Department of Energy (DOE) to try a soil separation program that seeks to reduce the volume of waste which would be shipped to the Envirocare of Utah Inc. permanent disposal facility. Former Democratic Councilman Thomas Richards, Torricelli and DOE maintain that the program, also supported by the U.S. Environmental Protection Agency (EPA), must be attempted to try and reduce the costs of shipping the material. Both Jeff Gratz, of the EPA, and Michael Redmond, of DOE contractor Bechtel National Corp., insist that some preliminary laboratory experiments using the technology in Wayne have shown that radioactive contamination can be reduced to a level of five picocuries per gram — depending upon soil composition. DOE and EPA, however will not guarantee that the five picocuries standard will be used in Maywood.

Patty Thompson, a spokeswoman for the IDNS, said last week that her state and Kerr-McGee Chemical Corporation reached agreement in April to begin the transportation of 68,000 tons of 11(e)2 soil from a factory site the company purchased from a former thorium processing facility, Lindsay Chemical and Light, in 1967. The site contains

SEE THORIUM, PAGE 18

The Shopper 6/1/94

11768

Lodi couple reacts to W. Chicago decision

EPA rep: projects are not the same

By CHRIS NEIDENBERG
of The Shopper News

MAYWOOD — Two Lodi residents questioned on the matter insist that state, local and county officials should be as aggressive in fighting the federal government to remove all area thorium materials as the state of Illinois has been doing for West Chicago.

An announcement, made in April by Illinois' Republican Gov. Jim Edgar, again points out that there are striking differences as to how the matters have been handled by elected officials in the respective communities.

Edgar and the State of Illinois have been embroiled in litigation with Kerr-McGee Chemical Corporation. Kerr-McGee has been forced under a state law to pay a penalty of $33 million, which will be held in escrow unless and until the corporation meets two deadlines for starting the permanent cleanup of 64,000 cubic yards of 11(e)2 thorium-tainted soil (the exact same classification as Maywood). The annual fee will be capped to $26 million, provided that the corporation provides the state an acceptable plan for excavating and disposing the remaining 576,000 cubic yards of waste.

Any opportunity for the government to take similar enforcement actions against a private party on thorium in the Maywood region, which has about 395,000 cubic yards of soil, was effectively stopped in 1983. At that time, Rep. Robert Torricelli (D-9) and U.S. Sen. Bill Bradley (D-NJ) helped obtain Congressional approval of a legislative amendment, U.S. Public Law 98-50.

The 1983 law, supported by, among others, Rep. Marge Roukema (R-5) and U.S. Sen. Frank Lautenberg (D-NJ), eventually created the Maywood Interim Storage Site (MISS) and removed Stepan Company as a potentially responsible party (PRP) for thorium-tainted contamination. The county's top Republican, Bergen County Executive William "Pat" Schuber, has praised Torricelli's efforts.

According to a letter sent to Republican Councilman Richard O'Neil, DOE contractor Bechtel National Corporation has spent $39 million in Maywood since 1984.

News that the State of Illinois has imposed such huge fines against a private party, unless it meets that state's demand for shipping all 640,000 cubic yards thorium-tainted soil out of the region, alarms Lodi residents Frank and Carol Bieniek. They questioned why area officials and the State of New Jersey cannot take similar action against the DOE.

"It does sound as though the elected officals in West Chicago are getting results so far," said Carol Bieniek, a Long Valley Road resident.

The woman is upset because she and her husband, Frank, were not told by a realtor that the home was contaminated with tainted soil upon buying the property. The property has a radiological soil reading of 35 picocuries per gram. DOE has put Bieniek's property on a schedule for cleanup. It is seeking to clean the soil to five pcl/g.

Their story mirrors that of Raymond and Angelica Coss, who in 1991, were dislocated from the Avenue C home they purchased when the DOE moved soil to the MISS, generating massive opposition in Maywood.

Carol Bieniek suggested that residents in Maywood and Lodi take the West Chicago approach and band together with officials to pressure DOE and EPA to send all Lodi's waste directly west, as has been espoused by the state's "Utah plan," rather than to the MISS.

"The problem is the people in Lodi have not gathered together to do something and I think that has slowed things down," she said. "We need to join forces with Maywood rather than fighting them. As the saying goes, 'United we stand, divide we fall.' "

Barbara Guetler, a representative of West Chicago's Thorium Action Group (TAG), said her members are convinced that a firm resolve shown by residents in New Jersey, to get all the thorium shipped out of the region, will even help TAG's cause. She urged residents to take advantage of the election year and pressure officials.

"If even one EPA region (in New York) starts supporting the use of 15 pcl/g, that doesn't bode well for us," said Guetler, who is convinced that the Maywood and West Chicago sites are exactly similar, except for DOE's involvement.

"We're concerned, because DOE issued the EPA comments on our proposed cleanup plan when they have no business being here," Guetler added. "But because they issued the comments in 'draft' form, we've been unable to see them."

She speculated that DOE is nervous because any strict cleanup in West Chicago will increase pressure on the department to do the same for Maywood, Lodi and Rochelle Park.

But Jeff Gratz, EPA project manager for Maywood, insisted that the West Chicago site has different characteristics.

"The assumption out there right now is that most of the properties are residential," Gratz said. "They do not have these large commercial tracts like Maywood. That's a big difference."

When informed that initial removal of soil in West Chicago involves a largecommerical site (the pile at Kerr-McGee's factory site), Gratz compared that plan to EPA's proposal for eliminating the MISS waste pile.

Mayor John Steuert said he was envious of West Chicago's efforts and demanded that Maywood be afforded the same standards. He rejected Gratz' claims that use of a standard lesser than the established 15 pcl/g standard is relevant in the borough. The mayor, however, said Torricelli would have to decide whether Stepan should foot Maywood's thorium cleanup bill.

"If something comes down the line indicating that we could force a tougher cleanup," he said. "I don't think anyone on the mayor and council would oppose it."

117688

Jun 14 10 10 AM '94

June 9, 1994

DEAR MS. Cange,

You can forget your EE/CA for pile removal AND soil WASHING. EXCAUATE AND Ship ALL Soils to UTAH under the health based 5 pci/g STANDARD.

AND initiate immediately an EE/CA for my contaminATED PROPERTY on which we WERE NOT Advised when we MADE the purchase about one year ago. NOT BY DOE, EPA, NJ DEPE, the realtor, the seller, the town, the local BOARD of Health, the County BOARD of Health NOR the TAX Office Why Did DOE Advise AT this LATE date?

You issued an EE/CA for the railroad property in Pequannock AND Shipped it quickly OUT of State, NOT to the Wiss site.

My wife and I demand nothing more than Pequannock except for the 5 pci/g STANDARDS. If you wish you can take the soil to montclair for immediate Shipment

For almost a year its been a 5 or 5-15 dispute. Meanwhile, my front lawn READS 35 pci/g! AND DOE Knew about it Since 1986/91

117688

We have two small children AND We WANT the Stuff OUT NOW, or you buy us OUT. DOE is more interested in the pile (miss) AND the Ballod property, a lot of which is in the pile. We do not want your usual wordy Respons: There is nothing to discuss. We want a yes or no in writing fro: Secretary O' Leary AND We will file an appropriate RESPONSE.

We will also be looking for answers from those mentioned in the SECOND paragraph.

Sincerely,

FRANK T. BieniK Jr
26 Long VALLEY RD.
LODI NJ 07644

11768

Mr. and Mrs. Michael Morris
51 East Hunter Avenue
Maywood, NJ 07607
(201) 368-8663

JUN 10 1 29 PM '94

June 4, 1994

Ms. Susan M. Cange, Site Manager
U.S. Department of Energy
Former Sites Restoration Division
P.O. Box 2001
Oak Ridge, Tennessee 37831-8723

Ms. Cange:

I am shocked about the flip flop of EPA from a 5PCI/G health based standard for cleanup to the 15 PCI/G DOE standard.

Especially after EPA proved 15 PCI/G is not health based. They did not flip flop in Montclair.

DOE's plan is not health based and I oppose it especially your untried cost cutter soil washing. That's my comment.

Now let's hear from DOE and EPA. Will you please furnish Maywood a copy of the transcript of the taped meeting between Mr. Guimond and Mr. Muszynski at EPA in New York.

We certainly are interested in the answer to "what's next after the Guimond and Muszynski meeting".

Sincerely,

Barbara Morris
Michael D. Morris

Michael and Barbara Morris

cc: President Clinton

117688

JUN 15 1 35 PM '94

June 9, 1994

Dear Ms. Susan Cange, Site Manager:

Please accept this form letter that a neighbor has given to me to send to you for your solicitation of comments on the proposed clean up of the Maywood pile. I am opposed to the DOE proposal with the option of implementing volume reduction treatment, if feasible, for the following reasons:

(1) The DOE's plan neither complies with state law nor affords an acceptable level of protection to the public.

(2) Property values will probably decline if a DOE plan to leave "cleaned soil" with levels of 15 pCi/g or below on the site after soil washing (if it works) becomes a reality.

The DOE has claimed that they do not have enough money in their budgets to simply move out all the contaminated soil. It seems apparent that this issue is a political one since budgets are estimated through the political process. Has our childern's health been overlooked in the politics of superfund?

Sincerely,

[signature]

OAK AVE
MAYWOOD

117688

June 3, 1994

Dear Miss Canee, JUN 15 9 22 AM '94

I have received the enclosed material from the Concerned citizens of Maywood.

I read where Congressman Torricelli said he would be working closely with both the Federal Departments (EPA and DOE) to be sure the concerns of Maywood citizens are reflected in the final clean up plan.

Your EE/CA Plan Does not reflect our concerns. Please advise if he has contacted you to change your plan. Are we ever going to be told the truth?

Sincerely,

Jodeigh Kelekian
615 Edel Ave.
Maywood NJ

117688

CONGRESSMAN
ROBERT G. TORRICELLI

NEWS RELEASE

New Jersey 9th District

✓ M&C
Rl. Oxxxxxx
Atty. Fede
M. Nolan

FOR IMMEDIATE RELEASE

Monday, March 21, 1994

Contact:

Phil Goldberg
(201) 646-1111

For Inquiries:

Richard Guymond, Principal Dep. Asst. Sec. of Energy
(202) 586-7709

TORRICELLI ANNOUNCES START DATE FOR CLEAN-UP OF THORIUM-TAINTED SOIL AT MAYWOOD SUPERFUND SITE

MAYWOOD, NJ -- Rep. Robert Torricelli (D-New Jersey) today announced that work will commence in July on the removal of the 35,000-cubic-yard pile of thorium-tainted soil that has been stored in Maywood for close to a decade.

"Within a matter of weeks, engineers will begin to prepare for the removal of the Maywood pile. And within a matter of months, the first thorium waste will be sent on its way by rail from Maywood to a permanent home in Utah," Torricelli said at the announcement. "Today marks the culmination of 14 years of hard work by the Maywood community and its elected officials, and 14 years of considerable patience."

✓ A final schedule for removal of the waste was negotiated by Rep. Torricelli and the U.S. Department of Energy over the last several months. In May, the Department will release its plans for removing the pile. Work at the site will commence in July to prepare for the first shipment of contaminated soil by rail to the Envirocare facility in Clive, Utah. This work will consist of upgrades to rail spurs already present at the site and decontamination activities to allow access for equipment and workers. In October, the first tainted soil will leave the site for Utah.

The Department of Energy has set aside $13.6 million in its Fiscal Year 1995 budget for the Maywood project, including $11.1 million for actual removal activities. "The allocation of funds shows that the Department of Energy is fully committed to commence removal activity this year. I will be testifying before the House Appropriations Committee later this week to ensure that this funding is preserved by the Congress," Torricelli added.

Removal of the pile is expected to take two to three years. In addition, negotiations between DOE and the EPA on a draft clean-up plan for the thorium-tainted soil that is still spread throughout several dozen properties in Maywood, Lodi and Rochelle Park are nearing completion. Once the plan is released, the public will have 60 days to comment. Torricelli said, "I will be working closely with both Departments to ensure that the concerns of the citizens of Maywood are reflected in the final plan."

--30--

WHAT HAPPENED TO NJDEPE

WE'L KNOW

ROBERT G. TORRICELLI
9TH DISTRICT, NEW JERSEY

COMMITTEES:
FOREIGN AFFAIRS
CHAIRMAN, SUBCOMMITTEE ON WESTERN HEMISPHERE AFFAIRS
SCIENCE, SPACE, AND TECHNOLOGY
SELECT INTELLIGENCE

Congress of the United States

House of Representatives

Washington, DC 20515-3009

WASHINGTON OFFICE
2159 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-3009
202-225-6081

DISTRICT OFFICES:
COURT PLAZA
25 MAIN STREET
HACKENSACK, NJ 07601
201-646-1111

16A PATH PLAZA
JERSEY CITY, NJ 07306
201-222-8100

November 22, 1993

117688

Dear Friend:

I'm pleased to inform you that the Nuclear Regulatory Commission (NRC) recently made a decision that will be of enormous benefit to our efforts to remove thorium waste from Maywood. The NRC has granted a license to Envirocare of Utah to permanently store thorium waste. This license makes Envirocare the first facility in the nation to be licensed to store such waste, and means that a repository for the Maywood waste has now been identified.

As you know, the United States Department of Energy has been working with the U.S. Environmental Protection Agency to draft a final cleanup plan for the Maywood cleanup. The plan is certain to call for the shipment of most of the Maywood soil to a commercially licensed site out of state.

In the meantime, I have been working to ensure that once a final plan is approved, there is a site under contract with the Department of Energy that can legally accept and safely store the thorium waste. The NRC approval removes the final roadblock to the granting of such a contract to Envirocare. I am confident that once a final cleanup plan is approved, there will be no delay in sending Maywood's thorium to Utah.

The citizens of Maywood should be commended for their patience during the arduous effort to remove deadly toxins from our neighborhood. While we all regret the delays, it is important that the job be done right. The careful environmental planning and evaluation that has been performed will lead to a better cleanup that will guarantee safe transportation and disposal and efficient use of Federal dollars.

Please be assured that I will continue to work to remove every bit of thorium waste from Maywood as soon as possible. If you have any comments or questions, please feel free to write or call.

Sincerely,

ROBERT G. TORRICELLI
Member of Congress

RGT:reh

Dear Mrs Cangl,

Living at 123 Maywood Ave. I am constantly in the nearby M.I.S.S. I have researched throughly the health based standard that has been applied to all the other super fund sites and expect the same standard to be applied on Maywood.

Had not the D.O.E. gotten involved with this site, the New Jersey E.P.A. vowed of had this

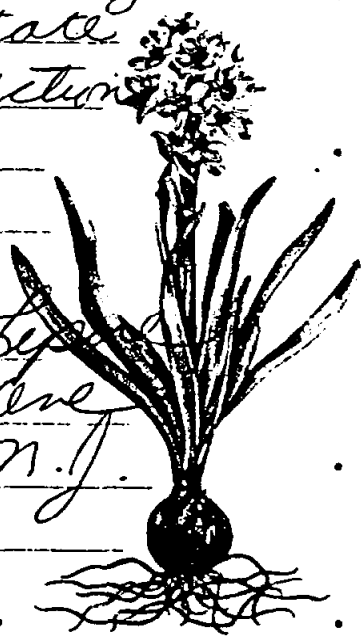
problem taken care of long ago. It is obvious that money, and not health, is the main concern in cleaning up the MTSS.

Forget soil washing and ship it all out to Utah.

After pocketing the site previously, I would not hesitate to repeat my action with my two children.

Lynne & Don Lee
123 Maywood Ave
Maywood, N.J.

Copy Gov. Whitman



117688

JUN 15 9 13 AM '94

MS. CANGE,

I READ AN ARTICE IN THE SHOPPER NEWS THAT REPORTED A STATEMENT BY A MR. MARTIN OF THE N.J. DEPT. OF ENVIORNMENTAL PROTECTION AS FOLLOWS: "THERE IS A WAY THEY CAN DEFINATELY GET DOWN TO THE 5 PCI/G LEVEL FOR MAYWOOD. THEY CAN DO IT BY GOING FOR EXCAVATION AND DISPOSAL IN A PERMANENT SITE," [UTAH]

EVERY BODY IS IN FAVOR OF THIS HEALTH BASED CLEAN UP PLAN EXCEPT PERHAPS TWO DEMOCRATS WHO, FOR SOME REASON, CANT SAY NO TO DOE. SOIL WASHING WOULD LEAVE SOME OF THE WASTES FROM LODI AND ROCKELLE PARK IN MAYWOOD, WHICH WOULD BECOME A PERMANENT DISPOSAL AREA

MY FAMILY VOTES NO!

Sincerely,

BERNADETTE E. PARODI
165 VAN CLEVE ST.
MAYWOOD, N.J. 07607

Rothann Robinson
585 Oak Ave
Maywood, NJ

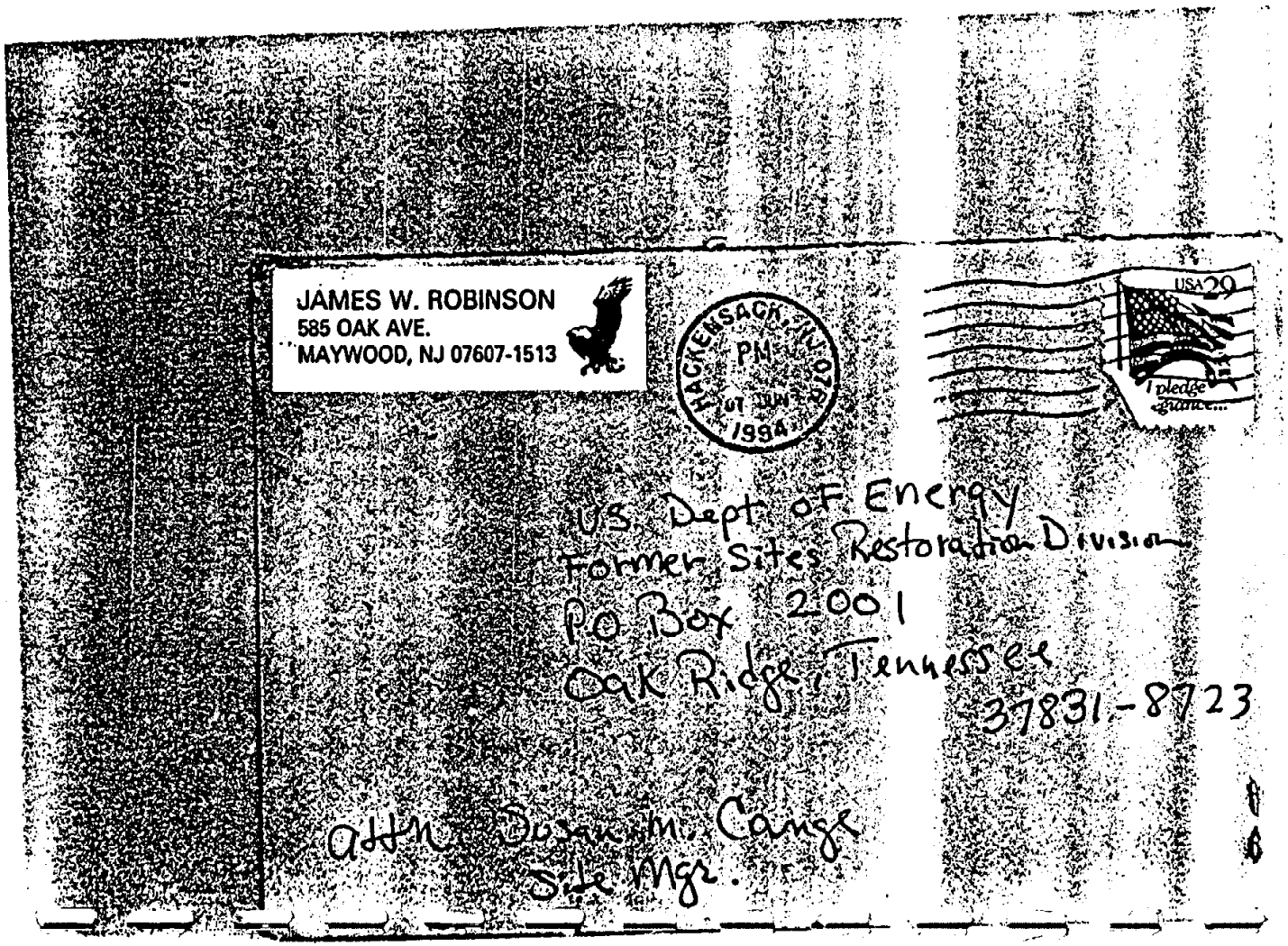
Dear Mr. Cange:

Thorium is a threat to Maywood.
The substance is dangerous
to have lingering around a populated
area. A health threat to
my children, friends and neighbors.
The publicity has already
hurt our property values.

Take it away
We dont want IT!

Rothann Robinson

117688


JAMES W. ROBINSON
585 OAK AVE.
MAYWOOD, NJ 07607-1513
HACKENSACK, N.J.
PM
1994
USA 29
I pledge allegiance...
U.S. Dept of Energy
Former Sites Restoration Division
P.O Box 2001
Oak Ridge, Tennessee
37831-8723
attn: Susan M. Cange
Site Mgr.

117688

May 31, 1994

JUN 15 9 10 AM '94

Dear Ms. Cange:

I cannot believe that Senator Lautenberg and Congressman Torricelli would allow EPA and DOE to do a short cut clean up after all the years and things they promised.

I hope the New Jersey EPA does not knuckle under like EPA did.

The EPA man said he did. Not Cave in - that EPA just switched from a health based standard clean-up to one that falls in line with President Clinton's policy! I read it in the paper.

My comment is that something smells a lot worse than the toxic wastes. I oppose your Clinton clean-up!

A Disgusted Maywood Reside
Elaine Jakubcak

117688

June 1, 1994
579 Wyoming Ave
Maywood NJ
07607

JUN 15 9 08 AM '94

Dear Ms Cange,

After reading the many articles in "The Shopper News" during the past several years as a resident of Maywood and parent of 2 children I say this,

"Its a health-hazzard — Dig the waste up and SHIP TO UTAH !!

No Soil WASHing

Lenore Titus

117688

92 Belle Ave.
Maywood, N.J. 07607
June 1, 1994

JUN 15 9 09 AM '94

Dear Ms. Cange,

Maywood is a highly populated area. Please ship out all the waste as agreed to by our politicians. This pile is a health hazard. Due to the many schools, day care centers, etc. removal of the waste is the only safe solution.

Very truly yours
Rosemary L. Nevins

11,7688

June 6 1994

To whom it may concern.

I am a homeowner and tax payer in Maywood N.J. It is about time this situation with Thorium removal is resolved I thought this was all settled with the governing bodies that this would all be completely removed. Even the fact that a lot of Thorium was brought in and dumped from other towns makes it ever more hazardous to the residents of Maywood N.J.

I do not approve of washing it down as there will be residue left and then if to much is left it will then turned into a dumping ground.

I want as a tax payer and homeowner the Thorium completely removed. Our Town has been exposed to this hazardous waste long enough

Sincerely

Mrs. Evelyn Lozier
55 W. Grove Ave.
Maywood, NJ 0761

117688

JUN 15 9 07 AM '94

May 31, 1994

Dear Suzan Cange;

I am sick of the EPA/DOE political Based rather than Health Based clean-up standard being applied to Maywood.

How dare you think that we are not smart enough to see the political action. In the Newspaper, The EPA Rep even admitted that they changed the plan to fall in line with the CLINTON Administration's efforts to reform the Superfund law

Nevermind your soil wash delay. First Clean up your act! Clean the residential areas first. The pile can wait. So can the Bullod Property.

You can use the Montclair bags for the residential waste clean-up - Not the MISS! Apparently those concerned citizens who have been picketing your meeting in Maywood and Wayne are wise to your Deceptive tricks If they picket again I'LL be out there with them! It seems our highly Populated area is of NO concern to the DOE. 15 pci/g is not a health based standard.

With so many daycare centers, schools, Municipal pools surrounding the MISS we need a 5pci/g standard.

sincerely

Robert J. Belby
1st FL. / 92 Belle
Maywood NJ 07607

117688

143 Lenox Ave.
Maywood, NJ 07607
June 08, 1994

Susan Cange, Site Manager
US Dept. of Energt
Former Sites Restoration Div.
PO Box 2001
Oak Ridge, TN 37831-8723

Dear Ms. Cange:

At the recent Maywood Sidewalk Sale I received a flyer at the Concerned Citizens table, that included a news-clipping dated February 26, 1992, that said, 'EPA could lead thorium clean up and DOE would not oppose it.

Your Mr. Seay said EPA could come in and continue the DOE's work without interruption.

It's now June, 1994 and no clean up. Why not give EPA a chance?

Didn't you let EPA take over Maywood's Utah Plan for Montclair?

Elizabeth Georgelis

CONTANT, SCHERBY & ATKINS
ATTORNEYS AT LAW
33 HUDSON STREET
HACKENSACK, N. J. 07601
(201) 342-1070
TELECOPIER (201) 342-5213

NEW YORK OFFICE
337 NORTH MAIN STREET, SUITE II
NEW CITY, N.Y. 10956
(914) 638-4925

FENSTER & WEISS, ESQS.
OF COUNSEL

JOHN M. CONTANT (1931-1988)
RICHARD JON CONTANT*
MICHAEL L. SCHERBY**
BRUCE L. ATKINS**
DANIEL P. GREENSTEIN*
MATTHEW S. ROGERS
ANDREW T. FEDE
BRIAN T. KEANE*

JULIE K. GRAPIN*
STEVEN D. GROSSMAN*
GERALDINE E. BEERS*
WILLIAM J. BAILEY
S.Y. KIM*

*ALSO MEMBER OF NY BAR
**ALSO MEMBER OF FLA BAR

PLEASE RESPOND TO:
HACKENSACK

June 9, 1994

Susan M. Cange, Site Manager
Former Sites Restoration Division
Department of Energy
Oak Ridge Operations
P. O. Box 2001
Oak Ridge, TN 37831

Re: Borough of Maywood, New Jersey

Dear Ms. Cange:

Please be advised that I am the attorney for the Borough of Maywood. I have been asked by the Mayor and Council to write to you to advise you of the opposition of the Mayor and Council to the cleanup proposal of which the Mayor and Council have become aware with regard to the Maywood Interim Storage Site ("MISS"). I enclose for your review copies of my letters of April 13 and June 6, 1994, to William J. Muszynski and Kathleen C. Callahan, Director of the United States Environmental Protection Agency ("EPA"). The Mayor and Council of the Borough remain steadfastly opposed to any cleanup standard other than the 5 pCi/g standard that had previously been endorsed by the EPA.

As noted in the enclosed letters, we have learned that the New Jersey Department of Environmental Protection ("DEPE") has continued to call for a cleanup in accordance with the 5 pCi/g standard, and the Mayor and Council hope that the DEPE's opposition will cause the EPA and the DOT to adhere to the 5 pCi/g standard.

In addition, the enclosed letters indicate the opposition of the Mayor and Council to the proposed soil washing operation. There are at least two reasons for this opposition. First, the Mayor and Council have not been provided with any evidence that the so-called soil washing technique will safely reduce the level of contamination to the 5 pCi/g standard. Second, the Mayor and Council are of the opinion that the proposed soil washing should not be conducted on the MISS. This site is in the middle of a highly populated and heavily traveled area.

Accordingly, based on all of the information available to the Mayor and Council, the position of the DEPE, and the previous position of the EPA, the Mayor and Council have no intention of approving the proposed resolution of the dispute between the DOE and the EPA, and oppose the revised cleanup proposal which we are told is scheduled to be formally presented to the public for comment in June 1994. Please consider this letter as the opposition of the Mayor and Council to that proposal if it has been presented for public comment. As I have not received a copy of same, I also ask you to send it to me.

Thank you.

Very truly yours,

ANDREW T. FEDE

ATF:RG
Enclosures
cc: Mayor and Council

117688

June 6, 1994

Kathleen C. Callahan, Director
Emergency and Remedial Response Division
United States Environmental Protection Agency
Region II
Jacob K. Javits Federal Building
New York, NY 10278-0012

Re: Borough of Maywood

Dear Ms. Callahan:

Thank you for your May 10, 1994 letter, which replies to mine of April 13, 1994. The Mayor and Council have asked me to write you to again express their strong disapproval of the "5/15" criteria for the cleanup, and opposition to a "soil washing" operation on the Maywood Interim Storage Site ("MISS"). The MISS property should be cleaned to the 5 pCi/g standard. Although you refer to land use considerations in your letter, the Mayor and Council are convinced that the "residential" standard is the only viable health-based standard for the MISS. The property should be cleaned up so that residential, commercial, or industrial uses are permissible. The time to do this is now, not later, as you imply, as land use changes affect the properties.

I enclose for your review Resolution No. 66, of the New Jersey Senate, which calls for the immediate removal of all contaminated soil from the MISS, and the related properties. The Mayor and Council of the Borough of Maywood have also expressed this demand by Resolution, as have the voters of the Borough of Maywood, by referendum.

The Mayor and Council also must again express opposition to the proposal for "soil washing" on the MISS. The MISS is in a highly populated and congested residential area. This is not the place for the use of the untested "soil washing" operation. I note the following, as reported by The Record on May 24, 1994:

An April 1993 report by the EPA on the proposed cleanup of thorium and radon in Orange stated: "No treatment technology is known today that can substantially reduce the toxicity, mobility, or volume of the type of radiation." The report suggested disposal of all the contaminated soil.

According to an EPA report released in December 1993, before it and the DOE resolved long-standing differences on how to remedy the Wayne and Maywood contamination problems, "separation of soil and radioactive contaminants has been ineffective and was considered "not feasible" for Maywood and Wayne.

Released in February, DOE literature introducing the soil-washing alternative said: "The effectiveness of [soil washing], or how well the process will work, is uncertain."

With this information at hand, the Mayor and Council strongly oppose soil washing at the MISS.

Of even greater significance, however, is the strong position taken by the New Jersey Department of Environmental Protection and Energy. As reported in The Record on June 4, 1994, the New Jersey DEPE has called the proposed clean-up plan "dangerous to the public." The DEPE has correctly called for strict adherence to the 5 pCi/g standard.

The Mayor and Council urge that the E.P.A. and the D.O.E. follow the lead of the New Jersey DEPE. I also request that you provide me with the information you refer to in your letter, which you state would indicate that the type of soil washing unit being considered has been operated safely and effectively elsewhere in the country. I also ask that you advise me of when and how the "revised cleanup proposal" will be formally presented for public comment.

Thank you.

Very truly yours,

ANDREW T. FEDE

ATF:RG
cc: Mayor and Council
Congressman Robert G. Torricelli
Senator Frank R. Lautenberg
William P. Schuber, Bergen County Executive
James Pasqualo, New Jersey Department of Health
Nicholas Martone, New Jersey DEPE
Governor Christine Todd Whitman
Commissioner Robert Shinn, New Jersey DEPE

BYRON BAER
SENATOR, 37TH DISTRICT
BERGEN COUNTY
125 STATE STREET
SUITE 205
HACKENSACK, NEW JERSEY 07601
(201) 343-3333
FAX (201) 343-1594

NEW JERSEY SENATE

117688

May 17, 1994

Hon. Mayor John A. Steurt and
Members of the Council
Borough of Maywood
459 Maywood Avenue
Maywood, NJ 07607

Dear Mayor Steurt and Council Members,

Enclosed is a copy of SCR 66 dealing with the removal of all thorium waste from Maywood and from your neighbors in Lodi and Rochelle Park. This matter has been a nagging problem for Maywood's citizens for too long and calls for immediate settlement.

I'd like to draw your attention to the fact that the resolution addresses contaminants that might be underground as well as those found in the pile.

My office remains ready to do everything possible to assist you to reach a satisfactory conclusion. I welcome your advice and help.

Sincerely,

Byron Baer

Byron Baer
Senator, District 37

SENATE CONCURRENT RESOLUTION No. 66

STATE OF NEW JERSEY

INTRODUCED MAY 12, 1994

117688

By Senator BAER

A CONCURRENT RESOLUTION memorializing the United States Department of Energy, the Environmental Protection Agency, and the Nuclear Regulatory Commission to take every expedient action, in conjunction with the officials of this State, to effectuate the immediate and permanent removal of thorium contaminated soil from sites in Maywood Borough, Rochelle Park Township, and Lodi Township, New Jersey.

WHEREAS, The radioactive metallic element thorium, a waste byproduct of certain manufacturing processes that occurred on-site from 1916 to 1959 at the Maywood Chemical Company in Maywood, New Jersey, was mixed with other substances and used as fill in several locations in residential areas of Maywood Borough, and had contaminated some properties in Rochelle Park Township and in Lodi Township; and

WHEREAS, Because of the imminent danger this situation posed, the United States Department of Energy in 1984 began a cleanup that removed approximately 40,000 cubic yards of contaminated soil from several of the affected properties, and constructed the Maywood Interim Storage Site to hold the contaminated soil on the site of the former Maywood Chemical Company; and

WHEREAS, This contaminated soil is now stored on-site, shielded only by plastic coverings, which are not adequate to reduce the risk of injury to the health of the citizens residing in the vicinity of the Maywood Interim Storage Site and to reduce the risk of harm to the environment; and

WHEREAS, Thorium contaminated soil still must be removed at the site of the Maywood Chemical Company, which was purchased in 1959 by the Stepan Chemical Company, and at several other sites in Maywood, Rochelle Park, and Lodi that were contaminated by thorium waste from the Maywood Chemical Company site; and

WHEREAS, This widespread contamination threatens the public health, safety and welfare of the citizens of these communities; and

WHEREAS, Although the United States Department of Energy has been slow to develop a plan for the removal of this contaminated soil and the Environmental Protection Agency has not as yet decided on a final strategy for the removal of the thorium contaminated soil from these sites, the Nuclear Regulatory Commission has recently licensed a site in the State of Utah to accept this type of waste and the Department of Energy has made a commitment to remove all the contaminated soil to that site; and

WHEREAS, It is imperative that there be no further delay in the removal of the thorium contaminated soil from these sites and that immediate action be taken to permanently remove all thorium contaminated soil from the Maywood, Rochelle Park, and Lodi sites; now, therefore,

April 13, 1994

William J. Muszynski, P.E.
Acting Regional Administrator
United States Environmental Protection Agency
Region II
Jacob K. Javits Federal Building
New York, NY 10278-0012

Re: EPA Region 2's Position on the Dispute Regarding Cleanup Levels for Radionuclide Contamination at the Maywood Chemical Company Superfund Site, Maywood, NJ

Dear Mr. Muszynski:

Please be advised that I am the attorney for the Borough of Maywood. The Mayor and Council of the Borough have received a copy of your March 23, 1994 letter to Joe La Grone in regard to the above-referenced matter. Although a more detailed statement is forthcoming, the Mayor and Council authorized me to immediately write to you to indicate their objection to the proposed clean-up plan referred to in your letter.

The Mayor and Council strongly object to the use of the 15 pCi/g standard. The Mayor and Council were under the impression that the EPA was enforcing a 5 pCi/g standard. The 15 pCi/g standard is not a health-based standard according to the information provided to us and is therefore unacceptable as a remediation level in the affected area.

Accordingly, the Mayor and Council of the Borough of Maywood urge you to stop any proceedings advancing the clean-up levels reached in your letter, and this demand is also being made to the Department of Energy, as a copy of this letter is being sent to Mr. La Grone. The Mayor and Council had hoped that the EPA would not waiver from the 5 pCi/g standard despite the position taken by the Department of Energy. They insist that you reconsider your proposal to agree with the Department of Energy's clean-up standard.

In addition, the Mayor and Council insist on the immediate removal of all of the contaminated soil from the Maywood Interim Storage Site and other affected properties in the vicinity. The Mayor and Council oppose any soil washing program on the site because of the obvious effects this will have on the health of residents in the area as well as people working for businesses surrounding the site. The Mayor and Council have not seen any evidence indicating that soil washing is an effective remediation measure that will reduce the level of contamination to the 5 pCi/g standard. Again, the Mayor and Council ask you to immediately rethink your position in regard to soil washing on this site. Instead, all contaminated soil should be removed from the site and either stored or treated elsewhere, far away from populated areas.

Thank you for your consideration, and if you have any questions, please do not hesitate to contact me.

Very truly yours,

ANDREW T. FEDE

ATF:RG
cc: Joe La Grone
Mayor and Council

Dear Ms Cange 117688

I just read the June 4th recore headline that says "U.S. talks at thorium cleanup"

Hooray for the state dept. of Environmental Protection! They say The Doe Plan is dangerous to the public, does not comply with state law or afford an acceptable level of protection to the public.

Wayne Mayor Waks says the federal agencies should get in line with state's directive and clean up should be quickly and safely.

Bergen County Exective Schuber will press Govenor Whitman to intervene for adoption of the state standards

Thanking You
Sheena Buchan
21 East Pleasant

SATURDAY
The Record
JUNE 4, 1994
Friend of the People It Serves

N.J. balks at thorium cleanup

By MICHAEL MOORE
Staff Writer

The state Department of Environmental Protection and Energy is refusing to approve the federal government's plan to remove thorium-tainted soil spread throughout Maywood and Wayne, a move that could further delay a cleanup first promised more than a decade ago.

Calling the federal Department of Energy's cleanup plan for 510,000 cubic yards of radioactive soil "dangerous to the public," the DEPE is withholding its needed approval until the federal agency agrees to meet stricter standards.

"We don't believe the DOE's cleanup plan either complies with state law or affords an acceptable

Asks U.S. to meet tighter standards

level of protection to the public," said Nick Martone, DEPE manager for the Maywood and Wayne sites. "We're not going to go along with this and give residents a false sense of security."

Trumpeted as one of the final obstacles to solving the radioactive soil woes of North Jersey, the DOE's long-anticipated cleanup proposal, hammered out with the federal Environmental Protection Agency, calls for contaminated dirt to be cleaned to a level of 5 picocuries of radiation per gram of soil in residential areas and 15 picocuries per gram in commercial districts.

But DEPE officials believe 15 picocuries is too high and want the 5 picocurie standard applied to both residential and commercial properties. Martone said cleanup cannot legally begin without DEPE approval.

A picocurie is a unit of radioactivity. Thorium is a radioactive element that breaks down into radon, a gas proven to cause lung cancer and other ailments.

Area officials support the DEPE's demand for a uniform 5 picocurie standard.

Wayne Mayor David Waks, who has been writing to the DEPE to push for stricter standards, ap-

See THORIUM Page A-8

THORIUM: State balks at U.S. proposal

From Page A-1

plauded the agency's decision. "I hail the DEPE," he said. "They are starting to see the light of day."

"At least the DEPE has taken a tough, protective stance. The federal agencies should get in line with the state's directive so we can clean this up quickly and safely," said Bergen County Executive William "Pat" Schuber. "I will be pressing Governor Whitman to intervene and push the federal agencies to adopt the standards of the DEPE."

Whitman spokesman Carl Golden said the governor is aware of North Jersey's thorium dilemma and is willing to intervene.

"The governor knows residents have a good cause for concern," he said. "This has to be cleaned up and, after consulting with DEPE commissioner [Robert Shinn], she will get things moving with the federal agencies."

But the DOE said New Jersey's apparent refusal to approve the plan could further delay the cleanup, first proposed in 1983.

"I don't know what will happen next and I'm not sure what the DOE or EPA's position is now," said Susan Cange, DOE site manager for Maywood and Wayne. "It's too early to say what we'll do. We're still waiting to get the state's position in writing."

The EPA, which originally supported a uniform 5 picocurie cleanup standard but later backed off after grappling with the DOE for a year, said the federal agencies may have to reconsider their positions.

"It's understandable why the state has misgivings," said Jeff Gratz, EPA site manager in Maywood and Wayne. "Our assumption of 15 picocuries being protective may have to be reevaluated. We may have to look at a lower criteria."

The thorium is a byproduct of the manufacture of gas lanterns at the old Maywood Chemical Works between 1916 and 1956, and at the former W. R. Grace & Co. plant in Wayne between 1948 and 1971.

Officials fear that the process of developing new standards, coupled with the possibility of disagreement negotiating a compromise, could further delay the cleanup of the soil, just as the DOE and EPA squabble delayed the existing plan for 13 months.

"I hope this doesn't turn out like it did a year ago between DOE and EPA," Cange said. "But I can't say for sure that it won't."

"Hubble Light York Beach, Maine" *Reproduction of original watercolor painting by John H. Millington*

Dear Mrs Conge,

117688

I read Mr Parodi's letter in the Our Town and agree with its contents. I oppose soil washing at 15 pci/g since it is not a health-based standard. Please record my opposition to your soiling washing plan of 15 pci/g and include Mr. Parodi's letter which is my feeling also. Maywood is too populated to not be cleaned up to a safe level. Maybe the entire town should come out and picket the D.O.E. office to show the nation that we don't believe that .15 pci/g is a safe standard

Yours truly,

Wayne H Westcott

628 Wyoming Ave

Maywood, NJ 07607

Letters to the Editor . . .

Parodi . . .

Dear Editor –

By waiting a week on your thorium birthday present article, you could have saved Congressman Torricelli from extreme embarrassment and asked him what's going on? Who is pressuring whom?

You quoted him on March 21, standing by the pile that he created, on the Maywood Interim Storage Site (MISS) he helped create via an agreement between the Department of Energy (DOE) and Stepan Company. Without a MISS, the hazardous wastes would have been shipped elsewhere just like at Montclair, Glen Ridge, West Orange, etc. Yes, excavate and dispose out of state. The NJ Department of Environmental Protection and Energy (NJDEPE) plan for Maywood was used for Montclair instead. You stated that Torricelli said the pile removal will take two to three years and DOE will release its plans in May for all the wastes beneath the MISS and at various residential and commercial properties in Maywood, Rochelle Park, and Lodi.

Also, that DOE plans to use a "soil washing"process to separate and reduce volume of contamination from clean soil. A process that *did not* work at the Montclair area sites and Maywood has *higher* concentrations of radioactive material than Montclair!

Finally, you said Torricelli made assurances that it is both the DOE and his intention to see to it that the clean up be carried out to the highest Environmental Protection Agency (EPA) standards. But three days later, on March 24, Senator Lautenberg announced that EPA and DOE had now agreed on "strict" cleanup guidelines of 5 pci/g above background for residential properties and 15 pci/g for commercial/government areas of the site. The residentials are in Lodi and Rochelle Park. Then there will be "inaccessible" properties, like under buildings, which will be ignored until they are demolished in the future or otherwise. If soil washing worked, the soil left behind can be contaminated as high as 15 pci/g, with no limits under the buildings. Thus along with unremediated soils under buildings, Maywood will be changed from an Interim Storage Site to a Permanent Disposal Site. But they promised five-year reviews to insure human health remains "protected"?

The state cleanup standard is 5 pci/g and NJEPA and USSEPA had clearly proven that 15 pci/g is *not* a health based standard and cited cancer risks involved.

As late as November 1993, six months after the Maywood dispute started, the EPA issued the action criteria for a West Chicago site, with the same kind of waste. They cited the law to prove 5 pci/g is a health based standard for cleanup of the residential areas *including* commerical, institutional and municipal properties. And that 15 pci/g is not a health based standard! But on March 24 the New York EPA acting administrator caved in by ignoring the EPA's own health based facts. Who is responsible? An investigation is in order. Let's call it "Backwater."

Our state officials must stand firm. Our local officials must urge the NJDEPE to insist on a 5 pci/g cleanup of all contaminated soil wherever it is, and the County and State Boards of Health as well! Mr. Torricelli said, "I will be working closely with both departments to ensure that the concerns of the citizens of Maywood are reflected in the final plan."

So be it. Excavate and dispose at Envirocare, Utah. No unproven soil washing delay. No more interim or permanent disposal site. Shipment of all wastes direct to Utah!

Maywood officials should insist now that these positions be reflected in the DOE proposed plan unless they disagree with Mr. Torricelli as Senator Lautenberg does.

Sincerely,
Chuck Parodi
48 West Grove

Eustace . . .

Dear Editor –

This letter is to urge Maywood Citizens to attend the April 27th meeting on the proposed new borough hall. This is a chance for us to ask questions and present our views about what we think Maywood should spend our future on.

An interested group of taxpayers could effectively sway our representatives to do just that, represent us!

Sincerely,
Timothy J. Eustace, D.C.
140 West Pleasant

117688

June 7 1994

To Whom it May Concern.

I am a homeowner and taxpayer in Maywood N.J. it is about time this situation with Thorium removal is resolved. I thought this was all settled with the governing bodies that this would be completely removed. Especially with the fact that a lot of Thorium was brought into Maywood and dumped from other towns making it even more Hazardous to the residents.

I do not approve of washing it down as there will be residue left and then we will become a dumping ground.

I want the Thorium completely removed. Maywood is a lovely town and we have been exposed to this Hazardous waste long enough.

Sincerely,

Margarita Tulon
619 Palmer Ave.
Maywood, N.J.
07607

117688

June 8, 199

JUN 15 9 27 AM '94

Susan M. Cange
U.S. Department of Energy
Former Site Restoration Div.
P.O Box 2001
Oak Ridge, Tennessee 37831-8723

Dear Ms. Cange;

We are absolutly and unalterably opposed to the soil washing remediation of the Maywood Storage Site.

This storage pile should be excavated and shipped to a disposal facility before the end of 1994.

The idea of attempting to reduce the volume of this soil by an untested procedure using non-existing equipment is preposterous. This treatment method would increase the airbourne contamination in a wide area during this operation and the residual soil

would be higher than the 5 pC1/g generally believed to be "safe". This is absolutely unexceptable for this or any other community.

Very Truly Yours,
Robert + Elizabeth Cloughley
592 Edel ave
Maywood N.J. 07607

117688

Susan M. Cange
U.S. Department of Energy
Former Sites Restoration Div.
P.O. Box 2001
Oak Ridge, Tennessee 37831-8723

June 8, 1994

Dear Ms. Cange,

We are one of a cluster of families suffering from environmentaly induced cancers probably resulting from close proximity to the Maywood Hazardous Waste Site

We and our neighbors want that site cleaned up by immediate removal to a proper disposal site. We oppose the proposed soil washing experiment because it will delay the elimination of this hazard and the residual soil will probably remain higher

than the 5 PCi/g generally considered to be "safe".

Very Truly Yours,
Jan + Jim Desmond
112 Lenox Ave
Maywood, NJ
07607

117688

June 8, 1994

Susan M. Cange
U.S. Department of Energy
Former Site Restoration Div.
P.O. Box 2001,
Oak Ridge, Tennessee 37831-8723

Dear Ms. Cange,

We are opposed to the soil washing proposed for the Maywood Storage site.

This hazardous waste site should be cleaned up immediately by removal to a proper disposal site.

Very Truly Yours,
Robert & Helen Clonfly
315 Esplanade
Maywood, NJ 07607

Jun 15 9 26 AM '94

117688

Ms. Susan Cange, Site Mgr.
U.S. Department of Energy Jun 15 9 25 AM '94
Former Sites Restoration Div.
P.O. Box 2001
Oak Ridge, Tennessee, 37831

Mr. & Mrs. Robert W. Holczer
81 Lenox Avenue
Maywood, NJ 07607-1139

June 7, 1994

As twenty-two (22) year residents, we feel we have too long endured the thorium problems in Maywood, New Jersey. With the approvals for the off-site disposal plan, we thought we would finally see an end to the hazards presented by the M.I.S.S. with the permanent removal of the thoriu waste. It appears this was pre-mature and too optimistic

Since the DOE's plan now calls for washing the contaminated soil, merely to reduce volume, but leaving contaminates here which are still considere to be at too high a level of radation by the DEPE; what will really have been accomplished? Maywood will have become a permanent site of radioactive waste, the health hazards will still exist, and property values will continue to decline, since NO real clean-up and disposal will have actually takenplace.

The people of Maywood want the federal and stat agencies to work together quickly to resolve their differences and rid Maywood of this material at once and for all time.

Sincerely
Robert W Holczer

Ms Cange,

How can DOE and EPA reject a plan for Maywood that EPA already approved for Montclair when DOE ignored the plan for Maywood in 1989? This plan was recommended by the state and the pile would have been gone in 1990.

Now you are talking 1996 and soil washing that did not work in Montclair. Is it not true that Maywood's wastes are higher levels than Montclair? But you still want to play with the soil wash.

Play with it if you like but don't play in Maywood! Our property values will drop if this becomes a permanent waste site!

Sincerely,
Mr. + Mrs. Pat And
504 Maywood Ave.
Maywood, NJ.

6/15/94

Dear Mr. Canger:

We have been residents of Maywood for 28 years. Most of the time we don't get involved with town politics or town causes because we're too busy to bother or we just ignore the problems that face our town. But we can no longer be still to this Thorium problem. We have been told over & over again that this contaminated soil will be removed from our town only to learn that more soil from other towns has been [illegible] [illegible] to worry about their future. But recently I have undergone surgery for a gallbladder [illegible] so maybe there is some truth to the contamination that has spread to the Maywood park area. I am tired of having [illegible]

[illegible]

documents concerning this Thorium pile.

As we near the time to retire & sell our house I fear it will be worth nothing as the value of our home decrease with the threat of Maywood becoming a permanent hazardous waste site.

We want this Thorium Pile removed not cleaned & hidden under tarps with other hazardous [illegible]

[illegible]

and thank you for your attention to this very critical matter.

[illegible] Ayala
[illegible] Belle Ave
Maywood, NJ

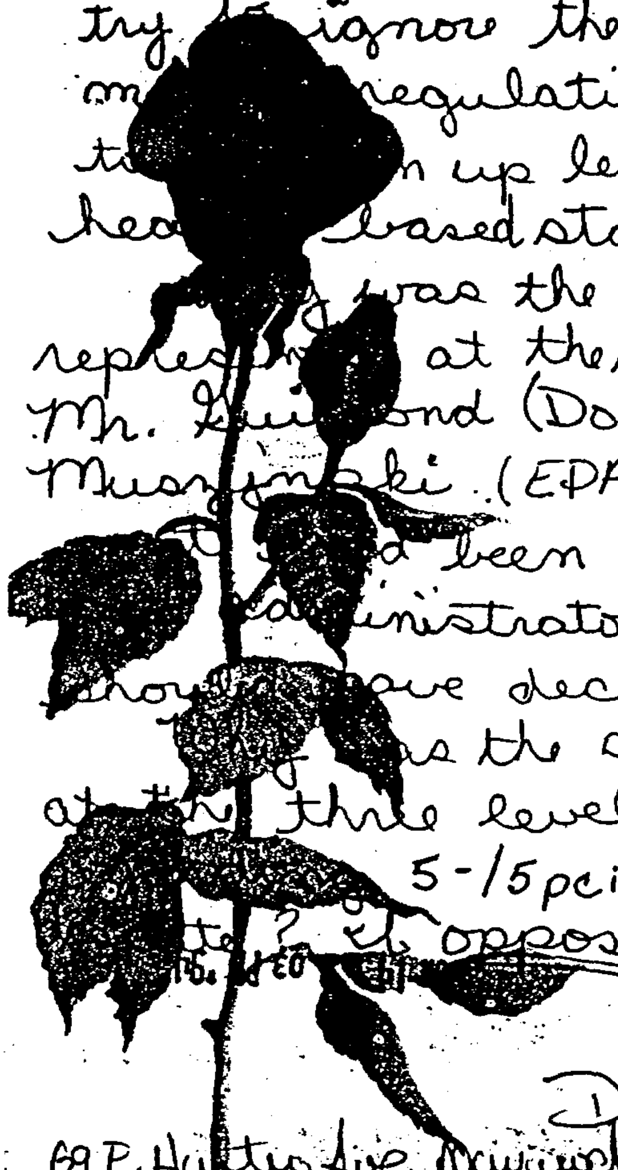
6/3/94

To Ms. Cange

Why did the DOE and EPA try [illegible] ignore the state's enviro m[illegible] regulations by switchi t[illegible]n up level that is <u>not</u> hea[illegible] based standard?

[illegible] was the state not repres[illegible] at the meeting betwee Mr. [illegible]ond (DoE) and Mr. Muszynski (EPA) after no agre [illegible]d been reached and t [illegible]ministrator, Carol Browne shou[illegible]ve decided?

[illegible] as the state not presen at th[illegible] three levels of meeting 5-15pci/g or 5Pci/G [illegible]te? I <u>oppose</u> soil washing



Sincerely,

Debrar + George

69 E. Hastings Ave Maywood Aiesinger

117688

614 Palmer Ave
Maywood, N.J.
07607.

Jun 14 1 53 PM '94

June 9, 1994

Dear Lisa Madan,

I am a homeowner and a tax payer in Maywood, N.J. I am very disturbed about the Thorium situation in town & hope the removal of it will be resolved soon. I understood that the removal was all settled with the governing bodies. We had Thorium brought in & dumped on us from other towns making it more hazardous to the residents of Maywood.

I do not approve of the washing down because of the residue that will be left. It will turn into a dumping ground.

I want the Thorium completely removed. We have been exposed to this hazard long enough. The cancer rate is too high in Maywood.

Sincerely
Mary A. Neill

only plan B given is the correct one - ship all of the soil to Utah for the future health of our citizens and town.

Sincerely,

Mrs. Josephine Gioia
817 Maywood Avenue
Maywood, NJ 07607

6/7/94

Ms. Conge -

The presence of radioactive materials and by products in the limited light industrial district is a prohibited use under Maywood's Land Use Code. The MISS was put in this district. DOE has been in violation and would further violate if they tried to bring in additional radioactive materials.

But so that you and EPA know about it, the MISS has been rezoned to commercial high rise. The Lionel property is now in a mid-rise residential zone.

I therefore oppose the 5-15 alleged clean up and the soil washing plan. The

11768

International
Association
Of Machinists
And Aerospace
Workers

LOCAL LODGE 1018
1943 ANNIVERSARY 1993

Local Lodge 1018
Post Office Box 31
La Guardia Station
Flushing, N.Y. 11371
Phone and Fax Number
516-997-0312

Pride In The Past *Faith In The Future*

RE: Public Comments (EE/C on clean up

475 Bergen Avenue
Maywood, NJ 07607
June 07, 1994

Susan Cange, Site Manager
U.S. Department of Energy
Former Sites Restoration Division
P.O. Box 2001
Oak Ridge, Tennessee 37831-8723

Dear Ms. Cange:

The DOE lacks credibility in Maywood. See our 11/22/89 letter to R.P. Whitfield giving many reasons for our opinion for comments in DOE FY 1991-1995 brochure-8/89. Note Comment and DOE Response (1989)

ISSUE 17
COMMENT: DOE has no credibility in Maywood, New Jersey, where DOE officials cannot be trusted. Maywood has been the victim of lies and deceits.

DOE Response Pg. 247
ENVIRONMENTAL RESTORATION

RESPONSE: It is the intent of the Five-Year Plan to encourage public comment about concerns to assist 4DOE in dealing with its environmental problems. Frank discussions of current environmental problems with all interested parties is a major ingredient of the Five-Year Plan. It is the intention of the Department that through these discussions, new avenues of understanding can be developed by all concerned and that the Department's credibility with Federal and State agencies, Tribal governments, and the public can be restored. Any methods to improve this communication would be appreciated and should be identified to DOE.

Five years later, our opinion is that DOE lacks greater credibility. DOE has not improved relationship with the public in accordance with above Response, and even despite the establishing of an office in Maywood to improve their public relation image.

See 3/30/93 (Torell to O'Leary) ltr - regarding further subterfuge activity by DOE personnel, political activity on Tag Grants, lies and deceipt.(copy attached).

Approximately 5 years ago, March 18, DOE personnel met with local officials and the Envirocare representative, at which time it was decided that when Envirocare obtained the permit to accept mixed waste, it would be shipped to Utah. When this permit was received DOE classified the waste 11(e)2. Envirocare later received a permit to accept the 11(e)2.

See attached newsarticle (9/21/93) Record - Agency OKs dump site for contaminated soil - Clears the way for clean up in North Jersey. Senator F.R. Lautenberg quotes, "Soon, there will be a facility to ship these deadly toxics to. This clears a huge stumbling block in our efforts to get these wastes out of New Jersey."

S. Cange
6/07/94

Re: Public Comment on
Clean up of MISS

Subsequently to this good news, DOE personnel comes up with a soil washing method- an UNAPPROVED METHOD for clean up. Such a method DID NOT WORK IN MONTCLAIR, but DOE personnel has the gall to attempt to use it in Maywood and the nerve to call such an unproven method - technology. We have asked our officials that their office of public relations be closed, but perhaps while they are still here, the office should be called a propaganda office to brainwash the public into accepting the soil washing.

We have fought long and hard in Washington for passage of the Right to Know Law, which was enacted to protect the worker in hazardous industries and people who live near toxic waste sites. See attached copies of Rachel's Hazardous Waste News #370, Chemicals and Health - Part 2 and #371-Chemicals and Health, Part 3, stating facts regarding increased risk of birth defects and some specific cancers to people living near a hazardous waste sites.

See attached Record newsarticle (6/4/94) N.J. balks at thorium cleanup - Asks U.S. to meet tighter standard and states that cleanup cannot legally begin without DEPE approval, and 6/8/94 newsarticle -EPA cuts price tag for radium cleanup - Essex project also taking less time.

IT CAN BE DONE FASTER AND CHEAPER - The clean up. THIS SHOULD BE APPLIED TO MAYWOOD TOO!!!

The DOE should not sacrifice the health of the public at any expense.

The original plan for Maywood is "Excavate and ship out once there was a place to put the waste". That is what the public has been fighting for the last 10 years.

While Secretary Hazel O'Leary welcomes whistle blowers, DOE personnel never acknowledged our requests for a meeting with her. We therefore have every reason to believe that our letters never reached the Secretary, but have been cut off with responses forwarded by her underlings.

Unless DOE personnel in charge of this project brings our requests to the attention of Secretary O'Leary, and giving her the true facts on this serious health issue, the matter should be forwarded to the Attorney General's office for a full investigation.

Sincerely,

Peter T. Torell
Peter T, Torell

Louise Torell
Louise Torell

ENCS: As stated above

cc: Concerned Citizens of Maywood

475 Bergen Avenue
Maywood, NJ 07607
November 22,1989

DRR 435-121-391

Mr. R.P. Whitfield
Office of Defense Waste and
Transportation Management
DP-112 Attn: Five Year Plan
Department of Energy
Washington, D.C. 20545

Dear Mr. Whitfield:

#1 Your "Five Year Plan" (5 x 5) is almost as bad as your statement that "if DOE is to maintain credibility with the communities, cleanup must continue. "DOE HAS NO CREDIBILITY IN MAYWOOD.

#2 All we have seen is arrogance, lies, unethical collusion with certain local officials including deceiving the public, soliciting Maywood Borough Attorney for his suggestions prior to submitting draft proposal to Maywood officials and refusing even under the Freedom of Information Act to furnish their attorney solicitation letter alleging it to be interagency.

Lies: (A) R. Atkin (DOE) Executive Work Session- Maywood Mayor/Council, March, 1988
DID HE NOT STATE:

1. Did not know vicinity properties contained chemicals. (Despite Ebasco 1987 Report?)

2. Did not know Voit Co., a vicinity property had allegedly been cleaned up via ECRA (NJ).

3. Did not know NJPDES Permit NJ 0054500 limited storage on MISS to 180,000 cu. yds. including contaminated soil present at site prior to USDOE involvement. (And there goes your 5 year plan). There is 130,000 cu. yds. stored now.

4. More than once, publicly, including the Rochelle Park Planning Board that Congress had mandated DOE ownership of the MISS which Maywood vehemently opposed. (But James W. Vaughan, Acting Asst. Secretary, DOE, June 12, 1986, exposed that lie when he wrote Senator Bradley advising there has been no Congressional direction concerning the acquisition of a portion of the Stepan Co. for use as MISS. Even former Mayor Panos said DOE should agree to a fixed lease).

(B) Peter Crose, DOE, 2/19/88 to M.J. Nolan/Peter Torell
He said, "We did not find chemical contamination at the Ballod property".

1. Joyce Feldman, EPA, (6/12/86) to Mr. R. Atkin, DOE, "DOE is authorized to analyze soils at DOE sites for radiological characteristics only...No authority exists for DOE to certify chemical decontamination of a property, according to our discussions". Where are Crose's test results???

2. Joyce Feldman, EPA, 5/5/87 to M.J. Nolan

"Mr. Trela addressed question you raised inconnection with removal of chemical contamination from the Ballod property prior to construction of the nursing home...All soils removed by DOE have been stored at the MISS". But J. Wagoner II, DOE, insists they are not in violation of the Memo of Understanding with Maywood that only allows radiological storage. The State permit does not authorize chemical/heavy metals either.

175

3. James W. Stanley, Dept. of Labor, OSHA to Peter Torell (5/18/87)

"...That employees working at the Maywood construction site (Ballod property) were not being exposed to the contaminants (thorium & organic solvents that were present before the remediation".

4. David Paley (NJDEP) to Schepisi & McLaughlin (12/5/85) re: Ballod Property

"Results indicated contamination present in southern portion of property at approximately 100 parts per million - groundwater has not yet been investigated. When investigationis performed there is strong possibility of encountering contaminated groundwater - because of known radioactivity, possibility cannot be ruled out of radon gas eventually beingdetected,especially in basement of a future home (nursing home?) Ballod and Rochelle Park are not included in your 1st 5 year plan. Which 5 year plan would they be in?

5. John J. Trela (NJDEP) 12/2/86 to Peter Torell

"With regard to Ballod property nursing home - The Dept. has monitored closely both the radioactive and chemical contamination at the site."

Would you say your Mr. Crose was more than grossly in error? Why hide the presence of chemicals/heavy metals that EPA knew were present in 1981. What was his reason?

6. Then there was F. Brezenski, USEPA, to MYU Campbell, USNRC (1981) with test results showing arsenic, chromium,copper, lead, hydrocarbons, etc.

DECEIT: R. Atkin (DOE) meeting with Maywood Mayor and Attorney - August 5, 1985

Wherein DOE is asked to furnish letter stating that current volume estimate of Lodi residential is 300 yds^3. Estimate was actually much higher. But a small volume would be easier to sell to Maywood residents.

In a letter of August 26, 1985, E.L. Keller, DOE, not only complies but includes a draft press release for Mayor to use stating 350 cu. yds would be moved. This figure was used in the local newspaper but DOE already had approval (see 8/26/85 letter) before the issue came before the Mayor & Council. In New Jersey there is something known as the Sunshine Act. Lodi estimate for 1985 actually was 3000 yd^3 and is now about 25,000 yd.^{3}.

Do you expect us to trust the DOE? and especially your first 5 yr plan of at least 25 years?

For a finale, refer to George B. Brezney (DOE) letter of April 13, 1987 to Peter Torell and read his Decision and Order. It is enclosed. Pages 1,2, and 3 should be enough. He advite he consulted with Borough's Attorney for his comments before making a settlement proposal in final form to the Borough which would be an attempt to end litigation challenging DOE's title to the property. Was not the DOE using the attorney hoping to sell the Borough whose interests should be the attorney's concern?

To top it off - Mr. Brezney had the gall to call it an inter agency communication? Then we were denied copy of R.S. Wittenauer's (DOE attorney) 7/24/86 solicitation letter to Maywood attorney in which he submitted the draft seeking any comments, changes, etc. that the Borough attorney may have.

Finally we received a copy of the July 24, 1986 letter showing the first two paragraphs and the rest, blank. (copy enclosed).

11798

Ask Mr. Watkins if he approves of these unbelievable actions of DOE officials or will he call for a GAO investigation?

In a letter of April 23, 1989 to me, Gordon Binder, Chief of Staff, USEPA, stated, quote - "I wish I could have broken through all obstacles in one fell swoop but this matter is now interagency which means we've got to work with DOE."

#3 Certainly this should be changed. The USEPA and NJDEP should handle the Utah Disposal Plan with proper enforcement against the responsible party/ parties.

Sincerely,

Louise Torell

Louise Torell, Secretary
Concerned Citizens

Encs.
cc: Admiral J.D. Watkins, Secy (DOE)
Congressman Florio
Congressman Courter
Congressman Roe
Senator Lautenberg
Mayor & Council, Maywood
Wm. Reilly, Administrator (USEPA
Senator Bradley

176

P 326 190 825

475 Bergen Avenue
Maywood, NJ 07607
March 30, 1993 11768

Hazel O'Leary, Secretary
Department of Energy
1000 Independence Avenue, S.W.
Washington, DC 20585

Dear Ms. O'Leary:

These are my comments on the DOE Five Year Plan 1994-1998, sent to assure inclusion in the comments and responses.

First, the Site Manager and personnel involved at the DOE "information" office in Maywood have carefully managed to keep the 1994-1998 plan out of the hands of Maywood residents. There has been no copy at the office and, as late as March 24, the site manager said, "Oh, they are updating the 1994-1998 Plan".
Yes, there is a general lack of trust of DOE here and at the site in Wayne, N.J.

Such an information office is a waste of taxpayers money. This is what DOE terms a Community Relations Program to educate the public. See the first attachment showing pickets and the cost for the unnecessary office.
(NO MORE THORIUM, PROTESTORS DEMAND - 4/24/92)

And the second attachment - (Why Have They Lied to You!!! - You Have the Right-to-Know!!!) This quotes Mr. William Seay and James Wagoner (both DOE) saying more funding to start a Utah (disposal) move would be available if EPA reassumed control of the Maywood Project through its Superfund. Mr. Wagoner is quoted saying EPA has a pot of money called Superfund and DOE does not because they have to request the money. Why shouldn't EPA reassume control of the Project. It was a Superfund Site since 1983 and <u>never was a Fusrap Site.</u> Proof of this is readily available.

The <u>third attachment</u> is an <u>August 25, 1992 memorandum</u> from Concerned Citizens of Maywood, N.J. to Bergen County Executive, Wm. Pat Schuber on the subject: Legal EPA TAG Grant vs. DOE Illegal TAG Grants?

While Page I-172 of the 5 Year 1994-1998 DOE Plan says the cleanup process must not be politically controlled but must be a joint effort between municipalities and the government for the benefit of the public - the memo shows use/missuse of a $50,000.00 carrot to set up a local politicians coalition to work toward DOE's goal of overcoming the public's objections to and mistrust of DOE personnel and activities - especially DOE's intent to continue to store wastes in Maywood from other towns about which they lied. After 10 years Maywood has 35,000 more cu. yards from outside.

We certainly expect some investigative action, not just the usual curt response "summary".

Sincerely,

Louise Torell

Louise Torell
(201-845-8394)

cc: President Bill Clinton

P.S. See attached for list
of enclosures

117688

Agency OKs dump site for contaminated soil

Clears the way for cleanup in North Jersey

By CHRISTOPHER MUMMA
Staff Writer

The federal Nuclear Regulatory Commission on Monday granted a key approval in the long-running effort to clean up thorium-contaminated soil in Maywood and Wayne, allowing for the storage of uranium and thorium at a remote site in Utah.

In approving the 4-year-old application by Envirocare of Clive, Utah, the NRC established the first commercially licensed facility in the United States for the disposal of low-level radioactive material like thorium. Formal approval from the federal Environmental Protection Agency is expected within the month.

Thorium, a byproduct of the manufacture of gas lanterns at the Maywood Chemical Works between 1916 and 1956, has been found on property formerly owned by the Stepan Co. Thorium is a radioactive element that breaks down into radon, a gas linked to lung cancer.

By the estimates of the federal Department of Energy, there are about 400,000 cubic yards of thorium-contaminated soil at 55 properties in Maywood, Rochelle Park, and Lodi. About 35,000 yards of soil

See THORIUM Page B-2

BERGEN RECORD TUESDAY, SEPTEMBER 21, 1993

THORIUM: EPA approval expected

From Page B-1

is stored under tarpaulins in Maywood.

The Wayne site, formerly owned by the W.R. Grace Co., a chemical and shipping firm, contains about 40,000 cubic yards of contaminated soil, all of which is being stored. Soil from that site was contaminated when the firm extracted the element and rare materials for use in gas lamps and optical lenses.

Both sites are on the EPA's Superfund list.

The DOE, which has been in charge of the cleanup since 1985, was expected to release a cleanup plan for the Maywood site in July. That plan, which could cost up to $416 million, called for the disposal of some part of the soil in Utah or Washington. No timetable for the removal of the soil has been established.

But a disagreement between the DOE and the EPA over the definition of contaminated soil has delayed the release of the plan. Despite the delay, New Jersey Sen. Frank R. Lautenberg welcomed the approval by federal regulators.

"This is great news for the citizens of Wayne and Maywood," Lautenberg said in a statement. "Soon, there will be a facility to ship these deadly toxics to. This clears a huge stumbling block in our efforts to get these wastes out of New Jersey."

The Utah site to which the soil will be taken is an uninhabited, remote location about 100 miles west of Salt Lake City. Just off Interstate 80 in the Great Salt Lake Desert, Clive is home to two large hazardous-waste disposal firms, and not much else.

Clive is part of a larger, 100-square-mile zone known as the Hazardous Industry Area, where a number of hazardous waste firms are located, said Myron Lee, a public education specialist in Toelle County, Utah.

"It's not really a town," Lee said. "It's kind of like a milepost in the road. It's 50 miles from nothin'."

Staff writer Colleen Mancino contributed to this report.

CHEMICALS AND HEALTH--Part 2

The Assistant Surgeon General of the U.S. Public Health Service, Barry L. Johnson, told Congress in May 1993 that living near a hazardous waste site "seems [to be] associated with a small to moderate increased risk of some kinds of birth defects and... some specific cancers."[1] Since 1986 Johnson has been Assistant Administrator of the Agency for Toxic Substances and Disease Registry [ATSDR], the unit of the Public Health Service that Congress created to deal with hazardous waste health issues.

Johnson told Congress that "health investigations of communities around some... hazardous waste sites have found increases in the risk of birth defects, neurotoxic disorders, leukemia, cardiovascular [heart and circulatory system] abnormalities, respiratory and sensory irritation, and dermatitis [skin disorders]."

Johnson told Congress there were 1331 dump sites on the official Superfund list, as of last May. He said industrial solvents are present at 87% of the sites; inorganic compounds (such as lead) at 87%, and pesticides at 50% of the sites. He said 41 million Americans live within 4 miles of 1134 Superfund sites that were studied. On average, 3325 people live within one mile of each site; since there are 1331 listed sites, this means a total of 4.6 million Americans live within a mile of an official Superfund site today.

Johnson said a typical site contains more than 100 different chemicals; "such mixtures may be much more toxic than any of the individual chemicals," he told Congress. [The situation is actually somewhat worse than Johnson described. U.S. Environmental Protection Agency (EPA) analyzed leachate at 13 representative hazardous waste sites from across the country. Only 4% of the organic chemicals in the leachate were identified by gas chromatography/mass spectroscopy [GC/MS], but this 4% included 200 individual chemical compounds, including 13 metals. "The unidentified 96%" of the organic chemicals is "of unknown toxicity," the National Research Council said when it reported EPA's findings in 1991.[2]]

To illustrate the point that even a single chemical can cause real problems, Johnson discussed the industrial solvent trichloroethylene (the second-most common chemical found at Superfund sites, after lead). He said, "An increasing body of scientific evidence indicates past exposures to hazardous substances can cause latent [delayed] adverse health effects. Recent findings from the ATSDR exposure registry of approximately 5000 persons exposed in the past to trichloroethylene (TCE) in drinking water showed registrants reporting elevated rates of diabetes, stroke, elevated blood pressure, and neurologic problems."

Johnson then described two large cancer studies that compared the health of people in counties with hazardous waste sites to the health of people in counties without hazardous waste sites. Both studies found an increased frequency of cancers in counties with hazardous waste sites. A 1983 study reported that age-adjusted gastrointestinal (GI) cancer death rates were higher than national averages in 20 of New Jersey's 21 counties (for the period 1968-1977). The environmental variables that correlated most closely with elevated death rates were population density, urbanization, and presence of toxic waste disposal sites.[3] A 1989 study looked at 593 hazardous waste sites in 339 U.S. counties (in 49 states) where contaminated ground water was the sole source for drinking, during the period 1970-1979.[4] (*See RHWN #127.*) Excess cancer deaths were found in counties with hazardous waste sites compared to counties without hazardous waste sites for the following kinds of cancers: lung, bladder, esophagus, stomach, large intestine, and rectum for white males; and cancers of the lung, breast, bladder, stomach, large intestine, and rectum for white females. Non-whites were not studied.

Johnson described a study by the New Jersey Department of Health of reproductive effects associated with contaminated drinking water.[5] Public drinking water systems were evaluated in 75 towns in northern New Jersey. The study looked at all live births and stillbirths (excluding chromosomal defects and plural births) during the period 1985-1988 in the 75 towns. The 75 towns were not know to have excessive health problems. Although some water systems had levels of certain contaminants above federal standards at the time of the study, contamination levels in the 75 towns are thought to be typical of U.S. water supplies, Johnson told Congress.

In the 75 towns, statistically significant associations were found for the following: total trihalomethanes [the chemicals formed in drinking water supplies when chlorine is added to kill germs] were associated with low term birth weight, intrauterine growth retardation, central nervous system defects, and major heart defects. Trichloroethylene (TCE) was associated with neural tube defects [defects of the spinal cord and brain] and oral cleft defects [for example, cleft palate]. Carbon tetrachloride was associated with low term birth weight, intrauterine growth retardation, central nervous system defects, and oral cleft defects. Dichloroethane was associated with major heart defects, and dichloroethylenes were associated with central nervous system defects.

Johnson then described a large study of birth defects among children whose mothers lived near waste dumps in New York state. "A particularly important study[6] examined the association between congenital malformations in children and maternal proximity to hazardous waste sites in the state of New York," Johnson told Congress. Researchers at the Yale University School of Medicine and the New York State Department of Health (NYDOH) studied 27,115 births and concluded that, overall, women living within a mile of an inactive dump have a 12% greater chance of bearing a child with a major birth defect, compared to women living further than a mile from a dump. (*See RHWN #313.*)

The researchers looked at 590 inactive dump sites in 20 northern New York Counties. Among the 590 sites studied, 90 were ranked as "high risk" sites because there was documented evidence that chemicals had migrated off the sites. The study found that women living within a mile of any of these 90 sites had a 63% greater chance of bearing a child with a major birth defect, compared to women living further than a

HAZARDOUS WASTE SITES
HEALTH RISKS
ON
CANCERS and BIRTH DEFECTS

RACHEL'S HAZARDOUS WASTE NEWS #371

Providing news and resources for environmental justice – January 6, 1994

MAYWOOD HAS SIMILAR WASTES !!!

CHEMICALS AND HEALTH—Part 3

Several studies of industrial dumps and contaminated water supplies during the last decade have reported adverse health effects among exposed human populations.[1] The principal health findings include:

• Significantly reduced stature (height) for a given age among children who lived near Love Canal, the chemical waste dump in Niagara Falls, N.Y., compared to a control group of children living further from the dump.[2]

• A higher prevalence of birth defects and liver disease among persons living near a thorium waste disposal site in Wayne, New Jersey, compared to persons living further away from the site.[3] (Thorium is a naturally-occurring radioactive element processed on this site by a private firm under contract to the old Atomic Energy Commission, now called the Department of Energy.)

• Low birth weight and birth defects in California children born in census tracts having waste disposal sites.[4]

• Enlargement of the liver (hepatomegaly) and abnormal liver function tests reported in residents exposed to solvents from a toxic waste dump in Hardemann County, Tenn.[5]

• Dermatitis, respiratory irritation, neurologic symptoms and pancreatic cancer at 7 waste disposal sites.[6]

• Significantly elevated rates of illness, including chronic kidney disease, stroke, hypertension [high blood pressure], heart disease, anemia, and skin cancer in a population exposed to toxic metals (cadmium and lead) from mine wastes in Galena, Kansas.[7]

• Leukemia (cancer of the blood-forming cells) among a group of children drinking water contaminated with industrial solvents in Woburn, Mass. In addition, a study of 4936 pregnancies and 5018 residents of Woburn aged 18 or younger revealed significant positive associations between intake of contaminated water and birth defects of the central nervous system, eye, ear, and face (e.g., cleft palate), as well as abnormalities of the chromosomes.[8]

• In Lowell, Mass., a group of 1049 people living 1200 feet from a large chemical waste dump was higher in self-reported complaints of wheezing, shortness of breath, cough, and persistent colds; irregular heart beat; constant fatigue and bowel dysfunction, compared to people living 2 and 3 times as far from the dump.[9] This study examined the possibility of recall bias (people selectively remembering health problems, or chemical exposures) and concluded that recall bias did not explain the findings.

• In Hamilton, Ontario, a study of people who lived and/or worked near an industrial dump revealed significantly elevated rates of the following conditions: bronchitis; difficulty breathing; cough; skin rash; arthritis; heart problems (angina [chest pain], and heart attacks); muscle weakness in arms and legs; tremors, cramps, and spasms; headaches; dizziness; lethargy; balance problems; and mood symptoms (anxiety, depression, insomnia, irritability, and restlessness) compared to populations living further from the site.[10] Recall bias was examined and rejected as the source of these problems.

• A survey of 2039 persons in 606 households living near the Stringfellow Acid Pits in Riverside County, California revealed significantly elevated rates for the following conditions: ear infections; bronchitis; asthma; angina [chest pain]; skin rashes; blurred vision; pain in the ears; daily cough for more than a month; nausea; frequent diarrhea; unsteady gait; and frequent urination.[11] ... Recall bias was examined and rejected as the cause of these problems.

• In Tucson, Arizona, a study of 707 children born with heart defects revealed that 35% of them were born to parents living in a part of the city where the water supply was contaminated with industrial solvents (trichloroethylene [TCE], and dichloroethylene). The rate of birth defects of the heart was three times as high among people drinking the contaminated water, compared to people in Tucson not drinking contaminated water.[12]

• A study of 296 women experiencing a spontaneous abortion during the first 27 weeks of pregnancy, compared to 1391 women having live births, revealed an association between spontaneous abortion and drinking water contaminants (detectable levels of mercury, or high levels of arsenic, potassium and silica).[13]

• Residents of Bynum, North Carolina, drinking raw river water contaminated by industrial and agricultural chemicals, have developed cancers 2.4 to 2.6 times more often than expected.[14]

To summarize: Epidemiological studies cannot prove a cause and effect relationship. Nevertheless, available information indicates that hazardous waste dumps can harm, and have harmed, humans living nearby. Likewise, contaminated water supplies have harmed people.

The problem of waste dumps is continuing to grow. As the National Research Council of the National Academy of Sciences said in 1991, "A limited number of epidemiologic studies indicate that increased rates of birth defects, spontaneous abortion, neurologic impairment, and cancer have occurred in some residential populations exposed to hazardous wastes. We are concerned that other populations at risk might not have been adequately identified." And the Council said, "Millions of tons of hazardous materials are slowly migrating into groundwater in areas where they could pose problems in the future, even though current risks could be negligible."[15]

There is a move afoot now in Washington, and in the mass media, to divert attention away from the problem of toxic wastes. The goal seems to be to cut funding for the federal Superfund program of toxic waste cleanup. It seems clear that such a move, if successful, will result in increased health costs for the American people.

SATURDAY
The Record
JUNE 4, 1994 Friend of the People It Serves

N.J. balks at thorium cleanup

By MICHAEL MOORE
Staff Writer

The state Department of Environmental Protection and Energy is refusing to approve the federal government's plan to remove thorium-tainted soil spread throughout Maywood and Wayne, a move that could further delay a cleanup first promised more than a decade ago.

Calling the federal Department of Energy's cleanup plan for 510,000 cubic yards of radioactive soil "dangerous to the public," the DEPE is withholding its needed approval until the federal agency agrees to meet stricter standards.

"We don't believe the DOE's cleanup plan either complies with state law or affords an acceptable

Asks U.S. to meet tighter standards

level of protection to the public," said Nick Martone, DEPE manager for the Maywood and Wayne sites. "We're not going to go along with this and give residents a false sense of security."

Trumpeted as one of the final obstacles to solving the radioactive soil woes of North Jersey, the DOE's long-anticipated cleanup proposal, hammered out with the federal Environmental Protection Agency, calls for contaminated dirt to be cleaned to a level of 5 picocuries of radiation per gram of soil in residential areas and 15 picocuries per gram in commercial districts.

But DEPE officials believe 15 picocuries is too high and want the 5 picocurie standard applied to both residential and commercial properties. Martone said cleanup cannot legally begin without DEPE approval.

A picocurie is a unit of radioactivity. Thorium is a radioactive element that breaks down into radon, a gas proven to cause lung cancer and other ailments.

Area officials support the DEPE's demand for a uniform 5 picocurie standard.

Wayne Mayor David Waks, who has been writing to the DEPE to push for stricter standards, ap-

See THORIUM Page A-8

THORIUM: State balks at U.S. proposal

From Page A-1

plauded the agency's decision. "I hail the DEPE," he said. "They are starting to see the light of day."

"At least the DEPE has taken a tough, protective stance. The federal agencies should get in line with the state's directive so we can clean this up quickly and safely," said Bergen County Executive William "Pat" Schuber. "I will be pressing Governor Whitman to intervene and push the federal agencies to adopt the standards of the DEPE."

Whitman spokesman Carl Golden said the governor is aware of North Jersey's thorium dilemma and is willing to intervene.

"The governor knows residents have a good cause for concern," he said. "This has to be cleaned up and, after consulting with DEPE commissioner [Robert Shinn], she will get things moving with the federal agencies."

But the DOE said New Jersey's apparent refusal to approve the plan could further delay the cleanup, first proposed in 1983.

"I don't know what will happen next and I'm not sure what the DOE or EPA's position is now," said Susan Cange, DOE site manager for Maywood and Wayne. "It's too early to say what we'll do. We're still waiting to get the state's position in writing."

The EPA, which originally supported a uniform 5 picocurie cleanup standard but later backed off after grappling with the DOE for a year, said the federal agencies may have to reconsider their positions.

"It's understandable why the state has misgivings," said Jeff Gratz, EPA site manager in Maywood and Wayne. "Our assumption of 15 picocuries being protective may have to be reevaluated. We may have to look at a lower criteria."

The thorium is a byproduct of the manufacture of gas lanterns at the old Maywood Chemical Works between 1916 and 1956, and at the former W. R. Grace & Co. plant in Wayne between 1948 and 1971.

Officials fear that the process of developing new standards, coupled with the possibility of disagreement negotiating a compromise, could further delay the cleanup of the soil, just as the DOE and EPA squabble delayed the existing plan for 13 months.

"I hope this doesn't turn out like it did a year ago between DOE and EPA," Cange said. "But I can't say for sure that it won't."

THE RECORD WEDNESDAY, JUNE 8, 1994

EPA cuts price tag for radium cleanup

Essex project also taking less time

By MARIS PERLOW
The Associated Press

TRENTON — The U.S. Environmental Protection Agency estimates that cleaning up radium contaminating three Essex County neighborhoods won't be as costly — or as slow — as first projected, an official said Monday.

The original EPA estimate was $250 million, with a target date of 2000. The figure has dropped to $200 million, with completion sometime in 1997.

EPA engineer Robert McKnight said the reductions can be attributed to the agency's overestimating disposal costs and contractors' making lower-than-expected bids to landscape the contaminated homes in Montclair, Glen Ridge, and West Orange.

The EPA suspects that the area was contaminated sometime during World War I, when a company in Orange called U.S. Radium painted the radioactive substance on watch dials to make them glow in the dark. Radium waste from the manufacturing process may have been dumped in the three areas, but McKnight said it's uncertain how the neighborhoods were contaminated.

In those areas, there are 350 homes slated to be cleaned up, and 100 have been decontaminated, McKnight said.

The cleanup cost for about 30 percent of the homes is about $500,000 each, he said, but for some the work can cost as little as $1,000. Cleanup involves removing the radium-tainted soil and bagging it.

The bags then are shipped to a federally licensed disposal area in Clive, Utah. So far, about 115 million pounds has been shipped to the area since the project began in 1990.

Radium has a 1,600-year half-life, or the time period it takes for half the atoms in a radioactive substance to decay.

As radium decays, it emits gamma radiation and radon. Both are known carcinogens and can seep into homes.

McKnight said radon mitigation systems have been installed in the homes, but the removal of radium, the source of the emissions, is the most important part of the cleanup.

P. T. Torelli
475 Bergen Ave.
Maywood, NJ 07607

CERTIFIED MAIL RRR

LaGUARDIA AIR TRANSPORT LOCAL 1018
International Association of Machinists and
Aerospace Workers – AFL-CIO

CERTIFIED
P 034 020 564
MAI

U.S. POSTAGE
PAID
ROCHELLE PARK, NJ
07662
JUN 09, '94
AMOUNT
$2.52
00043099-04

0000

RETURN RECEIPT REQUESTED

Susan Cange, Site Manager
U.S. Department of Energy
Former Sites Restoration Division
P.O. Box 2001
Oak Ridge, Tennessee 37831-8723

11763

CONCERNED CITIZENS of MAYWOOD

11768

JUN 13 1 52 PM '94

FOR IMMEDIATE RELEASE

June 8, 1994

Susan M. Cange
U.S. Department of Energy
Former Sites Restoration Division
P.O. Box 2001
Oak Ridge, Tennessee 37831-8723

Re: EE/CA proposed pile removal with option for soil washing-public comment

Dear Ms. Cange:

The following are comments of Concerned Citizens of Maywood (CCM) on above EE/CA which we strongly oppose. However, this may again be an exercise in futility. Why?

Because the letter (7/20/93) from Michael J. Nolan (CCM) to Secretary Hazel O'Leary requested she include his letter of January 27th 1993 with attachments to Wm J Musznski, Acting EPA Regional Administrator Reg II, in the administrative record as modifying criteria per EPA Directive No 9355.03-01 FS4. Mr. Albert S. Johnson (DOE) refused for Ms. O'Leary despite requirement that known community concerns should be reflected in the preferred alternative.

Mr. Muszynski did place the letter in the EPA Administrative Record and Ms. O'Leary should now do the same since this EE/CA conflicts with the DOE Preferred Option mandated by Public Law 98-50 per Congresswoman Lloyd (6/1/84) to Shelby Brewer (DOE) and agreed to by Brewer to Lloyd (7/6/84) and reported to Congressman Tom Bevill (4/11/86). Letter copies enclosed.

Comments filed by Maywood and Wayne residents on the 1994-1998 DOE Five Year Plan were not included in the August 1993 Volume III - Public Concerns. DOE also omitted the Borough of Maywood endorsement of the 1989 NJ DEPE Utah Plan as a comment on a prior 5 year plan.

Accordingly, we request that all copies of all comments received on this EE/CA be spread in the Administrative Record rather than a Cange style summary.

We challenge DOE to excavate and ship all the Pile offsite for disposal and say what day it will start and be completed. Contractors have already estimated the Wayne Pile can be removed in less than 6 months!

But the DOE wants the option of implementing volume reduction treatment? They want to experiment with unproven soil washing which was rejected in Montclair because the EPA could not separate the soils for a 5 pCi/g health based standard clean up. What happens if soil washing did work? It makes two piles. But instead of 5 pCi/g the DOE wants a 15 pCi/g level, which is not a health based standard. The Pile reading above 15 pCi/g would be shipped out and the Pile reading as high as 15 pCi/g

would be left on the MISS. Instead of a clean up, Maywood would become a permanent disposal area instead of an interim storage area site. Jeff Gratz (EPA) in writing told Susan Cange (DOE)(1/28/94) that "proposals that leave residual contamination onsite results in a permanent disposal area." Maywood wants a clean up that allows for unrestricted use of properties.

The Mayor & Council have gone on record that they oppose the soil washing and leaving contaminated soils. They have called on the EPA/DOE to excavate and dispose offsite all the contaminated soils above 5 pCi/g standard.

Page 34 of the DOE EE/CA on the Pile Plan states the removal with the option would be conducted only with the approval of the affected local authorities. Are you going to ignore your own published comittment?

Who could allow you to ignore the following facts:

1. Letter from Maywood Borough Attorney (6/6/94) to Kathleen C. Callahan (EPA) expressing Mayor & Council opposition to the "5/15" criteria and soil washing. It includes the New Jersey Senate Resolution No. 66 introduced on May 12, 1994 calling on DOE, EPA and NRC in conjunction with state officials to effectuate the immediate and permanent removal of all thorium contaminated soil from the MISS and other sites in Maywood Borough, Rochelle Park Township, and Lodi Township, N.J.

2. Senator Byron Baer (our District 37) May 17th letter pointing to the fact that "The Resolution addresses contaminants that might be underground as well as those found in the Pile."

3. Borough Attorney Fede's letter of April 13, 1994 to Wm. J. Muszynski's (EPA) reporting Mayor & Council opposition to any use of the 15 pCi/g standard and urging a stop to any activities advancing the EPA Region 2 position on the dispute.

4. Maywood Council Resolution 136-93 dated 10/26/93 endorsing 5 pCi/g clean up standard removal with no further storage within Maywood.

5. Page C-39 of NJDEPE Comments (Karl J. Delaney) to DOE 1994-1998 5 Year Plan - advises "State uses criteria of one in a million excess cancer occurrences within an exposed population and this is a minimum which is applied to all remedial activities conducted within New Jersey." Does this not settle the issue? No other meetings are necessary. Would you dare send your Mr. Guimond to NJDEPE as you did to EPA and with whose approval?

6. June 4, 1994 (The Record) "N.J. balks at thorium clean up" - does not comply with state law, dangerous to the public - not acceptable level of protection to the public - and a 5 pCi/g standard should be applied to both residential and commerical properties

7. Jeffery Gratz (EPA) March 14,1994 letter to Wayne resident- "For the Montclair site - soil washing could not effectively and efficiently meet the DOE remedial action objectives" - which was a 5 pCi/g clean up level!

8. Page 11 -12 - 18 of consultant's Soil Separation Report for Wayne - page 12 states "in this test, the characteristics of the "clean" stream are in fact that of a 'dirty' stream." This was Montclair test. Page 18 says "at this juncture, it is likely that DOE will go for the 15 pCi/g standard, arguing cost minimization and savings to taxpayers." In May 25,1994 letter to Maywood Mayor and Council, County Executive Pat Schuber stated- "if the 15 pCi/g standard is being utilized for cost measures, then we are subjecting future inhabitants of these properties to questionable health risks due to economics." He also stated "The protection afforded to residential properties should be applied to commerical settings" and "the EPA/DOE Decision, however is not endorsed by the general public."

9. Schuber letter (11/19/93) to Mayor and Council - he supports the 5 pCi/g standard for clean up as recommended by NJDEPE and EPA.

10. Congressman Torricelli letter (11/22/93) assures he will continue to work to <u>remove</u> "<u>every bit</u>" of thorium waste <u>from Maywood</u> as soon as possible

11. Letter (5/18/94) to NJDEPE Commissioner Robert Shinn from Dr. Resnikoff, Maywood's consultant clearly establishing the necessity for a 5 pCi/g standard for clean up.

12. From Soil Separation Report (4/20/94) for Wayne by RWMA - "In the agreement pertaining to Maywood, the DOE has stated they are bound to "clean" only to a level of 15 pCi/g but they will make a "Best Effort" to exceed this and approach or exceed the 5 pCi/g limit where possible. This agreement leaves considerable uncertainty with the DOE having the option to "clean" only to the level of 15 pCi/g, when the "Best Effort" proves too costly. Having 15 pCi/g material remain at the site means the use of the sites will be subject to restrictions, essentially forever, and is likely to result in the decreased values for adjoining properties.

13. Page 5 - 6 - 13 of RWMA comments on Baseline Assessment: Wayne "Some of the Wayne wastes came directly from Stepan Chemical," shipped October 11, 1963. Look at those pCi/g radioactive concentrations - nothing under 3270 and on up to 98100. And they came from Maywood! Montclair could not soil wash 40 pCi/g!

14. Letters from George Pavlou, (EPA) to Nolan (CCM) (4/4/94) and C. Tudd, Envirocare, (7/6/93) to A. Drol (Wayne). Pavlou states "that DOE chose to dispose of waste <u>only from UMTRCA</u> sites at the South Clive facility rather than waste from Maywood and Wayne during 1983 through 1988 was a <u>DOE</u> waste management decision; EPA was not part of that decision making process."

Judd says 2.5 million cubic yards of 11(e)2 waste was disposed of in that period.

In 1989 EPA/DOE rejected State's Utah Plan. Meanwhile we were told no site was available while DOE tried to force the State to locate a site in N.J.. So don't talk to us about delay or cost savings to the taxpayers while you ignore the responsible parties. Talk to us about the truth! Talk to us about excavate and disposal offsite as was mandated by Congress. Nothing else!

Talk to us about our federal officials and what they have said through the years and especially now when they talk of cost savings to the taxpayers but cannot spell RESPONSIBLE PARTY or admit they cannot fund the projects for proper clean ups. Richard Guimond (DOE) has said Congress is underfunding FUSRAP! Want proof?

15. Look at the DOE memo of January 26th 1994 under December 14th 1993 - Maywood Dispute: Review of the next steps after Guimond Muszyniski meeting. We know what took place and we suggest that Mr. Guimond head his ship away from NJDEPE officials and us. One cave in has been corrected by the State's insistence on the health based 5 pCi/g clean up standard.

As we said, no more meetings or "agreements" or "positions" are necessary. Let's get on with it or a full investigation.

Thank you.

Sincerely,

Chuck Parodi

Chuck Parodi FAX : 201-845-3271
President, Concerned Citizens of Maywood/48 West Grove Avenue, Maywood,NJ

cc: Governor Whitman
Carol Browner (EPA) Administrator
Hazel O'Leary (DOE) Secretary
U.S. Senator Lautenberg
Congressman Torricelli
Wayne Mayor & Council
Maywood Mayor & Council
Congresswoman Roukema
Bergen County Executive Pat Schuber
N.J. PIRG
Robert Shinn (NJDEPE) Commissioner
Jeanne Fox EPA Region II
Dr. Marvin Resnikoff

Enclosures: For numbers one through fifteen

11768

CONTANT, SCHERBY & ATKINS
ATTORNEYS AT LAW
33 HUDSON STREET
HACKENSACK, N. J. 07601
(201) 342-1070
TELECOPIER (201) 342-5213

NEW YORK OFFICE
337 NORTH MAIN STREET, SUITE 11
NEW CITY, N.Y. 10956
(914) 638-4925

FENSTER & WEISS, ESQS.
OF COUNSEL

JOHN M. CONTANT (1931-1968)
RICHARD JON CONTANT*
MICHAEL L. SCHERBY**
BRUCE L. ATKINS**
DANIEL P. GREENSTEIN*
MATTHEW S. ROGERS
ANDREW T. FEDE
BRIAN T. KEANE*

JULIE K. GRAPIN*
STEVEN D. GROSSMAN*
GERALDINE E. BEERS*
WILLIAM J. BAILEY
S.Y. KIM*

*ALSO MEMBER OF NY BAR
*ALSO MEMBER OF FLA BAR

PLEASE RESPOND TO:
HACKENSACK

June 6, 1994

Kathleen C. Callahan, Director
Emergency and Remedial Response Division
United States Environmental Protection Agency
Region II
Jacob K. Javits Federal Building
New York, NY 10278-0012

Re: Borough of Maywood

Dear Ms. Callahan:

Thank you for your May 10, 1994 letter, which replies to mine of April 13, 1994. The Mayor and Council have asked me to write you to again express their strong disapproval of the "5/15" criteria for the cleanup, and opposition to a "soil washing" operation on the Maywood Interim Storage Site ("MISS"). The MISS property should be cleaned to the 5 pCi/g standard. Although you refer to land use considerations in your letter, the Mayor and Council are convinced that the "residential" standard is the only viable health-based standard for the MISS. The property should be cleaned up so that residential, commercial, or industrial uses are permissible. The time to do this is now, not later, as you imply, as land use changes affect the properties.

I enclose for your review Resolution No. 66, of the New Jersey Senate, which calls for the immediate removal of all contaminated soil from the MISS, and the related properties. The Mayor and Council of the Borough of Maywood have also expressed this demand by Resolution, as have the voters of the Borough of Maywood, by referendum.

The Mayor and Council also must again express opposition to the proposal for "soil washing" on the MISS. The MISS is in a highly populated and congested residential area. This is not the place for the use of the untested "soil washing" operation. I note the following, as reported by The Record on May 24, 1994:

(1.1

11768

An April 1993 report by the EPA on the proposed cleanup of thorium and radon in Orange stated: "No treatment technology is known today that can substantially reduce the toxicity, mobility, or volume of the type of radiation." The report suggested disposal of all the contaminated soil.

According to an EPA report released in December 1993, before it and the DOE resolved long-standing differences on how to remedy the Wayne and Maywood contamination problems, "separation of soil and radioactive contaminants has been ineffective and was considered "not feasible" for Maywood and Wayne.

Released in February, DOE literature introducing the soil-washing alternative said: "The effectiveness of [soil washing], or how well the process will work, is uncertain."

With this information at hand, the Mayor and Council strongly oppose soil washing at the MISS.

Of even greater significance, however, is the strong position taken by the New Jersey Department of Environmental Protection and Energy. As reported in The Record on June 4, 1994, the New Jersey DEPE has called the proposed clean-up plan "dangerous to the public." The DEPE has correctly called for strict adherence to the 5 pCi/g standard.

The Mayor and Council urge that the E.P.A. and the D.O.E. follow the lead of the New Jersey DEPE. I also request that you provide me with the information you refer to in your letter, which you state would indicate that the type of soil washing unit being considered has been operated safely and effectively elsewhere in the country. I also ask that you advise me of when and how the "revised cleanup proposal" will be formally presented for public comment.

Thank you.

Very truly yours,

ANDREW T. FEDE

ATF:RG
cc: Mayor and Council
Congressman Robert G. Torricelli
Senator Frank R. Lautenberg
William P. Schuber, Bergen County Executive
James Pasqualo, New Jersey Department of Health
Nicholas Martone, New Jersey DEPE
Governor Christine Todd Whitman
Commissioner Robert Shinn, New Jersey DEPE

Q.1

BYRON BAER
SENATOR, 37TH DISTRICT
BERGEN COUNTY
125 STATE STREET
SUITE 205
HACKENSACK, NEW JERSEY 07601
(201) 343-3333
FAX (201) 343-1594

NEW JERSEY SENATE

11761

May 17, 1994

Hon. Mayor John A. Steurt and
Members of the Council
Borough of Maywood
459 Maywood Avenue
Maywood, NJ 07607

Dear Mayor Steurt and Council Members,

Enclosed is a copy of SCR 66 dealing with the removal of all thorium waste from Maywood and from your neighbors in Lodi and Rochelle Park. This matter has been a nagging problem for Maywood's citizens for too long and calls for immediate settlement.

I'd like to draw your attention to the fact that the resolution addresses contaminants that might be underground as well as those found in the pile.

My office remains ready to do everything possible to assist you to reach a satisfactory conclusion. I welcome your advice and help.

Sincerely,

Byron Baer

Byron Baer
Senator, District 37

(2.)

CONTANT, SCHERBY & ATKINS
ATTORNEYS AT LAW
33 HUDSON STREET
HACKENSACK, N. J. 07601
(201) 342-1070
TELECOPIER (201) 342-5213

NEW YORK OFFICE
337 NORTH MAIN STREET, SUITE 11
NEW CITY, N.Y. 10956
(914) 638-4925

FENSTER & WEISS, ESQS.
OF COUNSEL

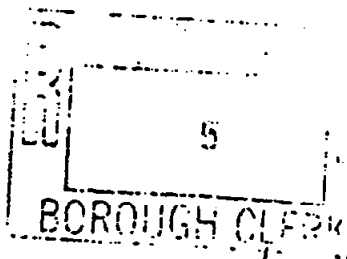
JOHN M. CONTANT (1931-1988)
RICHARD JON CONTANT*
MICHAEL L. SCHERBY**
BRUCE L. ATKINS**
DANIEL P. GREENSTEIN*
MATTHEW B. ROGERS
ANDREW T. FEDE
BRIAN T. KEANE*

JULIE K. GRAPIN*
STEVEN D. GROSSMAN*
GERALDINE E. BEERS*
WILLIAM J. BAILEY
S.Y. KIM*

*ALSO MEMBER OF NY BAR
**ALSO MEMBER OF FLA BAR

PLEASE RESPOND TO:
HACKENSACK

117681



April 13, 1994

William J. Muszynski, P.E.
Acting Regional Administrator
United States Environmental Protection Agency
Region II
Jacob K. Javits Federal Building
New York, NY 10278-0012

Re: EPA Region 2's Position on the Dispute Regarding Cleanup Levels for Radionuclide Contamination at the Maywood Chemical Company Superfund Site, Maywood, NJ

Dear Mr. Muszynski:

Please be advised that I am the attorney for the Borough of Maywood. The Mayor and Council of the Borough have received a copy of your March 23, 1994 letter to Joe La Grone in regard to the above-referenced matter. Although a more detailed statement is forthcoming, the Mayor and Council authorized me to immediately write to you to indicate their objection to the proposed clean-up plan referred to in your letter.

The Mayor and Council strongly object to the use of the 15 pCi/g standard. The Mayor and Council were under the impression that the EPA was enforcing a 5 pCi/g standard. The 15 pCi/g standard is not a health-based standard according to the information provided to us and is therefore unacceptable as a remediation level in the affected area.

Accordingly, the Mayor and Council of the Borough of Maywood urge you to stop any proceedings advancing the clean-up levels reached in your letter, and this demand is also being made to the Department of Energy, as a copy of this letter is being sent to Mr. La Grone. The Mayor and Council had hoped that the EPA would not waiver from the 5 pCi/g standard despite the position taken by the Department of Energy. They insist that you reconsider your proposal to agree with the Department of Energy's clean-up standard.

(3.)

In addition, the Mayor and Council insist on the immediate removal of all of the contaminated soil from the Maywood Interim Storage Site and other affected properties in the vicinity. The Mayor and Council oppose any soil washing program on the site because of the obvious effects this will have on the health of residents in the area as well as people working for businesses surrounding the site. The Mayor and Council have not seen any evidence indicating that soil washing is an effective remediation measure that will reduce the level of contamination to the 5 pCi/g standard. Again, the Mayor and Council ask you to immediately rethink your position in regard to soil washing on this site. Instead, all contaminated soil should be removed from the site and either stored or treated elsewhere, far away from populated areas.

Thank you for your consideration, and if you have any questions, please do not hesitate to contact me.

Very truly yours,

ANDREW T. FEDE

ATF:RG
cc: Joe La Grone
Mayor and Council

(3.1)

11768

CLERK
MARY ANNE RAMPOLLA, RMC
(201) 845-2900
FAX (201) 909-0673

BOROUGH OF MAYWOOD

459 Maywood Avenue, Maywood, NJ 07607

RESOLUTION #136-93
ENDORSING CLEAN UP STANDARD FOR THORIUM CONTAMINATED SOIL

WHEREAS, the Mayor and Council of the Borough of Maywood continue to be concerned about the need for adequate clean up criteria for thorium contaminated property in the Borough of Maywood; and

WHEREAS, the Mayor and Council have learned that the Environmental Protection Agency (E.P.A.) and the New Jersey Department of Environmental Protection and Energy (N.J.D.E.P.E.) have advanced clean up criteria of five picocuries per gram, a health based standard, as the recommended level for the clean up of thorium contaminated soil for unrestricted use at the Maywood site;

NOW, THEREFORE, BE IT RESOLVED by the Mayor and Council of the Borough of Maywood that:

1. The five picocuries per gram clean up criteria is endorsed by the Mayor and Council and the U.S. Department of Energy (D.O.E.) is urged to resolve the dispute resolution with E.P.A. by accepting and including the five picocuries per gram standard in the D.O.E. proposed clean up plan for the Maywood site;

2. The Bergen County Board of Health and the Maywood Board of Health are urged to also support this clean up standard;

3. A copy of this resolution be sent to the Secretary of the D.O.E., the N.J.D.E.P.E. Commissioner, the Administrator of E.P.A., County Executive William P. Schuber, the N.J. State Legislators for the 37th District, Congressman Torricelli and U.S. Senators Bill Bradley and Frank Lautenberg; and

(4)

BE IT FURTHER RESOLVED that with the health based standard, the D.O.E. proposed plan should also reflect the affirmative Maywood Referendum message - "To secure clean up and removal of the thorium contaminated soil within the Borough of Maywood and to prevent the further storage within the Borough of Maywood of any additional thorium contaminated soil from outside the Borough of Maywood; and

BE IT FURTHER RESOLVED that a copy of the within resolution be on file in the Office of the Borough Clerk and be available for public inspection during regular business hours.

Date: Oct. 26, 1993 APPROVED: _____
John A. Steuert, Jr., Mayor

ATTEST: Mary Anne Rampolla
Mary Anne Rampolla, Borough Clerk

	Moved	Seconded	Ayes	Nays	Abstained	Absent
Mayor Steuert						
Councilperson Nastri					✓	
Councilperson Winnie	✓		✓			
Councilperson Kuhn			✓			
Councilperson Bertucci		✓	✓			
Councilperson O'Neil			✓			
Councilperson Schmidt			✓			

(4.)

Comments of NJ DEPE
KARL DelANEY Director, DIV. R.P.S.R.

33.04 (p. 46) schedule for the ground water operable unit be available? With regard to the NISS and Wayne Interim Storage Site (WISS), Volume I states that, "Local political resistance has stopped plans for interim remedial action activities at selected residential and commercial properties in New Jersey and Missouri." Are the interim

33.05 (p. 46) actions deemed time critical, i.e., do unacceptable health risks exist? When will other disposal alternative investigations be completed?

3. Volume I of the subject plan refers to state involvement in the decision making process for key issues as listed below. Such issues include:

33.06 (p. 46) a) Questions have been raised concerning regional storage of Radioactive Wastes as prescribed in the ROD for Programmatic Environmental Impact Statement (PEIS) to be issued in federal fiscal year 1993. The PEIS will outline or determine USDOE national strategies that impact states and include: citing of facilities, transport of waste materials, land/water/energy impacts, etc. The PEIS is designed to ensure USDOE compliance with the National Environmental Policy Act (NEPA). Once in effect it may dictate site specific changes at the state level. Clearly the issue becomes, does non-inclusion of the NJDEPE in the FFA for FUSRAP sites in New Jersey eliminate official state input into the PEIS? If NJDEPE concerns are not addressed on an official level as opposed to an observational or informal commentator basis, the question arises how will this PEIS impact New Jersey?

Colorado decision state should be involved

33.07 (p. 15) b) It appears that DOE views state involvement as tantamount to public involvement, i.e. without a control document in place, the state is an interested party. Lack of formal NJDEPE input into the FFA has resulted in limited Departmental control at FUSRAP sites. This includes schedules for on-site activity as prescribed by the FFA. Additionally, and with regard to USDOE internal budget reviews, Volume I states that the USDOE justifies budget increases in part by gauging compliance with laws, regulations and enforceable agreements with EPA and state regulators. Is USDOE funding of remediation at New Jersey FUSRAP sites of a lesser priority due to New Jersey's non-inclusion in the FFA?

33.08 (p. 22) c) With regard to land use planning, Volume I states that the USDOE is seeking input from interested parties, including states. "The USDOE in collaboration with tribes, federal, state and local agencies is attempting to develop and implement clear clean-up and land-use objectives to achieve cost effective protection of public health and the environment." The broad category of land use planning includes such issues as use options based upon; "How clean is clean?" What level of clean-up is acceptable and for what future use? What are the health based standards used in such determinations? NJDEPE uses criteria based on a maximum of one in one million (10^{-6}) excess cancer occurrences within an

ONE IN A Million

LETTER 33

33.08 exposed population. This is a minimum standard which is applied to all remedial activities conducted within New Jersey.

33.09 (p. 15) 4. The plan specifies that it is the intention of the USDOE to complete its environmental remedial activities by 2019; however, the Middlesex Sampling Plant and the New Brunswick sites are not indicated as being included on the "NPL" and that there is currently no FFA in effect for these two sites. Without any specific "clean-up agreements" for these sites with the NJDEPE and/or the USEPA, it appears that no real time remedial activities are proposed for these sites. Is funding for USDOE sites contingent upon inclusion on the NPL?

33.10 (p. 47)
33.11 (p. 31) 5. The five year plan stresses problems associated with ongoing production of low level radioactive wastes but does not address mixed wastes already deposited under FUSRAP jurisdiction. In addition, the plan fails to identify in detail off-site disposal options for low level and mixed radioactive wastes or the potential use of expanded USDOE storage facilities that are planned or in construction.

The following comments refer specifically to Volume II of the Five Year Plan and the summaries of activity at the NISS and WISS sites:

33.12 (p. 47) 1. Although chemical characterization was supposedly completed at the Middlesex Sampling Plant, the results of these investigations have not been provided to the NJDEPE for review. When will they be?

33.13 (p. 47) 2. Volume II states that environmental monitoring activities have been instituted at the New Brunswick site. Results of these activities have not been made available to the NJDEPE. When will they be?

33.14 (p. 46) 3. The engineering evaluation and cost evaluations are scheduled to be completed and approved for the Middlesex and New Brunswick sites in federal fiscal years 1995 and 1996 respectively. As neither of the sites are currently included in an FFA with the USEPA and/or under any other control document with the NJDEPE, what assurance does the Department have that USDOE is committed to remediating these sites?

33.15 (p. 14) Another issue that NJDEPE would like addressed was brought to USDOE's attention in September 1992, at the FUSRAP meeting in Oak Ridge National Labs where discussions were focused on issues surrounding remedial options at FUSRAP sites. At that meeting, NJDEPE requested that the USDOE provide justification for the disparate pricing formula the DOE uses at its Hanford low level waste disposal facility. This facility charges approximately 20 times the cost per unit volume than that of private commercial facilities charge their customers. It seems that this pricing is unjustified and serves only to reduce the disposal options at FUSRAP sites and prolong the site remediation process.

LETTER 33

(5)

1768

SATURDA The Record
JUNE 4, 1994 Friend of the People It Serves

11768

N.J. balks at thorium cleanup

By MICHAEL MOORE
Staff Writer

The state Department of Environmental Protection and Energy is refusing to approve the federal government's plan to remove thorium-tainted soil spread throughout Maywood and Wayne, a move that could further delay a cleanup first promised more than a decade ago.

Calling the federal Department of Energy's cleanup plan for 510,000 cubic yards of radioactive soil "dangerous to the public," the DEPE is withholding its needed approval until the federal agency agrees to meet stricter standards.

"We don't believe the DOE's cleanup plan either complies with state law or affords an acceptable

Asks U.S. to meet tighter standards

level of protection to the public," said Nick Martone, DEPE manager for the Maywood and Wayne sites. "We're not going to go along with this and give residents a false sense of security."

Trumpeted as one of the final obstacles to solving the radioactive soil woes of North Jersey, the DOE's long-anticipated cleanup proposal, hammered out with the federal Environmental Protection Agency, calls for contaminated dirt to be cleaned to a level of 5 picocuries of radiation per gram of soil in residential areas and 15 picocuries per gram in commercial districts.

But DEPE officials believe 15 picocuries is too high and want the 5 picocurie standard applied to both residential and commercial properties. Martone said cleanup cannot legally begin without DEPE approval.

A picocurie is a unit of radioactivity. Thorium is a radioactive element that breaks down into radon, a gas proven to cause lung cancer and other ailments.

Area officials support the DEPE's demand for a uniform 5 picocurie standard.

Wayne Mayor David Waks, who has been writing to the DEPE to push for stricter standards, ap-

See THORIUM Page A-8

THORIUM: State balks at U.S. proposal

From Page A-1

plauded the agency's decision. "I hail the DEPE," he said. "They are starting to see the light of day."

"At least the DEPE has taken a tough, protective stance. The federal agencies should get in line with the state's directive so we can clean this up quickly and safely," said Bergen County Executive William "Pat" Schuber. "I will be pressing Governor Whitman to intervene and push the federal agencies to adopt the standards of the DEPE."

Whitman spokesman Carl Golden said the governor is aware of North Jersey's thorium dilemma and is willing to intervene.

"The governor knows residents have a good cause for concern," he said. "This has to be cleaned up and, after consulting with DEPE commissioner [Robert Shinn], she will get things moving with the federal agencies."

But the DOE said New Jersey's apparent refusal to approve the plan could further delay the cleanup, first proposed in 1983.

"I don't know what will happen next and I'm not sure what the DOE or EPA's position is now," said Susan Cange, DOE site manager for Maywood and Wayne. "It's too early to say what we'll do. We're still waiting to get the state's position in writing."

The EPA, which originally supported a uniform 5 picocurie cleanup standard but later backed off after grappling with the DOE for a year, said the federal agencies may have to reconsider their positions.

"It's understandable why the state has misgivings," said Jeff Gratz, EPA site manager in Maywood and Wayne. "Our assumption of 15 picocuries being protective may have to be reevaluated. We may have to look at a lower criteria."

The thorium is a byproduct of the manufacture of gas lanterns at the old Maywood Chemical Work between 1916 and 1956, and at th former W. R. Grace & Co. plant i Wayne between 1948 and 1971.

Officials fear that the process of developing new standards, couple with the possibility of disagree ment negotiating a compromise could further delay the cleanup o the soil, just as the DOE and EPA squabble delayed the existing plar for 13 months.

"I hope this doesn't turn out like it did a year ago between DOE and EPA," Cange said. "But I can't say for sure that it won't."

(6.)

117688

From :

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING

NEW YORK, NEW YORK 10278-0012

MAR 1 4 1994

Ms. Sue Portanova
17 Lucas Lane
Wayne, NJ 07470

Dear Ms. Portanova:

This letter is in response to your correspondence of March 9, 1994 regarding the soil washing treatment technology and its applicability at the Wayne Interim Storage Site. Specifically, you asked why soil washing did not work at the Montclair/Glen Ridge sites and why I believe it might work at the Wayne site.

The most significant factor in determining whether this technology can or cannot work at a given site is the efficiency of the system in separating soil with high concentrations of radionuclides (the contaminated residual) from soil with lower concentrations (the resulting clean stream). For the Montclair site, the treatment unit could not effectively and efficiently meet the remedial action objectives. At least for the pile at the Wayne site, the concentrations of contaminants are relatively low (average: 9.6 pCi/g for uranium-238, 1.8 pCi/g for radium-226, and 16.1 pCi/g for thorium-232) such that a high degree of efficiency is not required to meet cleanup objectives.

I am less optimistic about the viability of the soil separation technology for the material in the burial pits beneath the pile where levels of contaminants are several orders of magnitude higher than those in the pile. However, I believe we should give the Department of Energy (DOE) the opportunity to test the technology. At the meeting at Congressman Klein's office on March 4, 1994, which you referred to in your letter, the Undersecretary for the Environment for DOE, Thomas Grumbly, stated that if treatment turned out not to be viable, all contaminated material that could not be treated would be removed from the site. We intend to oversee this treatment and removal operation to ensure that it is protective and that it proceeds in a timely manner.

Thank you for your concern. If you have any further questions on this issue, please call me at (212) 264-6667.

Sincerely,

Jeffrey Gratz, Project Manager
Federal Facilities Section

(7)

plausible explanation of the error. Given the potential impact of this technology on Wayne, we are concerned regarding the lack of flaw-free tests.

THE MONTCLAIR SOILS

The processes just described can be carried out on small quantities of material in a laboratory relatively inexpensively. However, there are major uncertainties regarding what will happen when a machine capable of processing several tons per hour is constructed. In this section we will examine how laboratory and pilot-plant processes compared for the only case where they have been applied to soil from the same site.

The Laboratory Test

Soil from Montclair was tested by the EPA[1] to help determine the feasibility of soil separation. When received, the soil had a measured radium-226 activity of 54 pCi/g, with an error of plus or minus 10 pCi/g. The EPA then tested the material to gauge the applicability of soil separation; their results are shown in the first three columns of the seven column Table 1.

The first column gives the sieve size, where a higher mesh number indicates that only smaller particles can pass through.[2] The second column shows what fraction of the material (by weight or mass) would not pass through that sieve, but would pass through the one above. For example, 11.1% of the material was too large to pass through the coarse sieve, #4. 5.6% would pass through the #4, but not through the #16 sieve. In the end, 32.5% of the input material was fine enough to pass through the #400 sieve.

The third column shows the results of radiological measurements. After the soil was separated according to size, as just described, each fraction was measured for Ra-226 activity, and the results are shown on each line. For example, 13.9% of the material would pass through the #50 mesh, but not through the #100, and after being dried, it had a Ra-226 activity of 15 pCi/g.

If the activity of the whole sample is calculated by multiplying each activity by its weight fraction and summing over all the fractions, the result is 71.6 pCi/g. This should be the same as the 54 pCi/g we started with (According to the EPA, there was no measurable activity in the water.); the difference indicates the limits on the accuracy of the measurement process. This indicates that the activities of all of the streams could be off by several picocuries per gram, and shows the need for additional testing.

(8.1)

Still using this example of the data from the test done on Montclair soils, we now have eight streams of different size material. However, what's really wanted is two streams - a "clean" stream and a "dirty" stream. The different possibilities are gotten by deciding where to "cut" the eight streams, that is, deciding on a size where all the larger material will go in the "clean" stream and all the smaller material in the "dirty" stream. The results of the different possible cuts, calculated from the data in columns two and three, are shown in columns four through seven and in Figure 1.

For example, if we put only the material which did not pass through the #4 mesh in the "clean" stream, it will constitute 11% of the input material and will have an activity of 12 pCi/g. The dirty stream will have the other 89%, and will have an activity of 79 pCi/g. If, however, we put all the material that failed to pass through the #16 mesh in the clean stream, and all the material that did in the dirty stream, we get a clean stream consisting of 17% of the material with a specific activity of 15 pCi/g and a dirty stream containing 83% of the material, with an activity of 83 pCi/g. As we add more and more material to the clean stream, it at first stays steady at 15 pCi/g, then when quite fine material is added, it begins to have higher activity levels. Of course, if we put all the material in the so called "clean" stream, it contains the total activity of the material, 72 pCi/g, and all of the material.

The characteristics of the "clean" stream for these laboratory results are graphed in Figure 1, where the fraction of the soil put into the clean stream is plotted horizontally, and the corresponding Ra-226 activity is plotted vertically. In general, the more material is put into the "clean" stream, the dirtier it gets, but there is a substantial plateau where this effect is so small it is negligible, for this sample. For this soil, the clean stream is no dirtier if it comprises 50% of the material than if it comprises only, say, 20%.

It should be noted that the "cleanest" soil produced in the test on Montclair soils was 12 pCi/g and this level is uncertain by several picocuries per gram. This is significantly above the level of contamination that RWMA feels should fall under the definition of "clean" and significantly above the levels of contamination that should be retained on site, as discussed in Section 1 and Appendix B.. In this test, the characteristics of the "clean" stream are in fact that of a "dirty" stream.

The Field Test

The results of Table 5 are plotted in Figure 3. This figure assumes that the lab tests are a reasonably accurate predictor of how a full-sized plant would operate. If this assumption is correct, then, soil separation of up to 53% of the WISS pile could result in a coarse stream with material below the 5 pCi/g limit.

However, as indicated in our previous discussion, it probably is not safe to assume that the pilot plant will operate in a manner that is comparable to the lab tests. The pilot plant has not been run for long enough to predict with certainty how it, or a larger system, will operate. The procedures and results of further tests must be examined closely and evaluated carefully.

Also, Figure 3 also indicates that up to perhaps 75% of the material could be kept on site if a 15 pCi/g criterion were used. DOE has already given an indication that the agency's preference is to move to the 15 pCi/g criterion with the decision to classify the WISS site as commercial and its stated intention to make only a "best effort" to achieve the 5 pCi/g standard. At this juncture, it is likely that DOE will go for the 15 pCi/g standard, arguing cost minimization and savings to taxpayers.

---

[1] W. S. Richardson, T.B.Hudson, J.G.Wood and C.R.Phillips, "Characterization and Washing Studies on Radionuclide Contaminated Soils", Auburn U/S.Cohen Assoc./US EPA-Montgomery, in Contaminated Soil Treatment, Pub??, date??.

[2]. For example, a #4 mesh will pass particles up to 4.75 mm, 0.19 inches in diameter, while a #200 mesh will only pass particles of 0.075 mm, or 3/1000 inches diameter or smaller.

[3] W. Dolezal and P. Pierce, "Preliminary Conceptual Design of a Unit to Demonstrate the Field Treatability of Contaminated Soils in Montclair and Glen Ridge, NJ", S. Cohen & Associates, McLean VA for the US EPA Office of Radiation Programs, Dec. 1988.

[4] M.C.Eagle, W.S.Richardson, S.S.Hay and C. Cox. "Soil Washing for Volume Reduction of Radioactively Contaminated Soils", Remediation, Summer, p. 327 and accompanying "Preliminary Report on the VORCE Pilot Plant Phase II Test."

[5] "Preliminary Characterization and Bench Scale Testing of Soil Samples from W.R.Grace and Company (Wayne Plant) and Maywood Chemical Company Sites", S. Cohen and Assoc., McLean VA, for the US EPA, Office of Radiation Programs, May 1991.

[6] "Characterization Report for the Interim Storage Pile at the Wayne Interim Storage Site", Beehtel National, Inc., Oak Ridge TN, for the US DOE, DOE\OR\1949-298, Sept. 1991; this report contains errors in its averaging procedures which must be corrected to make this claim apparent.

11768

COUNTY OF BERGEN

Administration Building • Court Plaza South • 21 Main St. • Room 300E • Hackensack, N.J. 07601-7000
(201) 646-3630

William F. Schuber
County Executive

November 19, 1993

Mayor John Steuert and Council
Borough of Maywood
459 Maywood Avenue
Maywood, NJ 07607

Re: M.I.S.S.- Thorium Contaminated Soil
. DOE & EPA Cleanup Standard Dispute

Dear Mayor and Council:

The purpose of this letter is to discuss with you my views with respect to the ongoing "informal dispute" between the two federal agencies involved in determining the cleanup standards at the M.I.S.S. and the vicinity properties.

As I continue to await for the resolution of this informal dispute, I remain committed to a cleanup standard which is in the best interest of all residents affected by the thorium contamination. I recognize the fact that this new cleanup criteria is recommended by the New Jersey Department of Environmental Protection and Energy. The U.S EPA indicates that the appropriate soil concentration cleanup criteria should be the 5 picocuries (5 pCi/g) standard. In light of these recommendations, I support the use of the 5 pCi/g standard at the M.I.S.S. and vicinity properties.

I would be remiss, however, if I did not reiterate my continued concerns associated with this new cleanup criteria. There has been no indication from either federal agency as to how this new standard will affect the overall scope of work. Will the DOE revisit cleaned sites, expand the timetable for cleanup and removal, and request an unconscionable amount of funding to complete the project which may cause further delays?

I recognize that the tougher cleanup standard would be a welcomed decision in the communities due to the simple notion that current and future residents will have

a sense of security knowing that an austere cleanup plan was instituted at theses sites. However we must keep an eye on how this decision affects the ultimate removal plan and timetable.

As always, please continue to communicate with me on this important issue or any other issue of interest to you.

Thank you.

Sincerely,

William "Pat" Schuber
Bergen County Executive

WPS/as
cc: Mark A. Guarino, B/C Health Services
Michael Nolan, Concerned Citizens
Chuck Parodi, Concerned Citizens

(9)

ROBERT G. TORRICELLI
9TH DISTRICT, NEW JERSEY

COMMITTEES
FOREIGN AFFAIRS
CHAIRMAN, SUBCOMMITTEE ON WESTERN HEMISPHERE AFFAIRS
SCIENCE, SPACE, AND TECHNOLOGY
SELECT INTELLIGENCE

Congress of the United States
House of Representatives
Washington, DC 20515-3009

WASHINGTON OFFICE
2159 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-3009
202-225-5061

DISTRICT OFFICES
COURT PLAZA
25 MAIN STREET
HACKENSACK, NJ 07601
201-646-1111

14A PATH PLAZA
JERSEY CITY, NJ 07306
201-222-8100

November 22, 1993

117688

Dear Friend:

I'm pleased to inform you that the Nuclear Regulatory Commission (NRC) recently made a decision that will be of enormous benefit to our efforts to remove thorium waste from Maywood. The NRC has granted a license to Envirocare of Utah to permanently store thorium waste. This license makes Envirocare the first facility in the nation to be licensed to store such waste, and means that a repository for the Maywood waste has now been identified.

As you know, the United States Department of Energy has been working with the U.S. Environmental Protection Agency to draft a final cleanup plan for the Maywood cleanup. The plan is certain to call for the shipment of most of the Maywood soil to a commercially licensed site out of state.

In the meantime, I have been working to ensure that once a final plan is approved, there is a site under contract with the Department of Energy that can legally accept and safely store the thorium waste. The NRC approval removes the final roadblock to the granting of such a contract to Envirocare. I am confident that once a final cleanup plan is approved, there will be no delay in sending Maywood's thorium to Utah.

The citizens of Maywood should be commended for their patience during the arduous effort to remove deadly toxins from our neighborhood. While we all regret the delays, it is important that the job be done right. The careful environmental planning and evaluation that has been performed will lead to a better cleanup that will guarantee safe transportation and disposal and efficient use of Federal dollars.

Please be assured that I will continue to work to remove every bit of thorium waste from Maywood as soon as possible. If you have any comments or questions, please feel free to write or call.

Sincerely,

ROBERT G. TORRICELLI
Member of Congress

RGT:reh

(10.)

AWMA

RADIOACTIVE WASTE MANAGEMENT ASSOCIATES

May 18, 1994

Robert C. Shinn, Jr., Commissioner
Department of Environmental Protection and Energy
Trenton, NJ 08625-0028

Re: Cleanup Levels for Radionuclide Contamination
Maywood Interim Storage Site

Dear Commissioner Shinn:

Mike Nolan of Concerned Citizens of Maywood, for whom we are working under an EPA Technical Assistance grant, asked me to respond to a letter from Ronald Corcory, in response to a letter Mr. Nolan sent to you. Concerned Citizens and we are troubled by the proposed remediation standards and fear that New Jersey DEP may be relaxing its protectiveness criteria.

As you probably know, as we learn more about the thorium hazard and the risk of radiation, these standards have gotten more restrictive over time. The thorium wastes at Maywood were produced between 1916 and 1956 and will remain radioactive and hazardous essentially forever. Between that time, the atomic bomb blast occurred and continuing information from the victims has taught us much about the harmful effects of radiation. For low-level waste facilities, the performance standard is 25 millirems per year (mr/y) whole body dose commitment. But the Department of Energy is arguing instead that the limit 100 mr/y is appropriate, a limit that applies to operating nuclear reactors. Since all agree that these thorium wastes are hazardous, it is difficult to explain the appropriateness of a whole body dose of 25 mr/y to a community facing a proposed low-level waste facility and 100 mr/y to citizens around a thorium waste facility. One reason for this lower limit around low-level waste facilities is that this waste is quite long-lived and many generations could be potentially exposed; this is certainly also true for thorium waste. While it is true, as Mr. Corcory argues, that natural radiation exists at risk levels of 10^{-6} in the State and can vary greatly, the thorium wastes are in addition to the natural background that exists in the impacted communities. All risk assessment studies subtract out background.

The implications of the above for thorium wastes can be seen by examining the hazard posed by these materials. The radioactive hazard of thorium residues arises primarily from direct γ exposures and inhalation of radioactive radon gas from contaminated soil and secondarily from ingestion of radioactive dirt (a more serious problem for children than adults) and ingestion of contaminated ground or surface water.

(11)

For a residence 5 pCi/g in soil corresponds to a direct γ exposure from radium-228 and its radioactive decay products of 67 to 81 millirems per year (mr/y), depending on the contamination depth, as shown in the attached Table. This should be contrasted with the DOE exposure limit from operating nuclear facilities of 100 mr/y. Clearly concentrations of radium-228 of 15 pCi/g would be over the limit for a residence. Perhaps all parties, the State and federal government are in agreement on this point, though meeting the 25 mr/y figure would require radium concentrations of about 2 pCi/g. The problem is that the thorium waste material at the 15 cm or 6 inch depth can be brought to the surface in the future. As community zoning changes, the time a person spends at these contaminated properties can change as well and the risk correspondingly increase.

Radon presents an additional risk. At 5 pCi/g, "an estimated 4 picocuries per liter (pCi/l) of radon would be added to the lowest indoor level of a residential structure. Such a concentration would translate to an approximate lung cancer risk of 2×10^{-2}."[1] This additional risk is considerably greater than the risk levels commonly employed by the EPA, one part in a million.

To these risks must also be added the ingestion risk, particularly for children. Assuming a child ingested 1 g soil/day of soil containing thorium-232 and its decay products in secular equilibrium at 5 pCi/g, the additional radiation dose received is 9.1 mr/y, as also seen in the Table. An ingestion dose of 1 g per day was assumed by EPA contractors at Montclair.

We see important reasons for the State to maintain the risk level, one part in a million, and to further restrict the allowable thorium levels on remediated properties.

cc: M Nolan

Best,

Marvin Reshikoff

[1] Letter, NL Marion, DEP, to S Cange, DOE, Apr 8, 1993.

(11)

Radium-228 Hazard*

Direct Gamma Dose

	5 pCi/g		15 pCi/g	
	15cm	Infinite	15cm	Infinite
Ac-228	25.78	29.89	77.34	89.66
Ra-224	0.24	0.26	0.73	0.77
Pb-212	3.38	3.52	10.14	10.56
Bi-212	5.01	5.86	15.02	17.57
Tl-208	32.55	41.36	97.64	124.07
Total	**66.96**	**80.88**	**200.88**	**242.64**

* In mr/y assuming 8760 hr residence. If commercial, must assume 40 hr/wk*50 wk/y = 2000 hr exposure.

Radium-226 Hazard*

Direct Gamma Dose

	5 pCi/g		15 pCi/g	
	15cm	Infinite	15cm	Infinite
Ra-226	0.15	0.16	0.46	0.48
Pb-214	6.26	6.71	18.77	20.12
Bi-214	40.72	49.04	122.17	147.11
Pb-210	0.01	0.01	0.04	0.04
Bi-210	0.02	0.02	0.05	0.05
Total	**47.16**	**55.93**	**141.49**	**167.79**

Is soil separation an experimental technique?

Yes, soil separation at radioactive sites is a new, virtually untested, technology. Soil separation has been extensively used in mining operations with non-radioactive materials. However, the technology is in its infancy as far as its application to radioactively contaminated soils. There have been a number of laboratory tests of the technique, but only one field test. The field test was conducted by the EPA on a pilot plant constructed in Alabama and tested using contaminated soils from Montclair, NJ. The test was on a small amount of soil -- 3000 lbs.--in a test that lasted for several hours. Many times this amount of material needs to be tested to determine the efficacy of soil separation. Both the lab tests and the one field test had significant, largely unexplained anomalies in the test measurements, which make it difficult to draw hard conclusions from the data. These and other problems with both the laboratory tests and the field tests are discussed in Section 4.

How does the DOE currently define clean?

The DOE and the EPA have recently agreed on separate standards for residential and commercial sites in Maywood, another radioactively contaminated site in NJ. Residential areas are to be ""cleaned" to 5 picocuries per gram (pCi/g) of Ra-226 and Ra-228 to any depth. Commercial/industrial areas are to be "cleaned" to 5 pCi/g for the top six inches and to 15 pCi/g below that. Where removal of the contaminated material leaves a hole, replacement soil in commercial/industrial areas can be 15 pCi/g at depth, but the top one foot must be "clean" soil.

This decision has only been made for Maywood, but it is likely that the DOE and the EPA--two federal agencies-- will attempt to ignore the current township of Wayne zoning and treat the WISS site as commercial, since the same people will make the decision and since it is for the advantage of the DOE to have in place a classification that allows a lower level of "clean"-up.. The DOE considers most remaining sites to be commercial/industrial.

The WISS site has been zoned residential by the township of Wayne since 1939. Although Rare Metals operated at the site, the surrounding area is clearly residential with homes within 50 feet of the site. The DOE proposed standard would apply whether soil separation is used or not. Questions residents and the town governments must address include whether it is suitable to treat sites which are now embedded in residential areas as commercial and is it proper for federal agencies to override township zoning laws.

In the agreement pertaining to Maywood, the DOE has stated they are bound to "clean" only to a level of 15 pCi/g, but that they will make a "best effort" to exceed this

(12.1

11768

and approach or exceed the 5 pCi/g limit where possible. This agreement leaves considerable uncertainty with the DOE having the option to "clean" only to the level of 15 pCi/g, when the "best effort" proves too costly. Having 15 pCi/g material remain at the site means the use of the sites will be subject to restrictions, essentially forever, and is likely to result in decreased values for adjoining properties.

What are the arguments in favor of a 5 pCi/g or less standard?

The combined radioactive concentrations of radium-226 and radium-228 in soil should be substantially less than 5 pCi/g for residences. This is a health-based requirement. The hazard of these materials arises, primarily, from direct gamma exposures and from inhalation of radioactive radon gas from contaminated soil. Secondarily, there is a hazard from ingestion of radioactive dirt (clearly, a more serious problem with children than adults) and from ingestion of contaminated ground or surface water.

At 5 pCi/g, the direct gamma exposures from radium-228 and its decay products is 67 to 81 millirems per year, depending on the depth of the contaminants. This exposure is higher than the exposure limit set by the EPA for a low-level radioactive waste facility which is 25 millirems per year. (It should be noted that an operating nuclear facility has an exposure limit of 100 millirems per year.) It is inequitable that citizens at Wayne would be asked to accept a limit less stringent than citizens surrounding a low-level waste dump.

If the more restrictive EPA limit is used, then the allowable radium-228 concentrations would have to be less than 2 pCi/g. Clearly, the possible DOE limit of 15 pCi/g would be completely unacceptable.

A more detailed discussion of this issue is found in Appendix B.

Can soil separation provide material that will meet even DOE's standards?

Will soil separation provide coarse material that will meet either the 5 pCi/g or the 15 pCi/g standard? The DOE doesn't know yet.

As mentioned above, a small "pilot plant" machine was tested in Alabama, using soil from Montclair that was contaminated at the level 40 pCi/g. This test produced coarse ("clean") material at 12.1 pCi/g. Since Montclair was to be "cleaned" to residential standards, that was not acceptable and soil separation was not tested further.

Material from the pile at the Wayne site and from Maywood is somewhat less contaminated, and DOE has laboratory tests that indicate that the coarse material could have contamination levels that would meet their standards and could be dumped back into holes on the WISS site. However, as will be discussed more fully below, there have

(12.)

11768

we do not assume a future resident builds a basement because a basement on the WISS would have major water problems. A basement would also collect radon gas and would have to be ventilated. The process of building a basement would mean excavation of buried waste materials which would greatly increase the potential dose to a resident. For our calculations we assume conservatively that a person spends 8 hours outside the house and 16 hours per day inside. One could assume the outdoor time is reduced, but the calculated doses are in any case so high, it makes little difference to the bottom line conclusion, that the doses are too high for future occupancy unless the waste materials buried underground are removed.

Radiation Dose Rates from Waste Pits

Radioactive concentrations reported in the Remedial Investigation report are unreliable. Because of the presence of the pile, DOE contractors were forced to drill slantwise under the pile to locate the underground pits. These boreholes were intended to confirm the locations of certain burial pits. Sufficient measurements were not made for a radiological survey. The radioactive concentrations are much less than measured by the Nuclear Regulatory Commission[4] in 1983. Records of buried materials were destroyed in a mysterious fire at the site in 1977. Nevertheless, the process to extract thorium from monazite sands is known and was employed at Stepan Chemical, Maywood, New Jersey, for many years. The thorium-232 levels in the slurry pile at Maywood average 703 pCi/g, compared to DOE's assumed 567 pCi/g at Wayne. The bottom line here is that the average direct gamma and radon exposures could be greater by 25% or more than calculated by DOE under the assumed concentration 567 pCi/g. If the site reverted to residential use, the direct gamma exposures could be as high as 3059 mr/y, as shown in Table 1. This is approximately 200 times the current exposure rates.

But hot spots in the burial area can range up to 13,000 pCi/g. The maximum theoretically possible thorium-232 concentrations[5] are 109,000 pCi/g, the specific activity of thorium-232.

In addition to being parallel in origin with the Maywood wastes, some of the Wayne wastes came directly from Stepan Chemical[6], shipped October 11, 1963. Approximately 15 tons of thorium materials were shipped from Stepan Chemical. The

[4] *Ibid.*
[5] US Dept of Health, Education and Welfare, *Radiological Health Handbook*, January 1970.
[6] Nuclear Regulatory Commission Inspection Report, dated November 2, 1967.

(13.)

11768

Table 2. Radioactive Materials Shipped from Stepan Chemical, Maywood to Davidson Chemical, Wayne, October 11, 1963

Material	Percent ThO	Weight (lb)	Radioactive Concentration (pCi/g)
Unicer	24%	2800	26160
Rare Earth Oxides	12%	1260	13080
Thorium Chloride	45%	155	49050
Thorium Phosphate	12%	3000	13080
Thorium Sulfate	45%	18	49050
Thorium Acetate	55%	4	59950
Thorium Citrate	26%	2	28340
Thorium Hydroxide	80%	2	87200
Thorium Fluoride	69%	1	75210
Thorium Nitrate (crude)	45%	50	49050
Thorium Oxide (crude)	90%	50	98100
Crude Monazite	3%	20000	3270

(3.)

11768

inventory of materials shipped, and the radioactive concentrations of these materials is shown in Table 2.

Radon Exhalation from Buried Waste

Following direct gamma exposures, radiation doses due to radon are expected to be the second major contributor to radiation exposures to future residents. Calculations for current employees show radon to be a relatively minor contributor because the pile is wrapped in plastic and covers the underground waste materials. The radon cannot escape. Once the pile is removed, radon would be a major contributor. The radon levels would be much higher than the presently measured 0.004 pCi/l outdoors and 1 pCi/l indoors used by the risk assessment.

The radon doses are calculated in Table 3 for future residents. The contribution to the whole body dose commitment is approximately 1436 mr/y. The total whole body dose commitment due to combined radon inhalation and direct gamma to future residents is 4,496 mr/y, about 300 times present levels. These doses are far higher than the allowable limit to non-nuclear workers, 100 mr/y, or the EPA standard for low-level waste facilities, 25 mr/y.

Additional radiation pathways to humans provide a relatively small contribution and are not calculated here. These pathways include inhalation of radioactive particulates, immersion, water ingestion and dirt ingestion, primarily to children who might play in Sheffield Brook. Sheffield Brook is an intermittent stream, but children can play in the dry stream bed. DOE assumes a low dirt ingestion rate, 50 mg/d. A more realistic value is 1 g/d assumed by the EPA in risk assessment calculations at Montclair, New Jersey. The number of hours per week, and number of weeks per year also appears too low, a total of 7 hours a year. A more realistic estimate is 4 hr/wk, 50 wk/yr, but these calculations based on these higher assumptions were not carried out in this report because the estimated exposures would be low compared to direct gamma and radon contributions.

Risk Factors

To convert radioactive intake to risk, two factors must be employed. One set of factors, dose conversion factors, convert intake of radionuclides to radiation dose. The parameters employed by DOE, embodied in the RESRAD computer model, appear to be the latest values, based on the most current ICRP model.

(13.1

11768

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING

NEW YORK, NEW YORK 10278-0012

APR 4 1994

Mr. Michael Nolan
Concerned Citizens of Maywood
69 Lenox Ave.
Maywood, New Jersey 07607

Re: Maywood Interim Storage Site

Dear Mr. Nolan:

I am writing in response to your letter of March 9, 1994, in which you expressed concerns over cleanup levels for the Maywood Superfund Site among other issues.

As I stated in my September 7, 1993 letter to you, the Environmental Protection Agency (EPA) will only agree to cleanup levels and a remedial action plan for the Maywood Site that are protective of human health and the environment. I assure you that EPA will not "cave in" to any cleanup plan that compromises our bottom line. Soil washing, if it is to be formally proposed by the Department of Energy (DOE) as part of its cleanup plan, must be shown to meet our cleanup objectives before we will agree to its implementation. After resolution of the cleanup level dispute and finalization of the Record of Decision for the site, we will set up an ambitious, enforceable cleanup schedule with DOE.

With regard to another comment in your letter, I did not state, nor did I imply, in my September 7, 1993 letter to you, that DOE was limited by license to dispose of waste only from sites designated under Title I of the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA) at its South Clive "Vitro" facility. That DOE chose to dispose of waste only from UMTRCA sites at the South Clive facility rather than waste from Maywood and Wayne during 1983 through 1988 was a DOE waste management decision; EPA was not part of that decision-making process.

See attached

If you have any other questions regarding the Maywood site, please call Jeffrey Gratz, EPA project manager, at (212) 264-6667.

Sincerely yours,

George Pavlou, Acting Director
Emergency and Remedial Response Division

cc: N. Marton, NJDEPE
S. Cange, DOE

(14.)

PRINTED ON RECYCLED PAPER

ENVIROCARE OF UTAH, INC.
THE SAFE ALTERNATIVE

11766

July 6, 1993

Andrew Drol
13 Lucas Lane
Wayne, New Jersey 07470

Dear Mr. Drol:

I appreciate your interest in our Radioactive Waste Disposal Facility located at South Clive, Utah. I am writing this letter to describe to you the background and status of licensing our facility to take 11e.(2) materials.

The South Clive site was originally opened by the State of Utah and the Department of Energy in 1983 to accept and dispose of 11e.(2) materials. During the subsequent five years, 2.5 million cubic yards of 11e.(2) waste was accepted and disposed at the site under the direction of the Department of Energy.

Near the end of the five-year project, Envirocare purchased the remaining portion of the South Clive property and obtained a license for disposal of radioactive material.

In 1989, Envirocare asked the Nuclear Regulatory Commission for the authority to dispose of the same type of 11e.(2) material on the same property. Because Envirocare is a corporation and not a government agency, the NRC required Envirocare to go through a licensing process that had not been previously developed or used. Envirocare has been working with the NRC for almost four years to complete this application process. Our most recent correspondence with the NRC has suggested that the licensing should be completed by October 1993. Soon after that date, Envirocare will be able to accept 11e.(2) material for disposal.

Again I appreciate your interest in our facility. If there is any further information that I can provide, please give me a call at (801) 532-1330.

Sincerely,

Charles A. Judd, P.E.
Executive Vice President

46 WEST BROADWAY • SUITE 240 • SALT LAKE CITY, UTAH 84101 • TELEPHONE (801) 532-1330

(14)

112797

United States Government

Department of Energy

Oak Ridge Operations

Memorandum

DATE: January 26, 1994

7688

REPLY TO ATTN OF: EW-93:Cange

SUBJECT: DOCUMENTATION OF BI-MONTHLY PROJECT MANAGERS MEETINGS

TO: PDCC File:

Bi-Monthly Project Managers Meetings were held with Jeff Gratz on October 8 and again on December 14, 1993. The following is a list of topics discussed at each of these meetings.

October 8, 1993

- Maywood Dispute
  - EPA will be writing their decision now that Oct. 5 has come and gone.
- Wayne Document Schedule
  - BRA will be delivered November 18
  - FS will be delivered October 29
  - PP will be delivered November 30
- Onsite Activities
  - DOE plans to collect additional samples from Sheffield Brook during EM in response to EPA comments on the FS.

December 14, 1993

- Maywood Dispute
  - Review of next steps after Guimond & Muszyniski meeting
- Plans for radon testing in Maywood
  - Schedule is to test in Feb.
  - Plan will be sent in Jan.
- Wayne Document Schedule
  - DOE can expect EPA comments on the FS in December and the PP in January

(15-)

Department of Energy

Oak Ridge Operations
P.O. Box 2001
Oak Ridge, Tennessee 37831—

94-574

120654

120654

SEP 23 1994

The Honorable Bill Bradley
District Office of U.S. Senator Bradley
P.O. Box 1720
609 Vauxhall Road
Union, NJ 07083

Dear Honorable Bradley:

MAYWOOD SITE - PUBLIC RELEASE OF THE FINAL EE/CA TO REMEDIATE THE STORAGE PILE

The purpose of this letter is to inform you that the final version of the engineering evaluation/cost analysis (EE/CA) for remediation of the Maywood storage pile has been released. This final copy includes a responsiveness summary to public comments made during May and June of this year. A copy of this report has been enclosed for your information. In addition, a copy has been placed in the administrative record file at the Maywood Public Library and at the DOE Public Information Center in Maywood.

DOE is moving forward with its plans to remove the Maywood pile. Pile removal activities are scheduled to begin in early October and continue through November, 1994. During that time, approximately 5,000 cubic yards of material will be removed from the site and transported by rail to the Envirocare disposal facility in Utah. Removal activities will be discontinued during the winter months because of anticipated poor weather conditions. Additional pile material will be excavated and disposed of in Utah during 1995.

Please feel free to contact me at (615) 576-5724 if you have any questions or comments.

Sincerely,

Susan M. Cange, Site Manager
Former Sites Restoration Division

Enclosure

94-574

Department of Energy

Oak Ridge Operations
P.O. Box 2001
Oak Ridge, Tennessee 37831—

120654

SEP 23 1994

Mr. Eugene Peters
Office of U.S. Senator Bradley
SH-731 Hart Senate Office Building
Washington, DC 20510

Dear Mr. Peters:

MAYWOOD SITE - PUBLIC RELEASE OF THE FINAL EE/CA TO REMEDIATE THE STORAGE PILE

The purpose of this letter is to inform you that the final version of the engineering evaluation/cost analysis (EE/CA) for remediation of the Maywood storage pile has been released. This final copy includes a responsiveness summary to public comments made during May and June of this year. A copy of this report has been enclosed for your information. In addition, a copy has been placed in the administrative record file at the Maywood Public Library and at the DOE Public Information Center in Maywood.

DOE is moving forward with its plans to remove the Maywood pile. Pile removal activities are scheduled to begin in early October and continue through November, 1994. During that time, approximately 5,000 cubic yards of material will be removed from the site and transported by rail to the Envirocare disposal facility in Utah. Removal activities will be discontinued during the winter months because of anticipated poor weather conditions. Additional pile material will be excavated and disposed of in Utah during 1995.

Please feel free to contact me at (615) 576-5724 if you have any questions or comments.

Sincerely,

Susan M. Cange, Site Manager
Former Sites Restoration Division

Enclosure

94-574

12066

Department of Energy

Oak Ridge Operations
P.O. Box 2001
Oak Ridge, Tennessee 37831—

SEP 23 1994

Ms. Liz O'Donoghue
Office of U.S. Senator Lautenberg
SH-506 Hart Senate Office Building
Washington,DC 20510

Dear Ms. O'Donoghue:

MAYWOOD SITE - PUBLIC RELEASE OF THE FINAL EE/CA TO REMEDIATE THE STORAGE PILE

The purpose of this letter is to inform you that the final version of the engineering evaluation/cost analysis (EE/CA) for remediation of the Maywood storage pile has been released. This final copy includes a responsiveness summary to public comments made during May and June of this year. A copy of this report has been enclosed for your information. In addition, a copy has been placed in the administrative record file at the Maywood Public Library and at the DOE Public Information Center in Maywood.

DOE is moving forward with its plans to remove the Maywood pile. Pile removal activities are scheduled to begin in early October and continue through November, 1994. During that time, approximately 5,000 cubic yards of material will be removed from the site and transported by rail to the Envirocare disposal facility in Utah. Removal activities will be discontinued during the winter months because of anticipated poor weather conditions. Additional pile material will be excavated and disposed of in Utah during 1995.

Please feel free to contact me at (615) 576-5724 if you have any questions or comments.

Sincerely,

Susan M. Cange, Site Manager
Former Sites Restoration Division

Enclosure

94-574

120654

Department of Energy

Oak Ridge Operations
P.O. Box 2001
Oak Ridge, Tennessee 37831—

SEP 23 1994

Ms. Lisa Pleavin
District Office of U.S. Senator Lautenberg
Gateway One
Gateway Center
Newark, NJ 07102

Dear Ms. Pleavin:

MAYWOOD SITE - PUBLIC RELEASE OF THE FINAL EE/CA TO REMEDIATE THE STORAGE PILE

The purpose of this letter is to inform you that the final version of the engineering evaluation/cost analysis (EE/CA) for remediation of the Maywood storage pile has been released. This final copy includes a responsiveness summary to public comments made during May and June of this year. A copy of this report has been enclosed for your information. In addition, a copy has been placed in the administrative record file at the Maywood Public Library and at the DOE Public Information Center in Maywood.

DOE is moving forward with its plans to remove the Maywood pile. Pile removal activities are scheduled to begin in early October and continue through November, 1994. During that time, approximately 5,000 cubic yards of material will be removed from the site and transported by rail to the Envirocare disposal facility in Utah. Removal activities will be discontinued during the winter months because of anticipated poor weather conditions. Additional pile material will be excavated and disposed of in Utah during 1995.

Please feel free to contact me at (615) 576-5724 if you have any questions or comments.

Sincerely,

Susan M. Cange, Site Manager
Former Sites Restoration Division

Enclosure

94-574

Department of Energy

Oak Ridge Operations
P.O. Box 2001
Oak Ridge, Tennessee 37831—

120654

SEP 23 1994

Mr. Herb Nelson
Office of U.S. Representative Torricelli
2159 Rayburn House Office Building
Washington, DC 20515

Dear Mr. Nelson:

MAYWOOD SITE - PUBLIC RELEASE OF THE FINAL EE/CA TO REMEDIATE THE STORAGE PILE

The purpose of this letter is to inform you that the final version of the engineering evaluation/cost analysis (EE/CA) for remediation of the Maywood storage pile has been released. This final copy includes a responsiveness summary to public comments made during May and June of this year. A copy of this report has been enclosed for your information. In addition, a copy has been placed in the administrative record file at the Maywood Public Library and at the DOE Public Information Center in Maywood.

DOE is moving forward with its plans to remove the Maywood pile. Pile removal activities are scheduled to begin in early October and continue through November, 1994. During that time, approximately 5,000 cubic yards of material will be removed from the site and transported by rail to the Envirocare disposal facility in Utah. Removal activities will be discontinued during the winter months because of anticipated poor weather conditions. Additional pile material will be excavated and disposed of in Utah during 1995.

Please feel free to contact me at (615) 576-5724 if you have any questions or comments.

Sincerely,

Susan M. Cange, Site Manager
Former Sites Restoration Division

Enclosure

94-574

Department of Energy

Oak Ridge Operations
P.O. Box 2001
Oak Ridge, Tennessee 37831—

120654

SEP 23 1994

Mr. Phillip Goldberg
District Office of U.S. Representative Torricelli
Court Plaza North
25 Main Street
Hackensack, NJ 07601

Dear Mr. Goldberg:

MAYWOOD SITE - PUBLIC RELEASE OF THE FINAL EE/CA TO REMEDIATE THE STORAGE PILE

The purpose of this letter is to inform you that the final version of the engineering evaluation/cost analysis (EE/CA) for remediation of the Maywood storage pile has been released. This final copy includes a responsiveness summary to public comments made during May and June of this year. A copy of this report has been enclosed for your information. In addition, a copy has been placed in the administrative record file at the Maywood Public Library and at the DOE Public Information Center in Maywood.

DOE is moving forward with its plans to remove the Maywood pile. Pile removal activities are scheduled to begin in early October and continue through November, 1994. During that time, approximately 5,000 cubic yards of material will be removed from the site and transported by rail to the Envirocare disposal facility in Utah. Removal activities will be discontinued during the winter months because of anticipated poor weather conditions. Additional pile material will be excavated and disposed of in Utah during 1995.

Please feel free to contact me at (615) 576-5724 if you have any questions or comments.

Sincerely,

Susan M. Cange, Site Manager
Former Sites Restoration Division

Enclosure

Department of Energy

Oak Ridge Operations
P.O. Box 2001
Oak Ridge, Tennessee 37831—

94-574

120654

SEP 23 1994

Ms. Angela Carpenter
Project Manager
U.S. EPA - Region II
Federal Facilities Section
26 Federal Plaza
New York, NY 10278

Dear Ms. Carpenter:

MAYWOOD SITE - PUBLIC RELEASE OF THE FINAL EE/CA TO REMEDIATE THE STORAGE PILE

The purpose of this letter is to inform you that the final version of the engineering evaluation/cost analysis (EE/CA) for remediation of the Maywood storage pile has been released. This final copy includes a responsiveness summary to public comments made during May and June of this year. A copy of this report has been enclosed for your information. In addition, a copy has been placed in the administrative record file at the Maywood Public Library and at the DOE Public Information Center in Maywood.

DOE is moving forward with its plans to remove the Maywood pile. Pile removal activities are scheduled to begin in early October and continue through November, 1994. During that time, approximately 5,000 cubic yards of material will be removed from the site and transported by rail to the Envirocare disposal facility in Utah. Removal activities will be discontinued during the winter months because of anticipated poor weather conditions. Additional pile material will be excavated and disposed of in Utah during 1995.

Please feel free to contact me at (615) 576-5724 if you have any questions or comments.

Sincerely,

Susan M. Cange, Site Manager
Former Sites Restoration Division

Enclosure

Department of Energy

Oak Ridge Operations
P.O. Box 2001
Oak Ridge, Tennessee 37831—

94-574

120654

SEP 23 1994

Mr. Nicholas Marton
Research Scientist
New Jersey Dept. of Environmental Protection and Energy
Bureau of Federal Case Management
401 East State Street
Trenton, NJ 08625

Dear Mr. Marton:

MAYWOOD SITE - PUBLIC RELEASE OF THE FINAL EE/CA TO REMEDIATE THE STORAGE PILE

The purpose of this letter is to inform you that the final version of the engineering evaluation/cost analysis (EE/CA) for remediation of the Maywood storage pile has been released. This final copy includes a responsiveness summary to public comments made during May and June of this year. A copy of this report has been enclosed for your information. In addition, a copy has been placed in the administrative record file at the Maywood Public Library and at the DOE Public Information Center in Maywood.

DOE is moving forward with its plans to remove the Maywood pile. Pile removal activities are scheduled to begin in early October and continue through November, 1994. During that time, approximately 5,000 cubic yards of material will be removed from the site and transported by rail to the Envirocare disposal facility in Utah. Removal activities will be discontinued during the winter months because of anticipated poor weather conditions. Additional pile material will be excavated and disposed of in Utah during 1995.

Please feel free to contact me at (615) 576-5724 if you have any questions or comments.

Sincerely,

Susan M. Cange, Site Manager
Former Sites Restoration Division

Enclosure

Department of Energy

Oak Ridge Operations
P.O. Box 2001
Oak Ridge, Tennessee 37831—

94-574

120654

SEP 23 1994

Mr. Bruce Butler
Office of U.S. Representative Roukema
2244 Rayburn House Office Building
Washington, DC 20515-3005

Dear Mr. Butler:

MAYWOOD SITE - PUBLIC RELEASE OF THE FINAL EE/CA TO REMEDIATE THE STORAGE PILE

The purpose of this letter is to inform you that the final version of the engineering evaluation/cost analysis (EE/CA) for remediation of the Maywood storage pile has been released. This final copy includes a responsiveness summary to public comments made during May and June of this year. A copy of this report has been enclosed for your information. In addition, a copy has been placed in the administrative record file at the Maywood Public Library and at the DOE Public Information Center in Maywood.

DOE is moving forward with its plans to remove the Maywood pile. Pile removal activities are scheduled to begin in early October and continue through November, 1994. During that time, approximately 5,000 cubic yards of material will be removed from the site and transported by rail to the Envirocare disposal facility in Utah. Removal activities will be discontinued during the winter months because of anticipated poor weather conditions. Additional pile material will be excavated and disposed of in Utah during 1995.

Please feel free to contact me at (615) 576-5724 if you have any questions or comments.

Sincerely,

Susan M. Cange, Site Manager
Former Sites Restoration Division

Enclosure

Department of Energy

Oak Ridge Operations
P.O. Box 2001
Oak Ridge, Tennessee 37831—

94-574

120654

SEP 23 1994

Mr. Frank Covelli
District Office of U.S. Representative Roukema
1200 East Ridgewood Avenue
Ridgewood, NJ 07450

Dear Mr. Covelli:

MAYWOOD SITE - PUBLIC RELEASE OF THE FINAL EE/CA TO REMEDIATE THE STORAGE PILE

The purpose of this letter is to inform you that the final version of the engineering evaluation/cost analysis (EE/CA) for remediation of the Maywood storage pile has been released. This final copy includes a responsiveness summary to public comments made during May and June of this year. A copy of this report has been enclosed for your information. In addition, a copy has been placed in the administrative record file at the Maywood Public Library and at the DOE Public Information Center in Maywood.

DOE is moving forward with its plans to remove the Maywood pile. Pile removal activities are scheduled to begin in early October and continue through November, 1994. During that time, approximately 5,000 cubic yards of material will be removed from the site and transported by rail to the Envirocare disposal facility in Utah. Removal activities will be discontinued during the winter months because of anticipated poor weather conditions. Additional pile material will be excavated and disposed of in Utah during 1995.

Please feel free to contact me at (615) 576-5724 if you have any questions or comments.

Sincerely,

Susan M. Cange, Site Manager
Former Sites Restoration Division

Enclosure

Department of Energy

Oak Ridge Operations
P.O. Box 2001
Oak Ridge, Tennessee 37831—

94-574

126654

SEP 23 1994.

The Honorable John A. Steuert, Jr.
Mayor, Borough of Maywood
459 Maywood Avenue
Maywood, NJ 07607

Dear Mayor Steuert:

MAYWOOD SITE - PUBLIC RELEASE OF THE FINAL EE/CA TO REMEDIATE THE STORAGE PILE

The purpose of this letter is to inform you that the final version of the engineering evaluation/cost analysis (EE/CA) for remediation of the Maywood storage pile has been released. This final copy includes a responsiveness summary to public comments made during May and June of this year. A copy of this report has been enclosed for your information. In addition, a copy has been placed in the administrative record file at the Maywood Public Library and at the DOE Public Information Center in Maywood.

DOE is moving forward with its plans to remove the Maywood pile. Pile removal activities are scheduled to begin in early October and continue through November, 1994. During that time, approximately 5,000 cubic yards of material will be removed from the site and transported by rail to the Envirocare disposal facility in Utah. Removal activities will be discontinued during the winter months because of anticipated poor weather conditions. Additional pile material will be excavated and disposed of in Utah during 1995.

Please feel free to contact me at (615) 576-5724 if you have any questions or comments.

Sincerely,

Susan M. Cange, Site Manager
Former Sites Restoration Division

Enclosure

Department of Energy

Oak Ridge Operations
P.O. Box 2001
Oak Ridge, Tennessee 37831—

94-574

120654

SEP 23 1994

The Honorable Richard LoCascio
Mayor, Rochelle Park Township
405 Rochelle Avenue
Rochelle Park, NJ 07662

Dear Mayor LoCascio:

MAYWOOD SITE - PUBLIC RELEASE OF THE FINAL EE/CA TO REMEDIATE THE STORAGE PILE

The purpose of this letter is to inform you that the final version of the engineering evaluation/cost analysis (EE/CA) for remediation of the Maywood storage pile has been released. This final copy includes a responsiveness summary to public comments made during May and June of this year. A copy of this report has been enclosed for your information. In addition, a copy has been placed in the administrative record file at the Maywood Public Library and at the DOE Public Information Center in Maywood.

DOE is moving forward with its plans to remove the Maywood pile. Pile removal activities are scheduled to begin in early October and continue through November, 1994. During that time, approximately 5,000 cubic yards of material will be removed from the site and transported by rail to the Envirocare disposal facility in Utah. Removal activities will be discontinued during the winter months because of anticipated poor weather conditions. Additional pile material will be excavated and disposed of in Utah during 1995.

Please feel free to contact me at (615) 576-5724 if you have any questions or comments.

Sincerely,

Susan M. Cange, Site Manager
Former Sites Restoration Division

Enclosure

94-574

120654

Department of Energy

Oak Ridge Operations
P.O. Box 2001
Oak Ridge, Tennessee 37831—

SEP 23 1994

The Honorable Phillip Toronto
Mayor, Lodi Borough Hall
One Memorial Drive
Lodi, NJ 07644

Dear Mayor Toronto:

MAYWOOD SITE - PUBLIC RELEASE OF THE FINAL EE/CA TO REMEDIATE THE STORAGE PILE

The purpose of this letter is to inform you that the final version of the engineering evaluation/cost analysis (EE/CA) for remediation of the Maywood storage pile has been released. This final copy includes a responsiveness summary to public comments made during May and June of this year. A copy of this report has been enclosed for your information. In addition, a copy has been placed in the administrative record file at the Maywood Public Library and at the DOE Public Information Center in Maywood.

DOE is moving forward with its plans to remove the Maywood pile. Pile removal activities are scheduled to begin in early October and continue through November, 1994. During that time, approximately 5,000 cubic yards of material will be removed from the site and transported by rail to the Envirocare disposal facility in Utah. Removal activities will be discontinued during the winter months because of anticipated poor weather conditions. Additional pile material will be excavated and disposed of in Utah during 1995.

Please feel free to contact me at (615) 576-5724 if you have any questions or comments.

Sincerely,

Susan M. Cange, Site Manager
Former Sites Restoration Division

Enclosure

94-574
120634
120034

Department of Energy

Oak Ridge Operations
P.O. Box 2001
Oak Ridge, Tennessee 37831—

SEP 23 1994

Mr. Adam Strobel
Assistant to County Executive
Bergen County Administration Building
21 Main Street
Hackensack, NJ 07601

Dear Mr. Strobel:

MAYWOOD SITE - PUBLIC RELEASE OF THE FINAL EE/CA TO REMEDIATE THE STORAGE PILE

The purpose of this letter is to inform you that the final version of the engineering evaluation/cost analysis (EE/CA) for remediation of the Maywood storage pile has been released. This final copy includes a responsiveness summary to public comments made during May and June of this year. A copy of this report has been enclosed for your information. In addition, a copy has been placed in the administrative record file at the Maywood Public Library and at the DOE Public Information Center in Maywood.

DOE is moving forward with its plans to remove the Maywood pile. Pile removal activities are scheduled to begin in early October and continue through November, 1994. During that time, approximately 5,000 cubic yards of material will be removed from the site and transported by rail to the Envirocare disposal facility in Utah. Removal activities will be discontinued during the winter months because of anticipated poor weather conditions. Additional pile material will be excavated and disposed of in Utah during 1995.

Please feel free to contact me at (615) 576-5724 if you have any questions or comments.

Sincerely,

Susan M. Cange, Site Manager
Former Sites Restoration Division

Enclosure

Engineering Evaluation/Cost Analysis for the Maywood Site Storage Pile, Maywood, New Jersey

September 1994

Prepared by

U.S. Department of Energy
Former Sites Restoration Division
Oak Ridge, Tennessee

CONTENTS

CONTENTS (Continued)

FIGURES

TABLES

ACRONYMS AND ABBREVIATIONS

AEA	Atomic Energy Act of 1954, as amended
AEC	U. S. Atomic Energy Commission
ALARA	as low as reasonably achievable
ANL	Argonne National Laboratory
ARAR	applicable or relevant and appropriate requirement
BNAE	base/neutral and acid extractable compounds
BNI	Bechtel National, Inc.
BRA	baseline risk assessment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended
CFR	Code of Federal Regulations
DCG	Derived Concentration Guide
DOE	U. S. Department of Energy
DOT	U. S. Department of Transportation
EE/CA	engineering evaluation/cost analysis
EIS	environmental impact statement
EPA	U. S. Environmental Protection Agency
FFA	Federal Facilities Agreement
FR	Federal Register
FS	feasibility study
FUSRAP	Formerly Utilized Sites Remedial Action Program
FY	fiscal year
MCL	maximum contaminant level
MCLG	maximum contaminant level goal
MCW	Maywood Chemical Works
MISS	Maywood Interim Storage Site
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEPA	National Environmental Policy Act of 1969
NJDEP	New Jersey Department of Environmental Protection
NPL	National Priorities List
NRC	U. S. Nuclear Regulatory Commission
ORNL	Oak Ridge National Laboratory
OSHA	Occupational Safety and Health Administration
OU	operable unit
PAH	polyaromatic hydrocarbon
PP	proposed plan
RCRA	Resource Conservation and Recovery Act, as amended
RESRAD	residual radioactivity computer code
RI	remedial investigation
RI/FS-EIS	remedial investigation/feasibility study-environmental impact statement
ROD	record of decision
SAIC	Science Applications International Corporation

SARA	Superfund Amendments and Reauthorization Act
TBC	to-be-considered (guidelines)
TC	toxicity characteristic
TCLP	toxicity characteristic leaching procedure
TPH	total petroleum hydrocarbons
VOC	volatile organic compound
WL	working level
11e(2)	Section 11e(2) of the Atomic Energy Act, defining byproduct material

UNITS OF MEASURE

ft	foot (feet)
ft^2	square foot (feet)
ft^3	cubic foot (feet)
g	gram(s)
hr	hour(s)
kg	kilogram(s)
μg	microgram(s)
m^2	square meter(s)
m^3	cubic meter(s)
mg	milligram(s)
mi	mile(s)
mR	milli-roentgen(s)
mrem	millirem(s)
pCi	picoCuries
yd^3	cubic yard(s)
mR	milli-roentgen(s)
μR	micro-roentgen(s)

EXECUTIVE SUMMARY

This engineering evaluation/cost analysis (EE/CA) has been prepared in support of a proposed action to remove radioactively contaminated soils and debris from the Maywood Interim Storage Site (MISS) waste pile in Maywood, New Jersey. The MISS and associated properties, collectively designated as the Maywood site, became contaminated as a result of thorium processing operations by the former Maywood Chemical Works. The waste storage pile at MISS contains approximately 35,000 yd^3 of contaminated materials removed from 25 vicinity properties between 1984 and 1986. This EE/CA only addresses the contaminated materials contained in this waste storage pile. The U.S. Department of Energy (DOE) is responsible for cleanup activities at the Maywood site under its Formerly Utilized Sites Remedial Action Program (FUSRAP), as defined in the Federal Facilities Agreement (FFA) between DOE and the U.S. Environmental Protection Agency (EPA) for the site.

Remedial actions at the Maywood site are being conducted in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA). In addition, DOE has chosen to integrate the values of the National Environmental Policy Act (NEPA), which assure that the socio-economic and potential cumulative impacts of a proposed action are considered as part of the decision-making process for that action. DOE is currently conducting a comprehensive remedial investigation/feasibility study-environmental impact statement (RI/FS-EIS) for remedial action at the Maywood site. The proposed early removal action evaluated in this EE/CA is consistent with the overall cleanup strategy for the site, and will not limit the choice of reasonable alternatives or prejudice the ultimate decision for which the RI/FS-EIS is being prepared. The removal of the waste storage pile will facilitate proposed future waste processing activities at the MISS property during final remediation of the Maywood site and ensure protection of human health and the environment.

This EE/CA has been submitted for public comment in accordance with the requirements of 40 CFR 300.415. A summary of comments received by DOE and the respective DOE responses is provided as an Appendix.

1. SITE CHARACTERIZATION

1.1 SITE DESCRIPTION

The Maywood site consists of properties in the Boroughs of Maywood and Lodi and the Township of Rochelle Park, New Jersey, that were contaminated by operations for processing thorium, a radioactive element, at the Maywood Chemical Works (MCW). These operations occurred from the early 1900's through 1959. The three municipalities are located in a densely populated area of Bergen County in northeastern New Jersey, approximately 12 miles north-northwest of New York City and 13 miles northeast of Newark, New Jersey (Figure 1-1). The site is listed on the National Priorities List (NPL) as the Maywood Chemical Company.

Properties within the Maywood site include the DOE-owned Maywood Interim Storage Site (MISS) and other vicinity properties. These other properties include the Stepan Company property (formerly Maywood Chemical Works) and numerous residential, commercial, Federal, state, and municipal properties in Maywood, Rochelle Park, and Lodi, New Jersey (Figure 1-2). These properties are contaminated with the thorium-232, radium-226, and uranium-238 radioactive decay series as a result of thorium processing at MCW. Chemical contaminants are also known to be present on some of the properties.

The U.S. Department of Energy (DOE) was assigned responsibility for the Maywood site by Congress in 1984. DOE is conducting a study of possible cleanup actions for the site, called a remedial investigation/feasibility study-environmental impact statement (RI/FS-EIS), under the Formerly Utilized Sites Remedial Action Program (FUSRAP). FUSRAP was established in 1974 to identify and decontaminate or otherwise control sites where residual radioactive materials remain from the early years of the nation's atomic energy program and from commercial operations causing conditions that Congress has authorized DOE to remedy.

Congress assigned DOE the responsibility for cleaning up contamination at the site that resulted from thorium processing operations by the former Maywood Chemical Works. The U.S. Environmental Protection Agency (EPA) oversees the Maywood site cleanup. Each agency's responsibilities are described in a Federal Facilities Agreement (FFA) negotiated by DOE and EPA Region II. DOE is responsible primarily for addressing radioactive contamination and the contaminants that meet the definition of FUSRAP waste as described in the FFA. A separate RI/FS is being conducted by the Stepan Company, owner of the former MCW property, focusing on chemical contamination at the site. Although the DOE and Stepan Company RI/FS activities are being conducted independently, EPA has oversight over both actions; in consultation with DOE and the Stepan Company, EPA will ensure that sufficient coordination occurs between the parties to fully address the problems of the Maywood site.

To help in developing and evaluating remedial action alternatives, the Maywood site has been divided into five operable units (OUs) based on land use and the type of contaminated media (e.g., contaminated soils, contaminated buildings) of concern. The location of the properties making up these OUs is shown in Figure 1-2.

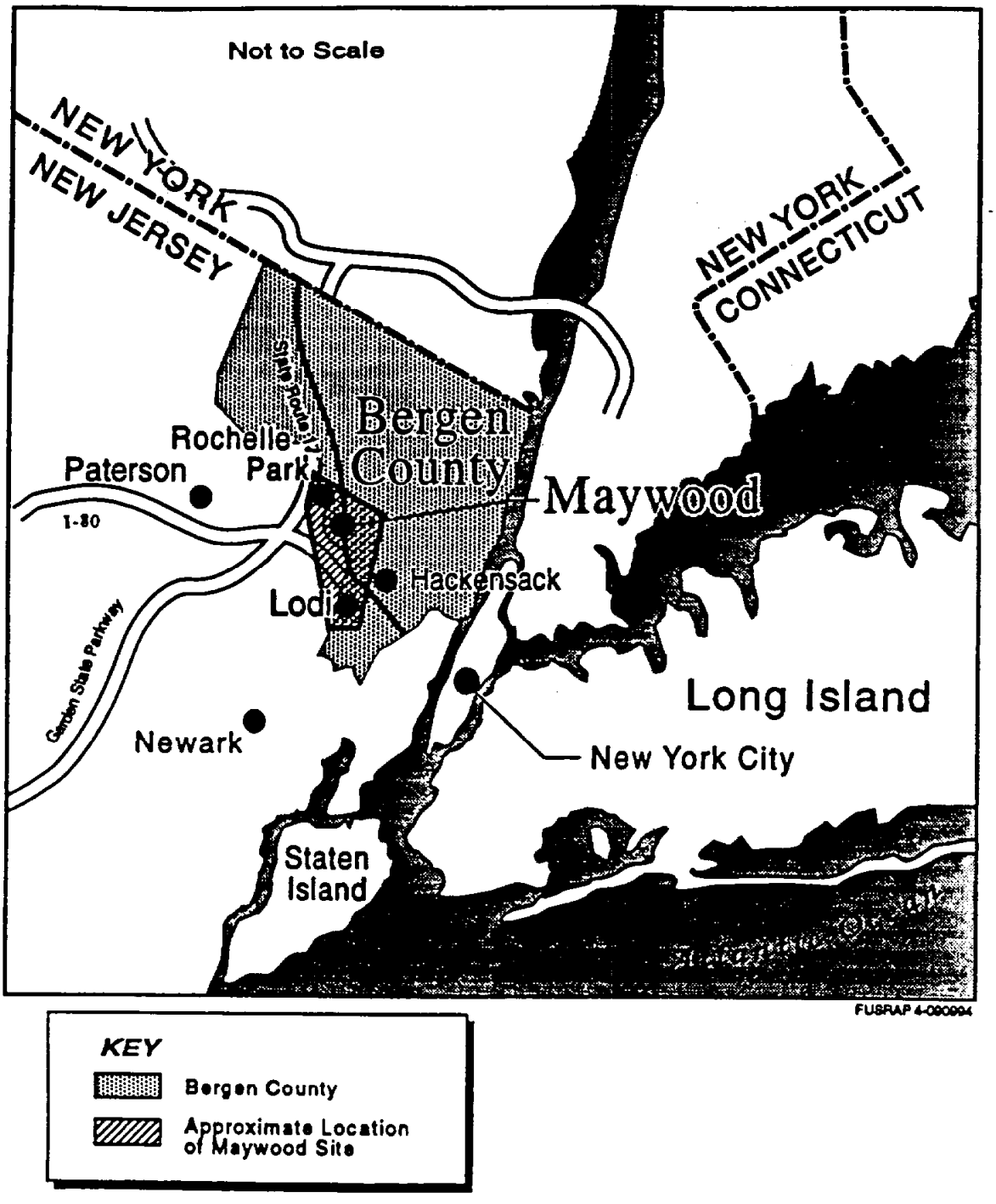


Figure 1-1. Location of the Maywood Site.

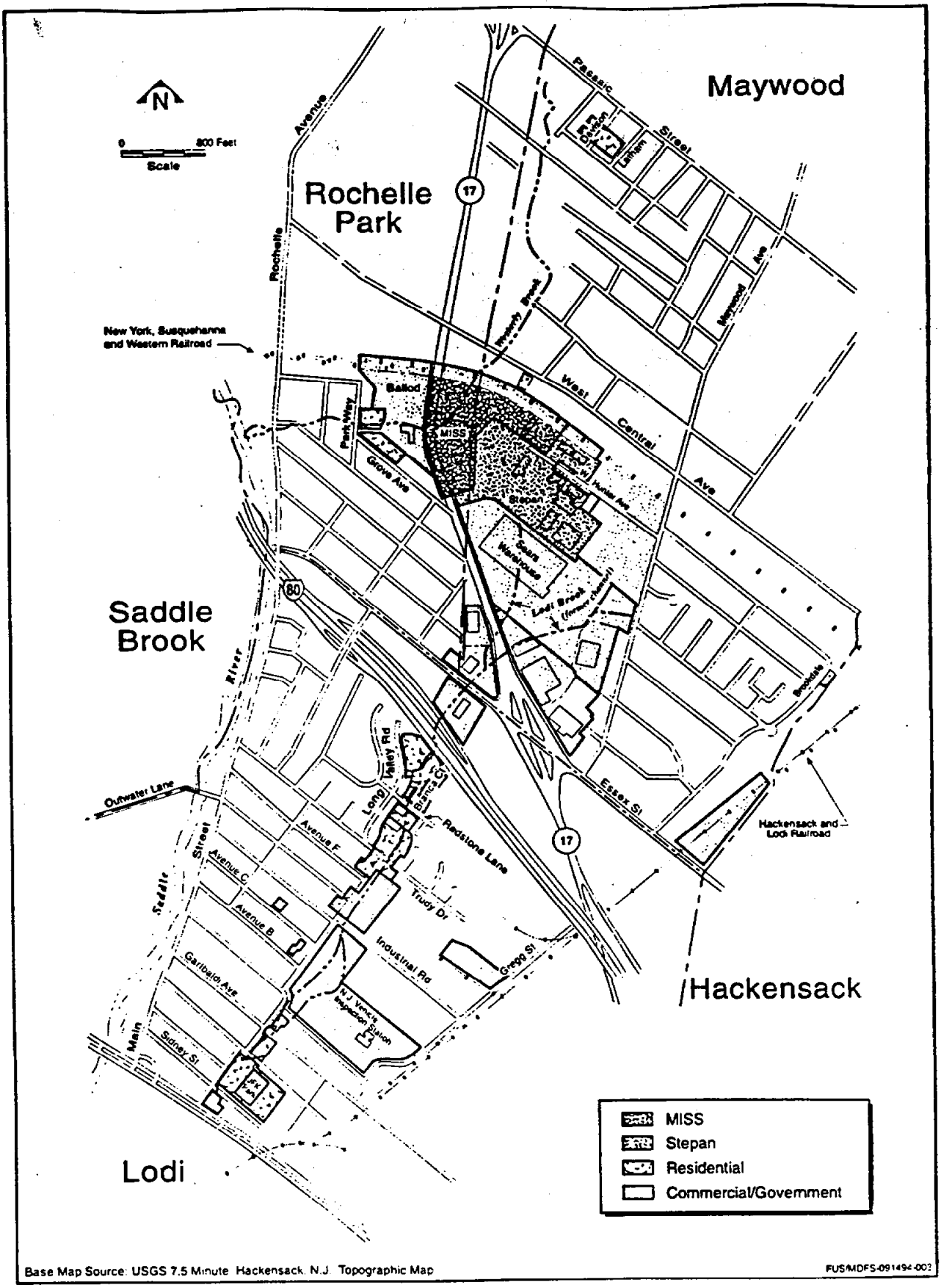


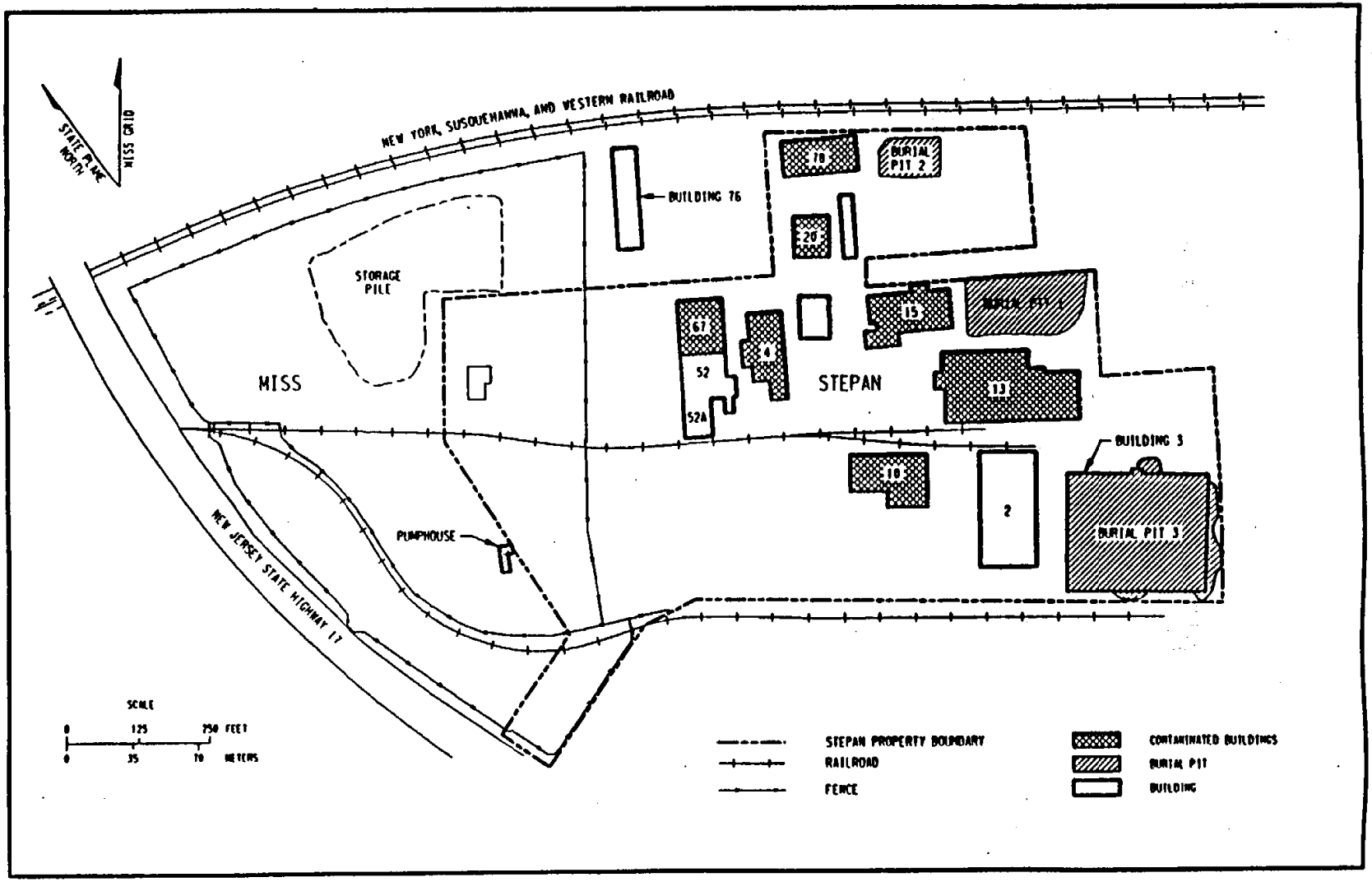
Figure 1-2. Map of the Maywood Site Operable Units.

The Maywood Interim Storage Site is an 11.7-acre property owned by DOE and located in the Borough of Maywood and the Township of Rochelle Park. The MISS property was previously part of a 30-acre property owned by the Stepan Company, and it was formerly part of the Maywood Chemical Works. DOE acquired the property from the Stepan Company in 1985. The property contains a waste storage pile, two buildings (Building 76 and a pumphouse), two partially buried structures, temporary office trailers, a reservoir, and two rail spurs. It is bordered on the west by State Route 17, on the north by a New York, Susquehanna, and Western Railroad line, and on the south and east by commercial and industrial properties. Residential properties are located north of the railroad line and within 300 yards to the north of the MISS property boundary. The waste storage pile at MISS occupies approximately 2 acres and contains about 35,000 yd^3 of contaminated soils and materials from previous cleanup actions conducted on vicinity properties at the Maywood site. A building at MISS (Building 76) also houses waste from previous cleanup actions and site investigations. Former waste retention ponds also are located at MISS. The property is enclosed by a chain-link fence and access is restricted within the fenced area. Figure 1-3 indicates principal features of the MISS property.

The Stepan Company, a pharmaceutical manufacturer, is located at 100 West Hunter Avenue in the Borough of Maywood, adjacent to MISS. The property covers 18.2 acres, approximately two-thirds of which contains buildings; some of these buildings are located in or near areas where the MCW thorium-processing operations occurred. Burial pits containing thorium-processing and other wastes are located on the site (see Figure 1-3). The property (excluding the main office and parking area) is enclosed by a chain-link fence and access is restricted within the fenced area.

Residential vicinity properties in the Boroughs of Maywood and Lodi and the Township of Rochelle Park contain radioactive contamination from thorium-processing operations. These properties were identified by DOE through surveys performed by Oak Ridge National Laboratory (ORNL). Nine residential properties in Rochelle Park on Grove Avenue and Park Way and eight residential properties in Maywood on Davison Avenue and Latham Street were completely decontaminated by DOE between 1984 and 1986. This decontamination was verified by ORNL and the properties were approved for use without radiological restriction. Eight residential properties in Lodi have also been decontaminated and have been independently verified as clean. One additional property in Lodi was partially remediated during previous removal actions. Of the remaining 31 contaminated residential properties to be dealt with by DOE, 29 are located in the Borough of Lodi (including the one partially remediated property) and two are located in Maywood.

Commercial/government vicinity properties include 27 properties located in Maywood, Rochelle Park, and Lodi. Twenty commercial vicinity properties are part of the Maywood site. State and federally owned properties include areas in the right-of-way for Interstate 80, a State Route 17 embankment, and the New Jersey Vehicle Inspection Station. Four contaminated municipal properties in Lodi (three parks and a fire station), residential streets suspected to have contaminated soils below the surface, and contaminated sediments from Lodi Brook are also included in this OU. The majority of these properties were contaminated through the same



R48F004.DGN

Figure 1-3
Site Map of the Maywood Interim Storage Site and Adjacent Stepan Company Property

processes as the residential properties — by movement of contaminated sediments along former stream channels or use of contaminated material as fill and mulch. Three of these properties (Ballod, Sears and State Route 17) were once part of the former MCW property and were used, at least in part, for waste disposal. A portion of one property (Ballod) was remediated during a previous removal action.

Contaminated buildings and structures are located on the Stepan property. Radiologically contaminated buildings include Buildings 4, 10, 13, 15, 20, 67, 78, and the guardhouse (see Figure 1-3). The radiological contamination is generally localized in discrete areas within buildings, and is fixed in place on building floors and surfaces and not easily removed by casual contact. The contaminated buildings are all old buildings that existed during the time that MCW was processing thorium. No buildings on vicinity properties were found to be contaminated, other than one residence in Lodi that contained contaminated building materials from MCW. The contaminated portion of this residential building has been removed and reconstructed.

This engineering evaluation/cost analysis (EE/CA) has been prepared according to the requirements of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). The primary purpose is to evaluate a proposed early removal action for the waste storage pile at MISS. This response action would deal with contaminated soils and debris generated during previous response actions at 25 vicinity properties at the Maywood site and placed in interim storage at MISS.

No significant near-term health threats are believed to be posed by the waste storage pile. However, DOE has determined that this early removal action (taking care of the waste pile before the remediation of the entire Maywood site) would facilitate future remedial activities at the site. It also would ensure the protection of human health and the environment. The proposed removal action is consistent with the remedial action strategy currently being planned for the Maywood site through the ongoing RI/FS-EIS process, and will not bias future actions at the site.

The RI/FS-EIS process will be completed before comprehensive remedial actions for the site will begin (ANL/BNI 1992). The RI/FS-EIS process will conclude with the publication of a document, called a record of decision (ROD), that will identify the selected remedy for the Maywood site.

Various removal actions have been or will be performed at the Maywood site before completion of the RI/FS-EIS process, in order to control actual or potential releases of contaminants into the environment. Removal actions completed previously are discussed in Section 1.2. Management of the contaminated materials in the waste storage pile discussed in this EE/CA also would be conducted as a removal action.

1.2 SITE BACKGROUND

The Maywood Chemical Works was constructed in 1895. In 1916, the plant began extracting thorium and rare earths from monazite sands for use in manufacturing industrial products such as mantles for gas lanterns. The plant also produced a variety of other materials, including lithium compounds, detergents, alkaloids, and oils. The plant stopped accepting monazite sands for extraction of thorium in 1956, but it processed stockpiled materials until 1959. Based on available historical information and knowledge of the chemical processes involved, the chemicals identified as having been used in the thorium extraction process include sulfuric acid, nitric acid, ammonium hydroxide, and ammonium oxalate. Oxalic acid was also used at the site in the production of higher-grade thorium.

In the extraction process, waste in a slurry form was produced. Until 1932, the slurry was pumped to two earthen-diked areas west of the plant. At that time, the disposal areas were affected by the construction of State Route 17, which separated the diked areas from the plant and partially buried them. Waste retention ponds also were located throughout the area of MCW that is now MISS.

Some of the process wastes were removed and used as mulch and fill on nearby properties, thereby contaminating those properties with radioactive materials. Although the fill consisted primarily of tea and coca leaves from other MCW processes, these materials were apparently contaminated with the thorium-processing wastes. Other wastes moved off-site from the property through natural drainage of the former Lodi Brook. Most of the open stream channel in Lodi has been replaced by an enclosed storm drain system.

MCW received a radioactive materials license from the AEC in 1954. The property was sold to the Stepan Company in 1959, which received a license from the AEC in 1961. Although the Stepan Company never processed radioactive materials, the company agreed to carry out certain remedial measures in the former disposal area on the west side of State Route 17 (now known as the Ballod property). Stepan began to clean up the thorium processing wastes in 1963. From 1966 through 1968, Stepan removed residues and tailings from the Ballod property and reburied them on the Stepan property in three burial pits. After these actions were completed, AEC certified that the portion of the property west of State Route 17 could be used without radiological restrictions.

Radioactive contamination, however, was discovered in the northeast corner of the property in 1980. The discovery was made after a private citizen reported radioactive contamination near State Route 17 to the New Jersey Department of Environmental Protection (NJDEP). A survey of the area (State Route 17, Ballod property, and Stepan property) conducted by NJDEP identified the contaminants as thorium-232 and radium-226. The U.S. Nuclear Regulatory Commission (NRC) was notified of the results and conducted additional surveys from November 1980 to January 1981. These surveys confirmed that there were high concentrations of thorium-232 in soil samples collected from both the Stepan and Ballod properties. NRC, therefore, requested a thorough survey of the area.

In January 1981, the EG&G Energy Measurements Group conducted an aerial radiological survey of the Stepan property and surrounding properties. The survey, which covered a 3.9-mi^2 area, indicated contamination not only on the Stepan and Ballod properties but also in areas to the north and south of the Ballod property. During February 1981, Oak Ridge National Laboratory (ORNL) performed a separate radiological ground survey of the Ballod property. Those results eventually led to designation of the property for remedial action under FUSRAP. In June 1981, another radiological survey of the Stepan and Ballod properties commissioned by the Stepan Company produced similar findings.

Through a provision of the Energy and Water Development Appropriations Act of 1984, Congress authorized DOE to conduct a decontamination research and development project at the Maywood site. The site was assigned to FUSRAP, and DOE negotiated access to a 11.7-acre portion of the Stepan property for use as an interim storage facility for contaminated materials that were to be removed from vicinity properties. This area is now known as MISS. In September 1985, ownership of MISS was transferred to DOE.

In late 1983, DOE began a program of surveys of properties in the vicinity of the former MCW plant. From 1984 to 1986, DOE completed removal actions at 25 residential properties, and partially remediated one additional residential property and one commercial property. The waste from these removal actions was placed in storage at MISS. Removal actions at the vicinity properties were halted in 1986 in response to community concerns about additional wastes being brought to MISS.

In July 1991, DOE conducted a time-critical removal action to decontaminate a residential property at 90 Avenue C in Lodi. This action was taken in response to radiological surveys which identified gamma exposure rates above DOE guidelines inside a portion of the building. The original owner of the residence was an employee of MCW, who apparently used discarded building and fill materials from MCW in the construction of an addition to the house. Contaminated soil and building materials generated during this removal action were packaged in appropriate containers and placed in Building 76 at MISS for storage.

The Maywood site was placed on the National Priorities List (NPL) by EPA on September 8, 1983. All remedial actions at the site conducted by DOE are being coordinated with EPA Region II under CERCLA. In addition, it is DOE policy to integrate the requirements of CERCLA with the values of NEPA for remedial action at sites for which it has responsibility. The RI/FS conducted under CERCLA is the primary process for ensuring that DOE remedial actions for the site meet environmental regulations. Under the integrated CERCLA/NEPA policy, the CERCLA process is supplemented, as appropriate, to include NEPA values.

The limits of DOE's responsibilities for the Maywood site are defined under a negotiated Federal Facilities Agreement between DOE and EPA Region II which became effective April 22, 1991. DOE is responsible for FUSRAP waste, which is specifically defined as:

- all contamination, both radiological and chemical, whether commingled or not, on MISS;

- all radiological contamination above DOE action levels related to past thorium processing at the MCW site occurring on any vicinity properties; and

- any chemical contamination on vicinity properties that would satisfy either of the following requirements:

  - the chemical contaminants are mixed or commingled with radiological contamination above DOE action levels; or

  - the chemical contaminants originated on MISS or were associated with the thorium processing activities at the MCW site which resulted in the radiological contamination.

Chemical contamination from MCW that is not on MISS (or that is not shown to be migrating from MISS), and not mixed with FUSRAP waste, is being investigated by the Stepan Company. This investigation is being conducted through an agreement signed by EPA and the Stepan Company in 1987 and an order signed by EPA in 1991.

The waste storage pile at MISS currently contains about 35,000 yd^3 of contaminated soil and debris removed from 25 vicinity properties between 1984 and 1986. It occupies approximately 2 acres with an average height of 18 ft. During construction, the ground surface was graded until level and rolled until firmly packed. A berm was constructed around the entire area, and a leachate collection system (a 6-inch layer of sand or fine soil) was installed and covered with an impermeable Hypalon liner. An additional 6-inch layer of sand was placed on top of the liner to drain any leachate that might form after the storage pile was completed. The bottom liner slopes toward two sumps for leachate collection. A 12-inch layer of fine-grained contaminated materials was placed over the upper sand layer to protect it and the liner during placement of the contaminated materials. After the removal action at the vicinity properties was completed, the pile was covered with a Hypalon cover, which was sealed to the bottom liner and further anchored using concrete blocks. In 1992, the cover was damaged by high wind; the damaged cover was promptly repaired and additional ballast was added to further secure the cover from future damage. DOE has maintained a comprehensive environmental monitoring program for air, surface water, sediment, and groundwater at MISS since 1984.

During the previous removal actions at the site, the public and local authorities were kept fully informed about the work being planned and conducted by DOE. This was accomplished through coordination with private property owners and local officials regarding logistics of the removal actions, as well as through local media coverage and by issuing public notifications (i.e., press releases). Formal access agreements were obtained with each affected property owner and the borough or township officials before the removal actions were conducted. Any

future response activities at the site also will be coordinated with the public and state and local officials according to the community relations plan for the site (BNI 1992).

1.3 ENVIRONMENTAL SETTING

Land Use and Demography. Land use in the vicinity of the Maywood site is a mixture of commercial, light industrial, and residential uses. MISS is zoned for light industrial use. There is no public access to MISS or to much of the Stepan property. According to the 1990 Census, the population of Maywood was 9,473, Lodi was 22,335, and Rochelle Park Township was 5,587. The population density in this area is approximately 10,000 people/mi^2.

Topography, Drainage, and Surface Water. The Maywood site is located in the glaciated section of the Piedmont Plateau of north-central New Jersey. The terrain is generally level, with minor highs and lows created by occasional shallow ditches and low mounds. Elevations range from 51 to 67 ft above mean sea level. The surface slopes gently to the west and is poorly drained.

The Maywood site lies within the Saddle River drainage basin. MISS is located approximately 0.5 mile east of the Saddle River, which is a tributary of the Passaic River, and approximately 1 mile west of the drainage divide of the Hackensack River basin. Rainwater runoff from most of MISS empties into the Saddle River through Westerly Brook, which flows under the property, under State Route 17 through a concrete culvert, and eventually empties into the Saddle River. Neither the Saddle River nor Westerly Brook is used as a source of potable water.

Another perennial stream on the Maywood site, Lodi Brook, begins as two branches on the Sears property. Most of the original stream channel has been replaced by an enclosed storm drain system. The former channel matches the distribution of contaminated materials in the Borough of Lodi. The western branch of Lodi Brook has been covered by the Sears warehouse and its parking lot. The eastern-most branch drains the surface area outside the Sears fence and then flows underground for most of its route to the Saddle River. Some surface runoff from MISS may flow parallel to State Route 17 and drain into Lodi Brook. Recent surface water flow studies at MISS, however, have observed no measurable surface runoff from the MISS property. Lodi Brook empties into the Saddle River downstream of Westerly Brook's confluence with the Saddle River.

Geology/Soils. Bedrock underlying the Maywood site consists of igneous-derived sedimentary rock of lower Jurassic and upper Triassic age identified as the Passaic Formation. The Passaic Formation has alternating beds of reddish-brown sandstone, mudstone, and shale. It ranges from 5900 to 8000 ft in thickness. Unconsolidated materials of glacial origin (boulders, gravel, silt, and clay) are layered over the bedrock at the site and in many parts of the region. The composition and characteristics of these deposits vary within the area, including unstratified deposits of unsorted rock fragments ranging from clay-sized particles to boulders laid down directly by glaciers and stratified deposits of bedded, well-sorted materials deposited by

glacial meltwater into streams and lakes. Extensive agricultural and urban development has disturbed or destroyed much of the original deciduous soil horizon. Most of the current soil cover in the area may be classified as urban fill.

Hydrogeology/Groundwater. Groundwater in the Maywood area occurs in both the Passaic Formation and the unconsolidated glacial deposits. The Passaic Formation is a productive aquifer with sufficient capacity for public and industrial use. However, there is no known use of this groundwater for drinking water or domestic uses in the area of the Maywood site. Groundwater flows through weathered rock and secondary fracture openings in the Passaic Formation, forming a system of tabular aquifers and aquicludes. The water is moderately mineralized and ranges from moderately hard to very hard. The unconsolidated glacial deposits provide a more variable source of groundwater, with highly variable water quality. It ranges from soft to hard but is generally not mineralized.

Depth-to-groundwater is shallow and ranges from approximately 3 to 15 ft below ground surface. Water levels fluctuate in response to short- and long-term seasonal patterns of precipitation and evapotranspiration. Levels are generally lowest in May through September, with rising water levels beginning in late November through December. Groundwater recharge occurs primarily through percolation from precipitation. At the MISS and Ballod properties, groundwater flow is toward the west in both the bedrock and overburden aquifers. Average hydraulic gradients vary depending on the season and recent precipitation. Gradients are generally steeper on the MISS property, and decrease rapidly on the Ballod property.

Ecology. The Maywood site is located within the glaciated portion of the Appalachian Oak Forest Section of the Eastern Deciduous Forest Province. However, urban development has destroyed the forest habitat in the area. This has resulted in natural landscapes dominated by grasses and forbs, with scattered shrubs and trees. The landscaped commercial and residential properties contain plant species common to landscaped yards, such as grasses, shrubs and trees. No threatened or endangered species have been identified at the Maywood site. Local habitat limits animal life to commonly occurring species adapted to suburban and urban environments.

Aquatic habitats are limited to drainageways, small temporary ponds, Westerly and Lodi Brooks, and the Saddle River. Hydrophytic vegetation is apparent along the upper portions of Lodi Brook on the Sears property. A wetlands delineation, performed as part of the RI/FS that the Stepan Company is conducting, identified wetlands covering approximately 1.7 ha (4.1 acres) in this area. However, no wetlands are present on the MISS property (DOE 1994a).

Climate and Meteorology. The regional climate is humid, with a normal annual precipitation of about 42 inches and about 120 days of precipitation per year. The area receives approximately 30 inches of snow per year. Average monthly temperatures range from 0.4°C (31.3° F) in January to 24.9°C (76.8°F) in July. The prevailing winds are from the northwest during October to April and from the southwest during the remainder of the year.

Archeological and Historical Sites. None of the buildings at the Maywood site are currently listed in the National Register of Historic Places. Consultation with the New Jersey Historic Preservation Office during the RI/FS-EIS process has confirmed that no archeological, cultural, or historic resources would be seriously affected by site activities.

1.4 ANALYTICAL DATA

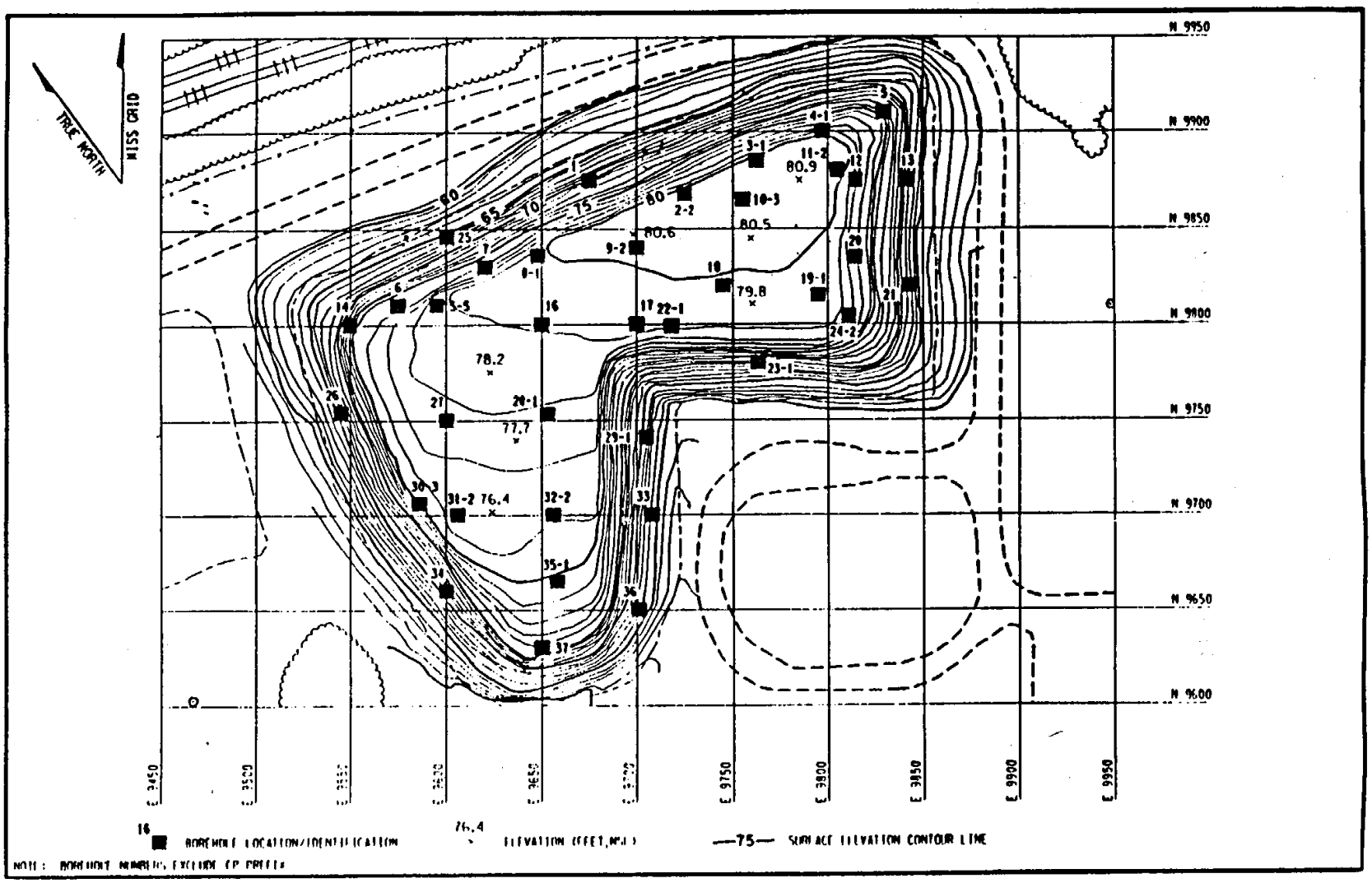
Detailed descriptions of the site characterization activities and results for the overall Maywood site are presented in the RI report (DOE 1992). Only information important to the MISS waste storage pile considered in this EE/CA is summarized in this section.

Radioactive Contaminants

Detailed characterization of the materials in the waste storage pile was conducted during 1990 and 1991 (BNI 1991). The sampling methods and approach were designed and agreed upon by DOE and NJDEP (Atkin 1989, Kaup 1989). The pile was surveyed and marked with a 50-ft grid, and 37 boreholes were drilled at locations indicated in Figure 1-4. To the degree possible, boreholes were drilled at the intersections of grid lines. However, some adjustments were necessary because of field conditions such as poor recovery, auger refusal, and unsafe slope conditions. If difficulties prevented reaching the proposed borehole depth, the drilling attempt was repeated at a location nearby. Drilling depth at each location differed because of the variable height of the pile and the depth of the leachate collection system underneath. After each borehole was drilled, the disturbed area of the pile cover was repaired.

To the extent possible, each borehole was sampled continuously from top to bottom using a split-spoon sampler. For each borehole, a randomly selected portion of the material taken from each sampling interval [using alternating 2-ft and 4-ft sampling intervals] was homogenized and composited to produce a single sample representative of the entire depth of the borehole. The composite samples (a total of 30) were then properly packaged and shipped for analysis by gamma spectrometry for thorium-232, radium-226, and uranium-238. Average radionuclide concentrations were 18.1 pCi/g for thorium-232, 2.4 pCi/g for radium-226, and 17 pCi/g for uranium-238. The results for each individual borehole are presented in Table 1-1.

These concentrations can be compared to DOE guidelines for these radionuclides. DOE has established generic guidelines (DOE 1990) for allowable radionuclide concentrations in soil for radium (radium-226, radium-228) and thorium (thorium-232, thorium-230). These guidelines limit concentrations of these radionuclides in soil to 5 pCi/g above background concentrations averaged over the first 6-inch layer of soil below the ground surface, and 15 pCi/g above background averaged over any 6-inch layer below the surface layer, averaged over any area of 100 m^2. For other radionuclides, DOE requires that soil concentration limits must be derived on a site-specific basis, such that the potential radiation dose to any member of the public would not exceed 100 mrem/year above background, and would be reduced as low as reasonably achievable (ALARA) below this dose limit. A site-specific guideline for total uranium of 100 pCi/g above background has been derived for the Maywood site (DOE 1994b). It should be



LSR086.DGN

Figure 1-4. MISS Waste Storage Pile Borehole Locations

Table 1-1. Radionuclide Concentrations in the MISS Storage Pile

Coordinates* East	Coordinates* North	Depth (ft)	Concentration (pCi/g ± 2 sigma) Uranium-238	Radium-226	Thorium-232
9550	9800	0.0 - 12.0	< 34.2	< 3.8	50.6 ± 10.6
9575	9705	0.0 - 9.1	< 24.6	4.5 ± 0.9	25.5 ± 6.7
9575	9820	0.0 - 12.0	< 11.8	1.9 ± 0.7	12.8 ± 4.8
9600	9660	0.0 - 8.0	< 21.1	2.5 ± 0.5	16.8 ± 2.4
9600	9700	0.0 - 8.0	< 9.0	2.0 ± 0.9	14.4 ± 3.2
9600	9750	0.0 - 8.0	< 12.4	2.6 ± 0.5	22.7 ± 6.1
9600	9800	0.0 - 12.0	< 13.2	2.0 ± 0.3	10.8 ± 1.7
9600	9846	0.0 - 4.0	< 17.1	2.7 ± 0.5	18.4 ± 4.1
9620	9830	0.0 - 12.0	< 16.4	1.7 ± 0.1	15.4 ± 0.9
9650	9630	0.0 - 12.0	< 14.3	2.5 ± 0.6	12.9 ± 0.3
9650	9665	0.0 - 13.0	< 14.3	4.1 ± 0.7	27.2 ± 7.8
9650	9700	0.0 - 14.0	< 8.6	1.8 ± 0.2	5.6 ± 1.4
9650	9800	0.0 - 15.0	< 8.3	1.4 ± 0.3	11.8 ± 3.4
9650	9850	0.0 - 12.0	< 9.9	2.0 ± 0.8	18.6 ± 4.5
9695	9650	0.0 - 4.0	< 26.3	4.3 ± 2.3	30.6 ± 4.2
9700	9750	0.0 - 4.0	< 9.6	< 0.9	6.4 ± 0.6
9700	9800	0.0 - 11.0	< 9.2	1.6 ± 0.3	14.4 ± 5.0
9700	9850	0.0 - 19.0	< 21.9	4.7 ± 0.8	34.1 ± 9.5
9708	9700	0.0 - 4.0	53.7 ± 28.1	4.9 ± 1.4	35.5 ± 8.3
9710	9785	0.0 - 14.5	< 8.3	1.8 ± 0.2	13.3 ± 3.3
9725	9880	0.0 - 10.5	< 16.2	1.4 ± 0.2	10.9 ± 1.3
9745	9820	0.0 - 14.0	< 15.3	2.8 ± 0.4	20.2 ± 0.6
9760	9885	0.0 - 12.0	< 19.7	1.8 ± 0.2	17.0 ± 2.8
9800	9815	0.0 - 14.0	< 8.2	1.7 ± 0.2	10.5 ± 3.0
9800	9900	0.0 - 8.0	< 10.8	1.2 ± 0.3	9.0 ± 2.2
9805	9870	0.0 - 8.0	< 11.3	< 1.4	15.2 ± 5.2
9820	9790	0.0 - 12.0	< 8.9	1.7 ± 0.1	16.3 ± 4.2
9825	9875	0.0 - 9.6	< 10.3	< 1.2	8.1 ± 1.4
9830	9910	0.0 - 8.5	< 15.2	1.4 ± 0.3	7.9 ± 1.2
9842	9875	0.0 - 4.0	< 14.8	4.2 ± 0.7	22.5 ± 5.1

*Sampling locations are shown in Figure 1-4.

noted, however, that these guidelines indicate the allowable residual radionuclide concentrations in natural soils and are not directly applicable to engineered waste storage facilities, such as the waste storage pile at MISS. Since the average concentration of thorium-232 in the pile exceeds the DOE guidelines, the entire contents of the waste storage pile would be managed under the proposed removal action.

DOE conducts an active environmental monitoring program at the Maywood site. Monitoring results for groundwater at MISS and nearby properties indicate that uranium, radium, and thorium concentrations are similar at upgradient and downgradient wells. Results from quarterly surface water (Westerly Brook) monitoring also indicate similar radionuclide concentrations at upstream and downstream sampling locations; all concentrations are below EPA maximum contaminant levels (MCLs) and DOE derived concentration guides (DCGs), and most concentrations are below analytical detection limits. Also, radionuclide concentrations in sediment samples from Westerly Brook are similar at upstream and downstream locations; no results exceed DOE guidelines for residual radioactive contamination in soils.

Air monitoring results indicate airborne radionuclide concentrations well below DOE and EPA standards for both radon and particulates. Also, the average radon flux rate at MISS is well below the DOE and EPA limits. The average exposure rates for external gamma radiation at MISS for 1993 was 111 mR/year above background at the site boundary (BNI 1994). The exposure rates at the boundary locations are elevated primarily because of localized soil contamination in the northeastern corner of the property in the area of Building 76, the former thorium processing facility, and not directly related to the waste storage pile considered for the proposed removal action. A person continuously occupying this area of the fenceline could exceed the DOE primary radiation dose limit of 100 mrem/year above background for members of the public. However, the property immediately adjacent to the northeastern corner of MISS is an industrial facility located approximately 150 ft northwest of the site boundary; the maximum dose to a hypothetical employee working in this facility is estimated to be approximately 0.57 mrem/year (BNI 1994).

Chemical Contaminants

Soil samples also were collected for analysis of chemical constituents from each borehole at the waste storage pile during the sampling program discussed above. For analysis of total petroleum hydrocarbons and volatile organics, samples were retrieved from the split-spoon sampler and were packaged and preserved before the composite sample was produced. The remaining contents were homogenized to ensure that they were representative of the composite sample. The composite sample was then properly packaged, preserved and shipped off-site for analysis. Based on knowledge of past processing operations, analytical parameters were selected to include toxicity characteristic (TC) metals, total polychlorinated biphenyls (PCBs), sulfide and cyanide reactivity, percent solids, and total petroleum hydrocarbons (TPH). Soil samples which exceeded 1,000 parts per million TPH were screened for EPA priority pollutant volatile organic compounds (VOCs) and base/neutral and acid extractable (BNAE) semivolatile organic compounds. Ten percent of all discrete samples were analyzed for the following broad-screen

parameters: TC volatile organics, corrosivity, TC BNAE semivolatile organics, TC pesticides, and TC herbicides.

The analytical results, as summarized in Table 1-2, indicated that the material in the waste storage pile is not a RCRA-hazardous waste. Concentrations of TC constituents (TCLP volatile organics, semivolatile organics, pesticides, herbicides, and metals) in the soil samples did not exceed the regulatory limits. Also RCRA limits for corrosivity and reactivity were not exceeded. The semivolatile organic compounds detected in the pile were polycyclic aromatic hydrocarbons (PAHs), which are commonly present as the result of incomplete burning of fossil fuels, garbage, or other organic substances. Because the Maywood site is in an industrial setting, the presence of PAHs is to be expected. The only VOC identified as exceeding detection limits in the soil samples was toluene, a common solvent and laboratory contaminant.

Several metals and volatile organic compounds were detected in groundwater and surface water at concentrations above existing or proposed MCLs or maximum contaminant level goals (MCLGs). The locations of the wells in which metals were detected in groundwater correlate with the detection of the same metals in nearby soil. The highest concentrations of VOCs in groundwater occur in wells located on the Stepan and Ballod properties, upstream and downstream of the MISS property, respectively. In surface water, metals were generally detected in similar concentrations in upstream and downstream sampling locations. Sediment samples collected from Westerly Brook at locations upstream and downstream from the Maywood site indicate similar concentrations of metals.

1.5 SITE CONDITIONS THAT JUSTIFY A REMOVAL ACTION

The threats posed by radioactively contaminated materials in the waste storage pile are of a non-time-critical nature, i.e., no immediate risk to human health or the environment currently exists at this property that would require emergency cleanup within 6 months. However, the conditions do meet criteria listed in Section 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) for conducting certain cleanup efforts as removal actions because there is "potential exposure to nearby populations, animals, or the food chain from hazardous substances or pollutants or contaminants." Also, the proposed action meets the requirement of CERCLA Section 104 that any removal action should "... contribute to the efficient performance of any long-term remedial action with respect to the release or threatened release concerned." The early removal of the waste storage pile at MISS would facilitate any future waste processing and staging activities at the MISS property during final remediation of the Maywood site. It would also complete the earlier removal actions which generated the contaminated materials contained in the waste storage pile.

The results of sampling the waste storage pile indicate that the primary contaminant of concern is thorium-232. The available data, as summarized in Section 1.4, indicate that the contaminated materials in the waste storage pile exceed the cleanup guidelines for the site only for thorium-232. The cleanup guidelines established for the site, however, are not directly applicable to the proposed removal action, which would address the entire contents of the waste

Table 1-2. Concentrations of Chemical Constituents Detected in MISS Storage Pile

Analyte	Number of Samples Analyzed	Number of Samples Detected	Concentration(µg/kg) Min.	Max.	Avg.
Semivolatile Organics					
Anthracene	30	2	42	740	232
Benzo(a)anthracene	30	10	51	1,500	414
Benzo(a)pyrene	30	12	54	1,500	461
Benzo(b)fluoranthene	30	11	66	1,400	427
Benzo(g,h,i)perylene	30	6	99	650	315
Benzo(k)fluoranthene	30	10	65	1,500	424
Bis(2-ethylhexyl)-phthalate	30	2	100	1,300	327
Chrysene	30	12	60	1,400	443
Fluoranthrene	30	18	76	3,300	802
Indeno(1,2,3-cd)pyrene	30	6	69	1,400	353
Phenanthrene	30	11	57	2,400	528
Pyrene	30	15	0	2,600	596
Volatile Organics					
Toluene	28	11	1	3,000	704
			Concentration(mg/kg) Min.	Max.	Avg.
Total Petroleum Hydrocarbons	155	28	63	6,100	659

storage pile. Final remediation of the MISS property as well as the overall Maywood site will occur following completion of the RI/FS-EIS process.

Potential radiological hazards from the contaminated soils are discussed in Section 4.1.1 of this report. To date, site investigations have not identified evidence of other contaminated media (for example, groundwater, surface water, or building surfaces) that warrant early removal actions.

2. REMOVAL ACTION OBJECTIVES

The waste storage pile at MISS resulted from previous removal actions at the Maywood site. It has been engineered to contain the contaminated soil and debris in a manner that will protect human health and the environment. There is little potential for disturbance and spread of these materials, and no imminent risk to human health or the environment has been identified. While the contaminated materials in the waste storage pile pose no immediate risk to human health or the environment, the proposed removal action would further reduce the potential for human or environmental exposure by removing this contaminant source from the site. It also would complete the earlier removal actions which generated the contaminated materials contained in the waste storage pile, and would facilitate the efficient performance of future cleanup actions for the overall Maywood site.

The intent of the proposed removal action is to relocate the contaminated materials to an appropriately licensed disposal facility. Soil treatment may be proposed by DOE to reduce the volume of waste for disposal, depending on the timing, availability, and effectiveness of the necessary equipment. Specifically, implementation of the proposed removal action would allow DOE to remove, transport, and dispose of contaminated materials from the waste storage pile to facilitate site-wide cleanup measures. The specific objectives are defined in Sections 2.1 through 2.4 in terms of statutory limits, scope and purpose of the proposed action, schedule, and compliance with regulatory requirements.

2.1 STATUTORY LIMITS

Authority for responding to releases or threats of releases from a contaminated site is addressed in Section 104 of CERCLA. Executive Order 12580 delegates to DOE the response authority for DOE sites. Under CERCLA Section 104(b), DOE is authorized to undertake such investigations, surveys, testing, or other data gathering deemed necessary to identify the existence, extent, and nature of the contaminants present at the Maywood site, including the extent of threats to human health and the environment. In addition, DOE is authorized to undertake planning, engineering, and other studies and investigations appropriate to directing response actions to prevent, limit, or mitigate potential risks associated with the site. Removal actions which are appropriate prior to implementation of the final remedial action for the site may be authorized by DOE, as necessary, in accordance with the FFA.

2.2 SCOPE AND PURPOSE

The scope of the proposed removal action can be broadly defined as management of radioactively contaminated materials in the waste storage pile at the Maywood Interim Storage Site. The primary purpose of the proposed action is to facilitate preparation of the MISS property for later waste treatment and staging activities during the final remediation of the Maywood site. The action also would ensure the protection of human health and the environment, and would provide final disposal of the radioactive wastes generated during earlier removal actions at the Maywood site. All activities would be conducted in a way to minimize

the potential risks to on-site personnel performing the removal action. The timely and complete removal of these materials from the waste storage pile would contribute to the efficient performance of comprehensive remedial actions being planned for the overall Maywood site.

2.3 SCHEDULE

The proposed removal action for the contaminated materials at the MISS waste storage pile is scheduled to begin in October 1994. The removal action is estimated to require approximately two to three years for completion, depending on the availability of funding. If sufficient budgetary resources are not allocated to DOE during this period, the period for completion of the action could be extended. Site preparation and mobilization activities in support of the proposed removal action will begin prior to October 1994.

The schedule includes development of detailed work plans and health and safety plans, development of appropriate decontamination facilities, removal of the contaminated materials from the waste storage pile, on-site processing as required, transportation of the contaminated materials for off-site disposal, and restabilizing the disturbed area until final remediation of the MISS property. It is anticipated that activity will be suspended during the winter months due to inclement weather conditions.

2.4 COMPLIANCE WITH REGULATORY REQUIREMENTS

The proposed removal action will be carried out according to all environmental laws and requirements that are determined to be applicable or relevant and appropriate requirements (ARARs) to the maximum extent practicable. This includes federal laws as well as more stringent state standards. In addition to ARARs, "to-be-considered" guidelines (TBCs) may play a role in the selection and implementation of a preferred alternative; TBCs include standards identified in specific departmental orders, etc., which are not promulgated by law but may be significant for the proposed action. A compilation of potential ARARs and TBCs for the proposed removal action for the waste storage pile is presented in Appendix A. The final compilation of ARARs for the overall Maywood site will be published in the FS for the site (DOE 1994a). The identification of potential ARARs and TBCs for the proposed removal action is based on the nature of the contamination (primarily soil contaminated with thorium-232), the nature of the proposed removal action, and the location of the site.

In accordance with CERCLA and the NCP, an alternative that does not meet an ARAR may be selected if one of several waiver conditions is met. One of these conditions is that the action is an interim measure and will become part of a total remedial action that will attain the requirement. This condition applies directly to the proposed removal action because this action is only part of the overall remedial action for the Maywood site. Moreover, compliance with ARARs may not be required for removal actions even when none of the specific waiver conditions is satisfied, based on consideration of factors such as the urgency of the situation and the scope of the removal action to be conducted.

Nevertheless, the proposed removal action will be conducted to comply with the substantive requirements of all ARARs to the maximum extent practicable. DOE will comply with all pertinent environmental requirements to ensure the protection of human health and the environment during implementation of the proposed action. Appropriate standards from the Occupational Safety and Health Act (OSHA) and other employee protection laws and guidelines also will be followed to protect workers during implementation.

3. REMOVAL ACTION TECHNOLOGIES AND ALTERNATIVES

This section summarizes the procedures and rationale used to identify alternatives for conducting the proposed removal action. It will consider relevant technologies that could be implemented to achieve the remedial action objectives specified previously. This process is consistent with the NCP and EPA guidance regarding removal actions. Because of the nature of the contaminated materials in the waste storage pile at MISS, the number of practical and suitable technologies that can be applied is limited. The technologies considered in selecting removal action alternatives include those identified in the NCP [40 CFR 300.415(d)], along with experience and information gained as a result of planning and implementing removal actions at similar sites.

3.1 TECHNOLOGY IDENTIFICATION AND SCREENING

Technologies potentially applicable to the proposed removal action have been screened and evaluated on the basis of site-specific conditions of the waste storage pile. The objective of the proposed removal action is to facilitate preparation of the MISS property for subsequent waste treatment and staging activities during the final remediation of the Maywood site and to ensure protection of human health and the environment. While the contaminated materials in the MISS pile are not considered to present an immediate risk to human health or the environment, the proposed removal action would further reduce the potential for exposure to humans or the environment.

General response actions that may apply to the remediation and management of radiologically contaminated sites include institutional controls, containment, removal, treatment, interim storage, and disposal. Several of these technologies, however, are not applicable to the proposed removal action considered in this EE/CA. Institutional controls, containment, and interim storage technologies are already implemented at the current waste storage pile, and are considered here only as a part of the no-action alternative.

Alternatives for the proposed removal action were identified by considering applicable technologies within each general response action category, according to the guidelines of the NCP [40 CFR 300.430(e)]. The potential technologies were screened with regard to effectiveness, implementability, and cost. The identification and screening of the technologies that may apply to the proposed action are discussed below and key considerations are summarized in Table 3-1.

Institutional Controls

Institutional controls are measures that prevent or minimize public exposure by limiting access or use of contaminated areas. They may include physical barriers (such as fences), use or deed restrictions, and environmental monitoring. Such controls are not effective in reducing the toxicity, mobility, or volume of contaminants, but they may reduce the potential for exposures to contaminated materials. The NCP specifies that institutional controls may not be

TABLE 3-1. Summary of General Response Technology Screening

Technology	Evaluation Result	Comments
Institutional Controls		
Use or deed restrictions	Not Applicable (Current DOE ownership maintained under all alternatives)	Limits on-site exposure to contaminants, but not effective in controlling the source or migration of contaminants; may be effective when used in conjunction with other technologies. The MISS property is currently owned by DOE, and DOE ownership and control would be maintained under all alternatives. No new actions are associated with the proposed removal action.
Access restrictions	Not Applicable (Current access restrictions maintained under all alternatives)	Limits on-site exposure to contaminants, but not effective in controlling the source or migration of contaminants; may be effective when used in conjunction with other technologies. Access restrictions are currently in place at MISS and will be maintained pending final remediation of the property.
Monitoring	Retained	Provides data for assessing control measures; may be effective when used in conjunction with other technologies. An extensive environmental monitoring program is in place at MISS and will be maintained pending final remediation of the property. Comprehensive environmental and personnel monitoring would be implemented throughout the proposed removal action.
Containment		
In-situ (capping)	Rejected (Current containment system retained in No-Action Alternative)	Can reduce contaminant mobility and mitigate potential exposures; contaminant toxicity and volume would not be reduced. The current liner/cover at the waste storage pile provides containment of the contaminated materials. Capping is not considered practicable as an interim measure for the waste storage pile due to potential incompatibility with future remediation measures for the MISS property, particularly for underlying contaminated soils.
Removal		
Excavation	Retained	Easy to implement, using conventional earth-moving equipment. Requires storage or disposal facility for excavated wastes and access restrictions during excavation.
Decontamination/ Demolition	Not Applicable	No contaminated structures are associated with the waste storage pile.

TABLE 3-1 (Continued)

Technology	Evaluation Result	Comments
Treatment		
Chemical/Physical Treatment	Retained	Treatment (soil washing) is retained for detailed evaluation for the proposed removal action, pending the results of treatability studies planned for 1994.
Interim Storage		
Existing on-site facility	Retained (No-Action only)	The contaminated materials considered in this EE/CA are currently in interim storage at MISS. Can effectively protect human health and the environment in the short term by reducing contaminant mobility and limiting exposures while a permanent remedy is developed.
Off-site	Rejected	Relocation of the contaminated materials to a temporary off-site storage location would provide no significant benefit over the existing waste storage pile at a considerable expense. No suitable off-site interim storage facility is currently available and development of a new facility would be prohibitively expensive and time-consuming.
Disposal		
On-site	Rejected	Permanent disposal of the Maywood site wastes will be fully evaluated in the FS for the site. No on-site disposal alternative is available for the proposed removal action and would be inappropriate due to the potential for biasing waste management evaluations in the RI/FS-EIS.
Off-site	Retained	Off-site commercial disposal facilities are currently licensed to accept 11e(2) byproduct material such as the MISS wastes. Off-site disposal at an existing DOE disposal facility is also plausible, but no such facility is currently in agreement to accept the Maywood site wastes. Siting of new disposal facilities is not considered to be a viable option within the time frame of the proposed removal action.

used as a substitute for active response measures as the sole remedy unless active measures are determined not to be practicable. Costs associated with institutional controls are generally low.

Institutional controls are currently in place at MISS and are considered generally effective in limiting potential exposure to the contaminated materials in the waste storage pile over the near term. The MISS property is owned by DOE, and institutional controls (access restrictions and environmental monitoring) will be maintained at this property at least until final remediation of the Maywood site is completed. Institutional controls, therefore, are considered as a component of the no-action alternative for the purposes of this analysis, although typically a "no-action alternative" assumes no active measures to control exposures. No new long-term institutional control measures would be associated with the proposed removal action. However, a comprehensive environmental and personnel monitoring program and additional access restrictions of the immediate work area would be implemented during the construction, processing, and restoration activities.

Containment

Containment technologies are designed to keep contaminated materials at their current locations. The purpose of containment is to reduce contaminant mobility and the potential for contaminants to move off-site. Containment technologies, in and of themselves, do not typically reduce the toxicity or volume of contaminants, but they may be effective in reducing contaminant mobility. Costs associated with containment technologies are considered moderate.

The current waste storage pile at MISS provides containment through encapsulation of the contaminated materials within the impermeable Hypalon liner and cover material. More permanent containment technologies, particularly capping, are considered impractical as an interim measure for the waste storage pile considered here because of potential interferences with ultimate remediation of the MISS property. Therefore, capping is eliminated from further consideration, and containment is considered here only as a component of the no-action alternative (i.e., continuation of the current containment system for the waste storage pile is considered as a component of the no-action alternative for the purposes of this analysis, although typically a "no-action alternative" assumes no active measures to control exposures or releases).

Removal

Removal of contaminated materials from a site can effectively reduce contaminant mobility and potential exposure. Contaminated soil and debris may be removed from the MISS waste pile using conventional earth-moving equipment such as backhoes, bulldozers, scrapers, and front end loaders. These technologies are reliable, can be easily and economically implemented with standard construction procedures and conventional equipment, and have been used extensively to control radioactive contamination similar to that associated with the waste storage pile. Removal technology is retained as a possible component of the action alternatives.

Treatment

Treatment includes a wide range of technologies, only a limited number of which are applicable to radioactively contaminated materials. Radioactive waste treatment technologies can be categorized as (1) those that remove the radioactive material from the waste matrix, and (2) those that change the form of the waste, thereby reducing the toxicity, mobility, or volume of the contaminants.

Treatment technologies identified as potentially applicable for the Maywood site are being fully evaluated in the FS for the site (DOE 1994a), including treatability studies for technologies that appear particularly promising. Treatability studies are scheduled to begin in 1994 to help evaluate soil washing technology for volume reduction of Maywood soils. Soil washing treatment technology is retained for further consideration for the proposed removal action. Treatment costs are considered moderate to high.

Removal of the MISS waste storage pile also would facilitate implementation of selected treatment technologies for the overall site remediation by providing an appropriate staging and processing area. Also, treatment of materials removed from the waste storage pile would provide additional data for optimizing the treatment process for site-specific conditions and production-scale materials management of all process streams.

Interim Storage

Interim storage involves the temporary placement of contaminated materials in a manner that effectively protects human health and the environment until the final treatment or disposal of the materials can be determined. Interim storage can be achieved by placing the contaminated materials in an existing engineered facility or in a newly constructed facility. Costs range from low, if existing storage capacity is available, to moderately high, if construction of a new facility is required.

The contaminated materials considered in this EE/CA are currently in interim storage at MISS. Since the contaminated materials would remain in the waste storage pile if no removal action were conducted, continued interim storage at MISS is retained as a component of the no-action alternative. Interim storage in a newly constructed facility is eliminated from further consideration on the basis of cost, implementation time, and lack of significant benefit.

Disposal

Disposal involves the permanent placement of contaminated materials in a manner that reduces contaminant mobility and protects human health and the environment for the long term. This technology can effectively reduce contaminant mobility and the potential for human exposure.

Alternatives for ultimate disposal of wastes from the overall Maywood site are being fully evaluated in the FS for the site (DOE 1994a). The disposal considerations for the proposed removal action are independent of the remedial action decisions regarding disposal for the overall Maywood site, and will not bias that process. Important differences in the two evaluations include the smaller volume of waste considered for disposal and the much shorter time frame desired for the proposed removal action. Thus, some potential disposal alternatives with lengthy time requirements (such as siting and developing a new facility, either on-site or off-site) may be appropriate for the site-wide disposal evaluation but would not be appropriate for the proposed removal action. The only disposal option considered available within the desired time frame, and which is therefore retained for further consideration in this analysis, is a licensed commercial disposal facility. Commercial disposal is currently available for the wastes from the waste storage pile, which are classified as 11e(2) byproduct material, at the Envirocare facility at Clive, Utah. Disposal costs, including transportation to the disposal facility, are considered moderate to high.

3.2 IDENTIFICATION OF PRELIMINARY ALTERNATIVES

The preliminary screening of potentially applicable technologies resulted in identification of the following technologies as potential components of removal action alternatives: removal of contaminated materials from the waste storage pile, treatment to reduce the volume of contaminated materials, and disposal at a licensed commercial facility. The screened technologies have been grouped into the following preliminary alternatives for the proposed action:

- Alternative 1: No action, with continuation of current interim storage, containment, environmental monitoring, and institutional controls. Remedial action for the waste storage pile would be delayed until the record of decision (ROD) for the Maywood site is issued.

- Alternative 2: Expedited removal of the contaminated materials from the waste storage pile, followed by transport of the wastes for off-site commercial disposal. This alternative includes access restrictions and increased environmental and personnel monitoring during implementation of restoration activities.

- Alternative 3: Expedited removal of the contaminated materials from the waste storage pile, and treatment using soil washing technology to reduce the volume of waste requiring off-site disposal. The concentrated treatment residues would be transported off-site for commercial disposal, while the decontaminated soil (with residual concentrations of thorium-232 and radium-226 in soil below 15 pCi/g) would be stored on-site for potential future use as subsurface backfill during implementation of the final remedial action for the Maywood site. This alternative includes access restrictions and increased environmental and personnel monitoring during construction and restoration activities.

4. EVALUATION OF ALTERNATIVES

The proposed removal action is an early action with regard to the overall remedial action planned for the Maywood site. The primary purpose of this removal action is to facilitate preparation of the Maywood Interim Storage Site for waste treatment and staging activities during the final remediation of the site. The action also will ensure protection of human health and the environment. The alternatives identified in Section 3.2 are evaluated below with respect to effectiveness, implementability, and cost.

4.1 EFFECTIVENESS

The effectiveness of an alternative is defined by its ability to protect human health and the environment from risks associated with the contamination in both the short term and the long term. Measures of effectiveness include (1) reduction of potential risks to human health and the environment; (2) compliance with regulatory requirements; (3) timeliness; and (4) reduction of contaminant toxicity, mobility, and volume through treatment.

4.1.1 Potential Health Impacts

Under Alternative 1, no action would be taken until a final decision is made regarding remediation of the overall Maywood site, including management of all site-related wastes. This alternative involves no immediate change in current exposures to radioactive materials at the site. An analysis of the baseline radiation exposure from current conditions at the waste storage pile (Alternative 1) is provided in the Baseline Risk Assessment (BRA) for the Maywood site (DOE 1993). The BRA analysis predicts a potential radiation dose of 114 to 142 mrem/year to workers at the MISS property and 3 to 24 mrem/year to transients at MISS. However, these estimates assume loss of institutional control at the MISS property and represent reasonable worst case conditions. DOE maintains an employee monitoring program for workers at the site, which indicates that current radiation exposures are less than 1 mrem/year above background.

Under Alternative 2, approximately 35,000 yd^3 of contaminated soil and debris would be removed and transported off-site for disposal. Under Alternative 3, the contaminated materials removed from the waste storage pile first would be treated to reduce the volume of soil requiring off-site disposal. Under both Alternatives 2 and 3, potential risks to human health and the environment at MISS would be reduced in the long term, because the contaminated materials would be removed from their present interim storage location and placed in an engineered facility designed for permanent disposal.

Worker Radiation Dose and Health Risk. Potential worker exposures would increase in the short term during the removal action period for Alternatives 2 and 3. The primary exposure pathways would include inhalation of contaminated dust and external gamma radiation. All activities associated with the implementation of Alternatives 2 and 3 would be conducted according to the site-specific health and safety plan to protect workers and the public. The potential radiation doses to workers conducting the removal action would be kept as low as

reasonably achievable (ALARA) by strict compliance with environmental, safety, and health protection guidelines and appropriate engineering practices for radiation protection.

The potential radiation dose to workers implementing the proposed removal action alternatives was estimated using the RESRAD computer code (Gilbert et al., 1989). For the purpose of this evaluation, radionuclide concentrations in contaminated soils were assumed to be 18.1 pCi/g for thorium-232 and progeny, 17 pCi/g for uranium-238 and progeny, 2.4 pCi/g for radium-226 and progeny, and 0.85 pCi/g for uranium-235 and progeny (assumed to be 5% of uranium-238 concentration based on typical isotopic distribution), based on available characterization data (BNI 1991). Potential exposure pathways considered in this evaluation included external gamma exposure, inhalation of contaminated dust and radon gas, and incidental ingestion of contaminated soil. It was assumed that the hypothetical worker receiving the maximum exposure would spend a maximum of 1500 hours per year (8 hours/day x 5 days/week x 9 months/year) in the contaminated area. It was assumed that the remedial action worker would have a breathing rate of 1.2 m^3/hour, and would be exposed to an airborne particulate concentration of 200 $\mu g/m^3$, of which 30% would be respirable. The worker was also assumed to ingest contaminated soil at a rate of 480 mg/day as a result of incidental hand-to-mouth contact.

For Alternative 2, the maximum radiation dose to the hypothetical worker from exposure to site contaminants during the removal action was estimated at 82 mrem/year (75 mrem/year from external gamma exposure, 5 mrem/year from inhalation of contaminated dust, and 2 mrem/year from incidental soil ingestion). This estimate is well below the DOE limit of 5,000 mrem/year for occupational exposure (10 CFR 835; DOE Order 5480.11, 1988) and slightly below the 100 mrem/year limit for the public (DOE Order 5400.5, 1990). This radiation dose would result in an incremental lifetime cancer risk of approximately 3×10^{-5} (i.e., the risk of getting cancer resulting from this radiation exposure over the remainder of the worker's lifetime would be approximately 3 in 100,000).

Exposure conditions for Alternative 3 were assumed to be the same as those for Alternative 2. The estimated radiation dose to the hypothetical maximally exposed worker is 82 mrem/year, and the excess cancer risk is estimated to be approximately 3×10^{-5}.

It is important to note that these dose estimates to the hypothetical worker experiencing the maximum exposure are based on very conservative exposure assumptions. They do not take into account mitigative measures (such as dust suppression, respiratory protection, protective clothing) which would be used during the proposed removal action. The potential radiation doses to workers performing the removal action would be kept as low as reasonably achievable (ALARA) by standard health physics practices and by strict compliance with DOE environmental, safety, and health protection guidelines. Mitigative measures would be implemented to minimize the amount of airborne contamination. Workers also would wear respiratory protection equipment, if necessary, to reduce the likelihood of inhaling contaminated particulates, and lapel air monitors would be worn to verify the safety of the working environment. A comprehensive personnel dosimetry program would be implemented to monitor

all radiation exposures and doses to workers throughout the removal action. Therefore, actual exposures and risks would be significantly lower than the estimates presented above.

General Public Radiation Dose and Health Risk. During construction, processing, and transportation activities associated with Alternatives 2 and 3, a resident or employee at a nearby property could receive a radiation dose above normal background exposure. The primary exposure pathway for the off-site public would be inhalation of contaminated dust. The dose to the off-site receptor from external gamma radiation would be negligible because the external gamma exposure rate decreases rapidly with distance from the source. The occurrence of any spillage during transport is expected to be minimal, and, because of the nature of the cargo (soil), any spillage could easily be cleaned up and retrieved for disposal. Thus, the potential for radiation exposure of the general public resulting from spillage would be minimal. Under either Alternative 2 or 3, wastes would be transported to the off-site disposal facility by rail, using the on-site rail spur; no off-site transport of contaminated materials by truck and no significant increase in local traffic is anticipated.

The radiation dose to the maximally exposed member of the public, therefore, would be bounded by the inhalation dose to the removal action worker discussed previously. The maximum incremental radiation dose to the general public from implementation of the proposed removal action is estimated to be less than 5 mrem/year for Alternatives 2 and 3. This dose is very small relative to the dose received from background sources of radiation. It is also well below the dose limit of 100 mrem/year specified by DOE (DOE Order 5400.5, 1990) for the public and the pathway-specific limit of 10 mrem/year for airborne releases (40 CFR 61). The lifetime incremental cancer risk resulting from this radiation exposure is estimated to be approximately 4×10^{-7} (4 in 10,000,000). Appropriate health physics practices and engineering measures (e.g., wetting the soil) would be employed during all excavation, processing, transportation, and disposal activities to minimize airborne releases of radioactivity and protect the public from unnecessary exposure.

While Alternative 2 would not directly reduce the volume or toxicity of contaminants, it would reduce contaminant mobility through improved containment in a permanent disposal facility. It would further reduce the potential for exposure of the public to contaminated materials in the waste storage pile. Alternative 3 would reduce the volume of contaminated soil through treatment, as well as reducing contaminant mobility through improved containment in a permanent disposal facility.

The commercial disposal facility which would receive the contaminated materials removed from the MISS waste storage pile operates under license to the Nuclear Regulatory Commission and the State of Utah. License conditions provide for the protection of public and worker health and the environment.

4.1.2 Potential Environmental Impacts

Soils and Water Resources. Under Alternative 1, no direct impacts to soils would occur. Alternatives 2 and 3 also would be expected to have no long-term impacts on soil or water resources. However, some minor impacts could occur during the removal of the soils from the waste storage pile, as disturbed areas would be more likely to experience wind and water erosion. These temporary effects could be minimized by decreasing the area disturbed at any time during excavation operations, and by employing good engineering practices (such as sediment barriers to minimize the amount of sediment leaving the work area, and containment of surface runoff during storms).

Air Quality. Alternative 1 would result in no incremental impacts on air quality. Environmental monitoring activities at the site indicate no significant adverse air impacts from normal site operations (BNI 1993). Resuspension and dispersion of contaminated particulates during construction, processing, and transportation activities under Alternatives 2 and 3 could impact local air quality during the short term. These impacts, however, would be eliminated after the removal action was completed. The potential for dust generation while implementing the removal action would be minimized by implementing good engineering practices (such as wetting and/or covering exposed surfaces, as appropriate, during the action period). Monitoring of ambient concentrations of airborne particulates and radon would be conducted throughout the removal action to ensure compliance with requirements to protect workers and the public.

Ecological Resources. Implementation of Alternative 1 would result in no physical changes to existing habitats and associated biota. Alternatives 2 and 3 also would not be expected to harm plants or wildlife. The waste storage pile directly affected by the proposed removal action is an engineered storage cell; it is actively maintained to discourage intrusion by wildlife, and therefore provides no significant habitat. Animals inhabiting the MISS property and adjacent areas within sight or range of hearing of the construction or waste transportation operations might be temporarily disturbed or displaced. However, the MISS property does not provide substantial wildlife habitats because of its urban nature. As a result, few animal species inhabit the property. Vegetation near the waste storage pile would be disturbed during the excavation activities. However, the existing plant species are neither unique nor restricted in distribution, and disturbed habitats could be readily revegetated. Because the MISS property supports only a few common species, the proposed removal action would have no significant harmful effect on plants or wildlife. Removal of the contaminated materials from the waste storage pile would reduce the potential for uncontrolled spread of contamination by plants or wildlife.

Threatened or endangered species would be unaffected by implementing any of the alternatives. Critical habitats for listed species are not present at the MISS property, and no threatened or endangered species are known to inhabit the site.

Wetlands and Floodplains. It is DOE's policy to avoid adverse impacts on floodplains and wetlands to the extent possible (10 CFR 1022). Any remedial actions at the Maywood site

will be carried out in compliance with Executive Order 11988, Floodplain Management, and Executive Order 1190, Protection of Wetlands, where applicable. However, the MISS waste storage pile addressed by this EE/CA is not located within 100-year floodplain or wetlands areas, so these requirements would not apply. No wetlands would be impacted by the proposed removal action alternatives.

Cultural Resources. No archaeological sites or historic structures listed in the National Register of Historic Places would be affected by implementing any of the alternatives.

4.1.3 Compliance with Regulatory Requirements

The proposed removal action is an interim measure which would become part of the comprehensive remedial action for the Maywood site that will attain all applicable or relevant and appropriate requirements. Under all alternatives, surface and subsurface soils at the MISS property that exceed contaminant-specific ARARs would remain, awaiting final remediation of the property. However, under Alternatives 2 and 3, contaminated soils and debris from the MISS waste storage pile would be removed and relocated to a permanent disposal facility. Alternatives 2 and 3 would be conducted in a manner that would follow pertinent environmental requirements and protect human health and the environment during implementation of the removal action. Appropriate OSHA standards and other employee protection laws and guidelines also would be followed to ensure worker protection during implementation, and compliance with all action-specific and location-specific ARARs.

4.1.4 Timeliness

Alternative 2 is expected to be potentially more favorable than Alternative 3 with respect to timeliness, due to uncertainties at this time associated with applying soil washing technology to the Maywood soils. This criterion may be better evaluated following treatability studies that are scheduled to be initiated in 1994. The only practical constraint on the speed with which Alternative 2 could be implemented is the availability of funding resources. Under Alternative 1, no action would be taken at the waste storage pile before the comprehensive remediation of the overall Maywood site. Alternative 1, therefore, is the least timely of the alternatives considered.

4.1.5 Reduction of Contaminant Toxicity, Mobility, and Volume Through Treatment

Section 121 of CERCLA specifies a statutory preference for remedial actions that use treatment technologies that permanently and significantly reduce the toxicity, mobility, or volume of the hazardous substances as a principal element. Because of the nature of the primary contaminant of concern in the MISS waste storage pile (thorium-232 and its associated decay products), treatment for reduction of toxicity is not feasible. Therefore, only treatment to reduce contaminant mobility and/or volume may be considered. Among the alternatives considered here, only Alternative 3 includes treatment as a principal element to reduce contaminant volume. Under Alternative 3, physical separation techniques would be used to separate the radioactive

contaminants from the uncontaminated soil fraction. The decontaminated soil would be used on-site as subsurface backfill during implementation of the final remedial action, while the treatment residuals, with the concentrated radioactive contaminants, would be transported for disposal at an off-site commercial disposal facility. Neither Alternative 1 nor Alternative 2 include a treatment component.

4.2 IMPLEMENTABILITY

The implementability of an alternative is defined by its technical feasibility, availability, and administrative feasibility. Technical feasibility refers to the ability to construct, operate, maintain, replace, and monitor an alternative's technical components. The demonstrated performance of technical components is also considered, as are potential constraints associated with the site environment. Availability of services and materials refers to the resources required to implement specific components of an alternative and the ability to obtain them. Administrative feasibility addresses the acceptability of an alternative by other agencies, and how well it satisfies specific project requirements (such as budget, schedule, and efficient performance of the overall remedial action planned for the site).

4.2.1 Technical Feasibility

Technical feasibility does not apply to Alternative 1, the no-action alternative. The components of Alternative 2 are technically feasible and have been implemented for similar actions. Excavation of the contaminated materials from the waste storage pile is technically feasible using readily available equipment. Its performance has been demonstrated during past removal actions at the Maywood site and other sites. Monitoring and maintenance activities would be continued at MISS following excavation of the waste storage pile, awaiting final remediation of the MISS property. A comprehensive environmental monitoring program is currently in place for MISS and will be continued until the final remediation of the property is completed. The current monitoring system is sufficient to meet the objective of protecting human health and the environment.

In addition to those components discussed under Alternative 2, Alternative 3 also includes a physical treatment process to reduce waste volume. The proposed treatment technology is similar to that used extensively in the mineral mining industry and is considered to be technically feasible. The performance of the treatment technology for processing contaminated soil from the waste storage pile will be evaluated through treatability studies initiated in 1994.

Commercial disposal of the waste materials removed from the MISS pile is technically feasible. Commercial disposal of 11e(2) wastes is currently available at the Envirocare facility in Clive, Utah. This facility and all commercial radioactive waste disposal facilities are required to maintain comprehensive environmental monitoring and occupational health physics programs as a license condition.

4.2.2 Availability of Services and Materials

Availability does not apply to Alternative 1, the no-action alternative. The services and materials required to implement Alternatives 2 and 3 are readily available.

4.2.3 Administrative Feasibility

Administrative feasibility considerations include the potential of a proposed action to achieve response objectives and to satisfy state and local concerns. These concerns include permitting and interagency cooperation, public and occupational safety, transportation factors, impacts on land use and values, compliance with policies and requirements, and public acceptance. The NCP specifies that a formal community relations plan be developed to provide information to the public and to obtain public comment. A site-specific community relations plan has been developed for the Maywood site (BNI 1992).

State and local authorities and citizens have indicated a strong preference for removal of the MISS waste storage pile. Since Alternatives 2 and 3 achieve this objective, they are expected to have favorable administrative feasibility. However, community officials and citizens have also indicated their opposition to the treatment of contaminated soils and replacement of treated soils on-site; therefore, Alternative 3 would be expected to be regarded less favorably by the community than Alternative 2. Alternative 1 would not address community concerns in any manner. Short-term negative impacts on the community during implementation of Alternatives 2 or 3 would include traffic and noise associated with removal, treatment, and transportation of the contaminated materials under Alternatives 2 and 3; these impacts would be mitigated by conducting all activities according to pertinent regulatory requirements, by using good engineering practices, and through an active community relations program.

No administrative feasibility issues are anticipated with respect to commercial disposal of the waste. The waste volume associated with this proposed removal action would be a small fraction of the total waste capacity of the commercial disposal facility.

Removal activities conducted under Alternatives 2 and 3 would be conducted only with the approval of the affected local authorities. All response activities at the Maywood site are coordinated with EPA Region II and state and local government authorities. Active communications would be maintained with the public, local media, EPA, and state and local officials, as specified in the community relations plan for the site (BNI 1992).

4.3 COST

The costs of alternatives are considered only in a comparative manner to determine if the cost of one alternative is much greater than that of another alternative of similar effectiveness. General estimates of potential costs for each alternative can be compared to permit a screening according to relative costs. Funds from DOE, not from EPA's Superfund, would be used to implement the proposed removal action. Because the proposed action would be completed

within a short time, present value considerations would not appreciably affect cost estimates; cost estimates for this analysis assume no discount or escalation.

For Alternative 1 (No Action), no direct incremental costs would be incurred. This alternative would only defer the costs associated with remediation of the waste storage pile until the ultimate remediation of the overall Maywood site. However, it is estimated that the total cost for remediation of the waste storage pile might be somewhat lower if conducted during the comprehensive remediation of the overall Maywood site.

The total cost of implementing Alternative 2 is estimated at approximately $ 20,000,000. This estimate includes all direct and indirect costs, including subcontracts, engineering, environmental health and safety support, procurement, overhead, and contingencies. The cost estimates for waste transportation ($121/yd^3) and disposal ($216/yd^3) are specific to the Envirocare facility in Clive, Utah, based on current estimates. A volume of 35,000 yd^3 of contaminated materials from the MISS waste storage pile is assumed to be transported for off-site disposal. Transportation and disposal costs contribute approximately 60% of the total costs for Alternative 2.

The total cost for Alternative 3 is estimated to be approximately $ 12,300,000. This estimate includes all direct and indirect costs, including subcontracts, engineering, environmental health and safety support, procurement, overhead, and contingencies. The cost estimate for soil treatment assumes that 35,000 yd^3 of contaminated soil is processed at a unit cost of $108/yd^3, and that the treatment process reduces the volume of waste requiring off-site disposal by 80%. Cost estimates for waste transportation ($121/yd^3) and disposal ($216/yd^3) are based on off-site disposal at the Envirocare facility in Clive, Utah. Soil treatment is the primary cost element for Alternative 3, contributing 30% of the total costs, while off-site transportation and disposal of the treatment residuals contributes approximately 20%.

Cost elements common to Alternatives 2 and 3 include improvements to the on-site rail spur and other site preparation activities, mobilization and demobilization expenses, medical monitoring, training, engineering and health and safety support, excavation of 35,000 yd^3 of contaminated materials from the MISS waste storage pile, restoration of the disturbed area, subcontract costs (such as analytical laboratory and civil survey costs), contingencies, and program management costs.

4.4 COMPARATIVE SUMMARY

The three alternatives for managing the waste storage pile were compared on the basis of effectiveness, implementability, and cost. This comparison is summarized in Table 4-1.

Alternative 1 would provide the least effectiveness, since it would provide no improvement in the control of contaminated materials; however, it also has the lowest cost. Alternatives 2 and 3 would be more effective in providing permanent control of contaminated materials from the waste storage pile, and facilitating preparation of the MISS property for waste

TABLE 4-1. Comparative Analysis of Removal Action Alternatives

Alternative	Effectiveness	Implementability	Cost
Alternative 1: No action	No immediate change in impacts on human health and the environment.	Technical Feasibility and Availability not applicable. Administrative Feasibility is unfavorable, since this alternative does not achieve response objectives or satisfy state and local concerns.	No direct cost.
Alternative 2: Expedited removal of contaminated material from MISS waste pile and off-site commercial disposal	Eliminates long-term impacts to human health and the environment from contaminants in the waste storage pile; minor short-term impacts during the removal action can be effectively mitigated. Facilitates preparation of the MISS site for waste treatment and/or staging activities associated with final remediation.	Technical Feasibility would be straightforward, using readily available equipment and standard engineering practices. Administrative Feasibility is expected to be satisfactory, as this alternative achieves response objectives and satisfies state and local concerns.	$ 20,000,000
Alternative 3: Expedited removal of contaminated material from MISS waste pile, treatment by soil washing for volume reduction, on-site storage of decontaminated soils, and off-site commercial disposal of treatment residuals	Eliminates long-term impacts to human health and the environment from contaminants in the waste storage pile; minor short-term impacts during the removal action can be effectively mitigated. Facilitates preparation of the MISS site for waste treatment and/or staging activities associated with final remediation.	Technical Feasibility of soil washing for the Maywood site is still being evaluated. Services and materials are readily available. Administrative Feasibility is expected to be satisfactory, as this alternative achieves response objectives and satisfies state and local concerns.	$ 12,300,000

treatment and staging operations during the final site-wide remediation. Alternatives 2 and 3 use technically feasible methods for the removal of contaminated materials from the MISS waste storage pile. The technical feasibility of the soil treatment process proposed under Alternative 3 is still being evaluated. Commercial disposal of the waste generated from this removal action is technically feasible and currently available. The action alternatives would have near-term costs for excavation, treatment (Alternative 3 only), and transportation of the contaminated materials to the off-site disposal facility. Alternative 3 potentially has lower costs than Alternative 2. Alternative 3 also satisfies the statutory preference for reduction of waste volume by treatment.

Because the excavation, treatment, and disposal activities would be implemented according to all regulatory requirements and good engineering practices, these activities are not expected to meet serious institutional obstacles. The potential short-term environmental consequences associated with Alternatives 2 and 3 from the temporary disturbance of the pile can be minimized by using good engineering practices during the action period. The long-term environmental consequences associated with these alternatives would be beneficial, because the relocation of the radioactive materials from the waste storage pile to a permanent disposal facility would reduce the risk of exposure.

4.5 IDENTIFICATION OF THE PROPOSED ALTERNATIVE

Based on an evaluation of the three alternatives for the proposed removal action, Alternative 3 (i.e., excavation of contaminated materials, and treatment by soil washing, with on-site storage of decontaminated soil and transport of the contaminated residuals to an off-site commercial disposal facility) has the potential to best satisfy the evaluation criteria. However, evaluation of the technical feasibility of the treatment technology for the MISS waste has not been completed. Due to these uncertainties in the performance of the treatment technology, Alternative 2 will be selected pending the completion of additional treatability testing. Under Alternative 2, the contaminated materials in the waste storage pile would be excavated and transported to an off-site commercial disposal facility. This alternative would present no unacceptable risk to public health and the environment, and can be implemented in a timely, straightforward, and cost-effective manner.

Alternative 2 has been tentatively selected over Alternative 3 due to its more favorable technical feasibility, pending further evaluation of the proposed soil washing technology for Maywood soils. A treatability study will be conducted during 1994 to evaluate whether the soil washing technology can reliably achieve significant reduction in the volume of waste requiring off-site disposal at a favorable cost. If the results of this study are favorable, DOE will propose modifying the remedy to include treatment by soil washing and transportation of the concentrated treatment residuals to an off-site commercial disposal facility.

The proposed removal action is consistent with CERCLA, which requires that interim actions contribute to the extent practicable to the efficient performance of any anticipated final remedy. The removal action would also satisfy the conditions for interim actions under NEPA

while an EIS is in progress. The analysis presented in this EE/CA demonstrates that the proposed action can be implemented in a manner that protects human health and the environment. The proposed removal action is consistent with the overall cleanup strategy for the Maywood site, and will not limit the choice of reasonable alternatives or prejudice the ultimate decision for which the RI/FS-EIS is being prepared. Furthermore, it will facilitate preparation of the MISS property for any future waste staging and treatment activities during the comprehensive remediation of the site.

5. PROPOSED ACTION

Under the proposed removal action, contaminated soil and debris in the waste storage pile will be removed and transported to an off-site commercial disposal facility. The environment at MISS will be monitored throughout the removal action to ensure that all pertinent requirements are met. Appropriate measures will be employed to reduce potential adverse impacts on the environment and minimize health risks (see Table 5-1).

Conventional earth-moving equipment will be used to remove contaminated soil and debris from the waste storage pile. Wastes will be packaged and shipped according to the waste acceptance criteria of the disposal facility as well as DOE and U.S. Department of Transportation (DOT) requirements. Wastes will be transported from the MISS property to the disposal facility by rail in bulk form. Excavated materials will be placed in dump trucks for transport to the on-site rail spur. Plastic sheeting will be used to prevent the spread of contamination and to facilitate collection of any spilled soil. The exteriors of all vehicles will be surveyed for radioactive contamination before leaving the MISS property, and any vehicles exceeding applicable contamination guidelines will be decontaminated before being released from the site. Transportation routes will be established, and an emergency response plan will be developed and coordinated with appropriate local fire and police departments. The excavated materials are not considered to be radioactive under transportation guidelines because the activity concentrations are expected to be well below 2,000 pCi/g, the lower limit established by the DOT for defining radioactive materials.

Samples will be collected from the excavated wastes for analysis to assure compliance with the waste acceptance criteria of the disposal facility. Following removal of the waste storage pile, the excavated area will be stabilized with an appropriate vegetation cover, until final remediation of the site.

In summary, the proposed removal action will include the following activities:

(1) Preparation of a detailed work plan and health and safety plan.

(2) Preparation of appropriate decontamination facilities to clean equipment and tools used in excavation and transport activities.

(3) Excavation of contaminated materials from the waste storage pile.

(4) Analysis of samples of the excavated materials to confirm compliance with regulatory requirements and waste acceptance criteria of the disposal facility.

(5) Loading of excavated materials into railcars for transport to the off-site commercial disposal facility.

(6) Rail transport to the off-site commercial disposal facility for permanent disposal.

Table 5-1. Major Mitigative Measures for the Proposed Action

Mitigative Measure	Features
Dust Control	Dust suppressants (e.g., water sprays, foam application) will be used during all activities having the potential for generating significant quantities of airborne particulates.
Worker Protection	An operational environmental safety and health plan will be developed for the proposed removal action. Respiratory protection equipment and other appropriate personnel protective equipment will be used, as necessary. All workers will wear protective clothing and will pass through an access control point for radiological scanning prior to leaving the site. A comprehensive radiation monitoring and personnel dosimetry program will be implemented.
Environmental Monitoring	Gamma radiation levels and airborne contaminant concentrations (particulates and radon) will be monitored in the general work area and at the site perimeter to protect both workers and the general public. Surface water runoff from exposed areas will also be monitored. Appropriate responses, such as increasing engineering controls, will be taken if measured contaminant levels approached project administrative control limits. Contaminant releases to air and surface water off-site will be minimized by implementing appropriate engineering controls.
Equipment Inspection	Equipment used for excavation, processing, and transportation of contaminated materials will be routinely inspected during operations. Equipment will be decontaminated, as necessary, to prevent inadvertent spreading of contamination into uncontrolled areas.
Run-on/run-off Controls	Surface water run-on will be controlled by temporary berms or other diversion structures. Migration of contaminants through run-off will be mitigated by sediment filters or siltation fences.
Access Restrictions	Access to work areas will be restricted, and current access controls at MISS will be maintained. All workers will pass through an access control point for radiation scans to prevent radioactive materials from leaving the site.

(7) Site restoration activities as necessary to restabilize the excavated area pending final remediation of the MISS property.

(8) Environmental monitoring will be implemented throughout the removal action to ensure compliance with all pertinent requirements. Appropriate mitigative measures will be used to reduce potential adverse environmental impacts and health risks (Table 5-1).

Following the completion of the treatability study of the proposed soil washing technology for Maywood soils, to be conducted during 1994, DOE will reevaluate this proposed alternative. If the results indicate that the soil washing technology can reliably achieve significant reduction in the volume of waste requiring off-site disposal at a favorable cost, DOE may propose modifying the remedy to include treatment. In this event, the following activities will be added to those listed above:

(3a) Treatment of contaminated soils using physical separation (soil washing) technology to reduce the volume of contaminated soil requiring off-site disposal. Decontaminated soil (soils with residual concentrations of thorium-232 and radium-226 below 15 pCi/g) will be stored on-site for potential future use as subsurface backfill during implementation of the final remedial action for the Maywood site. Treatment residuals with the concentrated radioactive contaminants (soils with residual concentrations of thorium-232 and radium-226 above 15 pCi/g) will be loaded onto railcars (activity 5 listed above) for transport to the off-site commercial disposal facility for permanent disposal (activity 6 listed above).

Other activities will remain the same as listed above.

6. REFERENCES

Argonne National Laboratory/Bechtel National, Inc., 1992, *Work Plan-Implementation Plan for the Remedial Investigation/Feasibility Study-Environmental Impact Statement for the Maywood Site, Maywood, New Jersey*, DOE/OR-20722-193.1, November 1992.

Atkin, R.G., 1989, Letter from R. G. Atkin (Site Manager, Technical Services Division, Oak Ridge Operations Office, Department of Energy) to E. G. Kaup (Case Manager, Division of Hazardous Waste Management, New Jersey Department of Environmental Protection), Subject: Preliminary Waste Pile Sampling Plan for Maywood (November 7).

Bechtel National Inc., 1991, *Characterization Report for the Interim Storage Pile at the Maywood Interim Storage Pile*, DOE/OR/21949-296, October 1991.

Bechtel National Inc., 1992, *Draft Community Relations Plan for the Remedial Investigation/Feasibility Study-Environmental Impact Statement for the Maywood Interim Storage Site, Maywood, New Jersey*, DOE/20722-193.2, November 1992.

Bechtel National Inc., 1994, *Maywood Interim Storage Site Environmental Monitoring Report for Calendar Year 1993*, DOE/OR/21949-373, June 1994.

Gilbert, T.L., et.al., 1989, *A Manual for Implementing Residual Radioactive Material Guidelines*, ANL/ES-160, DOE/CH/8901, prepared by Argonne National Laboratory for the U.S. Department of Energy, Assistant Secretary for Nuclear Energy, June 1989.

Kaup, E. G., 1989, Letter from E. G. Kaup (Case Manager, Division of Hazardous Waste Management, New Jersey Department of Environmental Protection) to R. G. Atkin (Site Manager, Technical Services Division, Oak Ridge Operations Office, Department of Energy), Subject: Preliminary Waste Pile Sampling Plan for Maywood (December 20).

U.S. Department of Energy, 1988, *Radiation Protection for Occupational Workers*, DOE Order 5480.11, December 21, 1988.

U.S. Department of Energy, 1989, *Comprehensive Environmental Response, Compensation and Liability Act Program*, DOE Order 5400.4, October 6, 1989.

U.S. Department of Energy, 1990, *Radiation Protection of the Public and the Environment*, DOE Order 5400.5, February 8, 1990.

U. S. Department of Energy, 1992, *Remedial Investigation Report for the Maywood Site, Maywood, New Jersey*, DOE/OR/21949-337, December 1992.

U. S. Department of Energy, 1993, *Baseline Risk Assessment for the Maywood Site, Maywood, New Jersey*, DOE/OR/21950-003, March 1993.

U. S. Department of Energy, 1994a, *Feasibility Study for the Maywood Site, Maywood, New Jersey (EPA Final Draft, Rev. 1)*, DOE/OR/21950-999, April 1994.

U.S. Department of Energy, 1994b, *Uranium Guidelines for the Maywood, New Jersey Site*, W.A. Williams to L. Price, April 25, 1994.

U.S. Environmental Protection Agency, 1987, *Superfund Program; Interim Guidance on Compliance with Applicable or Relevant and Appropriate Requirements; Notice of Guidance*, Federal Register, 52(166):32496-32499 (Aug. 27).

7. LIST OF CONTRIBUTORS

This EE/CA has been prepared by the U.S. Department of Energy with contractual assistance from Argonne National Laboratory (ANL), Bechtel National, Inc. (BNI), and Science Applications International Corporation (SAIC). The following individuals contributed to the preparation of this report.

Name	Education/Experience	Contribution
ANL D. E. Dunning	M.S., Environmental Engineering, 18 years experience in radiological and environmental assessment	Proposed action and alternatives, site characterization, comparative analysis
BNI M. E. Redmon	B.S., 7 years experience in site remediation and project management	Cost estimation, technical review
SAIC T. Patterson	M.B.A. Management, B.S. Construction Engineering, 10 years experience in engineering and construction project management	Technical review, coordination with FS-EIS
DOE S. M. Cange	M.S. Environmental Engineering, 10 years experience in environmental restoration	Technical review

APPENDIX A

REGULATORY REQUIREMENTS FOR THE PROPOSED ACTION

TABLE A-1. Contaminant-Specific Requirements

Source	Description of Requirement	Determination	Comments
Clean Air Act, as amended; National Primary and Secondary Ambient Air Quality Standards (42 USC 7401-7671, 40 CFR 50)	Establishes National Primary and Secondary Ambient Air Quality Standards for certain pollutants, including total particulate matter.	Applicable	Excavation equipment exhaust and fugitive dust could potentially contribute to air quality deterioration.
Ambient Air Quality Surveillance (40 CFR 58, 58 FR 8452)	Requires enhanced monitoring of ozone and its precursors. States must include photo-chemical assessment monitoring in their State Implementation Plans for serious to extreme ozone non-attainment areas.	Applicable	New Jersey is classified as a severe ozone non-attainment area.
National Emission Standards for Hazardous Air Pollutants (42 USC 7401-7671, 40 CFR 61)	Emissions of radionuclides from any DOE facility to the ambient air shall not exceed levels that would result in an effective dose equivalent of 10 mrem/year.	Applicable	These requirements are considered pertinent for the protection of the public during implementation of the proposed action.
Federal Water Pollution Control Act, Clean Water Act (33 USC 1251-1387): Water Quality Standards (40 CFR 131), National Pollutant Discharge Elimination System (40 CFR 122-125)	Establishes water quality standards for surface waters and pretreatment standards for waste waters released to publicly-owned treatment works (POTWs).	Applicable	Any wastewater resulting from the proposed action will be managed in accordance with the NPDES process.
Radiation Protection for Occupational Workers (10 CFR Part 835)	Specifies occupational radiation protection standards and program requirements for DOE and DOE contractor operations; includes basic dose limits of 5000 mrem/year for radiation workers and 100 mrem/year for the public, and derived air concentration limits for radionuclides in air; requires all radiation exposure to be reduced ALARA.	Applicable	These requirements are also specified in DOE Order 5480.11.

Table A-1. Contaminant-Specific Requirements (Continued)

Source	Description of Requirement	Determination	Comments
Radiation Protection of the Public and the Environment (DOE Order 5400.5)	Specifies that concentrations of Ra-226, Ra-228, Th-230, or Th-232 in soil averaged over any 100 m^2 area may not exceed background by more than 5 pCi/g in the top 15 cm of soil or 15 pCi/g in any 15-cm layer below the surface layer; within any habitable structure, gamma radiation exposure may not exceed 20 μR/hr above background, and radon decay product concentrations may not exceed 0.03 WL and should not exceed 0.02 WL where reasonably achievable. Radiation exposure to any member of the public from DOE operations may not exceed 100 mrem/year effective dose equivalent above background for continuous exposure and may not exceed 500 mrem/year in any single year; further, all radiation exposures must be reduced to levels as low as reasonably achievable (ALARA). Concentrations of radionuclides in air in uncontrolled areas may not exceed specified Derived Concentration Guides.	To be considered	Although not promulgated standards, the DOE Order requirements are derived from such standards and they constitute requirements for protection of the public with which the proposed action will comply. This DOE Order is now a proposed rule to be codified at 10 CFR 834 (58 FR 16268), which would be potentially applicable upon final promulgation.
Occupational Safety and Health Act, General Industry Standards (29 USC 651-678, 29 CFR 1910)	Specifies health and safety standards for hazardous waste operations, including limits for exposure to noise, ionizing radiation and certain hazardous materials, including radionuclides.	To be considered	Since these requirements are part of an employee protection law rather than an environmental protection law, with which CERCLA response actions should comply, they are not subject to the ARAR process. However, they constitute requirements for worker protection with which the proposed action will comply.

TABLE A-2. Action-Specific Requirements

Source	Description of Requirement	Determination	Comments
CERCLA Off-Site Rule (CERCLA Section 121(d)(3), as amended; 58 FR 49299)	Wastes generated as a result of CERCLA remediation activities and transferred off-site must be managed at a facility which meets acceptability criteria established by EPA.	Applicable	The proposed removal action will be conducted in compliance with the Off-Site Rule requirements. Any off-site disposal facility will be determined to meet EPA acceptability criteria prior to any waste shipment.
Radiation Protection for Occupational Workers (10 CFR Part 835)	Specifies occupational radiation protection standards and program requirements for DOE and DOE contractor operations; requires all radiation exposure to be reduced ALARA.	Applicable	All on-site activities will be conducted in accordance with these requirements. These requirements are also specified in DOE Order 5480.11.
Hazardous Materials Transportation Act, as amended by the Hazardous Materials Transportation Uniform Safety Act (49 USC 1801-1819, 49 CFR 171-174, 177)	Establishes the requirements for transportation of hazardous (including radioactive) materials, including classification, packaging, labeling, marking, shipping and placarding requirements.	Applicable	Applicable to transportation of radioactive materials off-site. It is anticipated that all wastes generated during the proposed removal action will contain radioactivity concentrations below 2000 pCi/g, the threshold subject to classification as radioactive material under these transportation regulations.
New Jersey State Hazardous Materials Transportation Regulations (Title 7, New Jersey Admin. Code)	Establishes the requirements for transportation of hazardous (including radioactive) materials. Materials regulated by the Atomic Energy Act and hazardous chemicals may not be transported through the state of New Jersey without prior written approval by all authorities having jurisdiction in such matters and by the New Jersey Department of Environmental Protection.	Applicable	Applicable to transportation of radioactive materials off-site. The State of New Jersey has not officially adopted the Federal Hazardous Materials Transportation Regulations, although for the most part the Federal regulations have been incorporated into the New Jersey regulations.
Uranium Mill Tailings Radiation Control Act (42 USC 2022, 40 CFR 192)	Establishes requirements for control of residual radioactive material at uranium and thorium processing or depository sites, and during site restoration, including performance criteria for control measures for contaminated soils, buildings, and groundwater, and waste management.	Relevant and appropriate	Since the Maywood site is not a designated mill tailings site, these requirements are not strictly applicable; however, they are considered relevant and appropriate because of the similar nature of the contaminants and site conditions.

Table A-2. Action-Specific Requirements (Continued)

Source	Description of Requirement	Determination	Comments
Occupational Safety and Health Act (29 USC 651-678): General Industry Standards (29 CFR 1910); and Safety and Health Standards (29 CFR 1926)	Establishes health and safety standards for workers at hazardous waste operations, including requirements for worker training, development of emergency response and safety and health plans, and the type of safety equipment and procedures to be followed for hazardous waste site operations.	To be considered	Since these requirements are part of an employee protection law rather than an environmental protection law, with which CERCLA response actions should comply, they are not subject to the ARAR process. However, they constitute requirements for worker protection with which the proposed action will comply. All workers involved with the proposed removal action will have completed all required training, appropriate safety equipment will be available on-site for use as needed, and all safety procedures will be strictly followed.
Radiation Protection of the Public and the Environment (DOE Order 5400.5)	Radiation exposure to any member of the public from DOE operations may not exceed 100 mrem/year effective dose equivalent above background for continuous exposure and may not exceed 500 mrem/year in any single year; further, all radiation exposures must be reduced to levels as low as reasonably achievable (ALARA).	To be considered	Although not promulgated standards, these requirements are derived from such standards and they constitute requirements for protection of the public with which the proposed action will comply. These requirements have been issued as a proposed rule to be codified at 10 CFR Part 834 (58 FR 16268), and would be applicable upon final promulgation.
Radioactive Waste Management (DOE Order 5820.2A)	Specifies requirements for managing DOE radioactive waste. Radiation exposure to any member of the public resulting from management of DOE radioactive waste may not exceed 25 mrem/year effective dose equivalent.	To be considered	Although not promulgated standards, these requirements are derived from such standards and they constitute requirements for protection of the public with which the proposed action will comply.
Safety Requirements for the Packaging and Transportation of Hazardous Materials, Hazardous Substances and Hazardous Wastes (DOE Order 5480.3)	Establishes requirements for the packaging and transportation of hazardous materials, hazardous substances, and hazardous wastes. Includes package standards, operating procedures, quality assurance and testing requirements.	To be considered	Although not promulgated standards, these requirements are derived from such standards and they constitute requirements for protection of the public with which the proposed action will comply.
Environmental Protection, Safety, and Health Protection Standards (DOE Order 5480.4)	Establishes requirements for the application of mandatory environmental protections, safety, and health (ES&H) standards applicable to all DOE and DOE contractor operations.	To be considered	Although not promulgated standards, these requirements are derived from such standards and they constitute requirements for protection of the public with which the proposed action will comply.

TABLE A-3. Location-Specific Requirements

Source	Description of Requirement	Determination	Comments
National Historic Preservation Act, as amended (16 USC 470, 40 CFR 6.301(b), 36 CFR 800)	The effect of any federally assisted undertaking must be taken into account for and district, site, building, structure, or object that is included or eligible for inclusion in the National Register of Historic Places.	No	No such properties are known to exist in the area affected by the proposed action, so no adverse impacts to such properties is expected; however, if these resources were affected, the requirement would be applicable.
Archeological and Historical Preservation Act (16 USC 469, 40 CFR 6.301(c))	Prehistorical, historical, and archeological data that might be destroyed as a result of a federal, federally assisted, or federally licensed activity or program must be preserved.	No	No adverse impacts to such data is expected to result from the proposed action; however, if these data were affected, the requirements would be applicable.
Historic Sites, Buildings, Objects, and Antiquities Act (16 USC 461-469, 40 CFR 6.301(a))	Requires federal agencies to consider the existence and location of landmarks on the National Registry of Natural Landmarks to avoid undesirable impacts on each landmark.	No	No such resources are known to exist in the area affected by the proposed action, so no adverse impacts to such resources are expected; however, if these resources were affected, the requirement would be applicable.
Fish and Wildlife Coordination Act (16 USC 661-668, 40 CFR 6.302(g), 50 CFR 27)	Requires consultation when federal department or agency proposes or authorizes any modification of any stream or other water body, and adequate provision for protection of fish and wildlife resources. Lists actions prohibited in areas belonging to National Wildlife Refuge System.	No	Proposed action does not impact any stream or other water body. Site is not in the National Wildlife Refuge System.
Endangered Species Act (16 USC 1531-1544, 50 CFR 17.402, 40 CFR 6.302(h))	Federal agencies must ensure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any threatened or endangered species or destroy or adversely modify any critical habitat.	No	No critical habitat exists in the affected area, and no adverse impacts on threatened or endangered species are expected to result from the proposed action.
Clean Water Act, Dredge or Fill Requirements (33 USC 1251-1387, 40 CFR 230-231, 33 CFR 320-330)	Requires permits for discharge of dredged or fill material into waters of the United States, including wetlands.	No	No jurisdictional wetlands are present in the area affected by the proposed action.
Floodplain Management (Executive Order 11988, 40 CFR 6.302(b))	Federal agencies must avoid, to the maximum extent possible, any adverse impacts associated with direct and indirect development of a floodplain.	No	The area affected by the proposed action is not in a 100-year floodplain.

Table A-3. Location-Specific Requirements (Continued)

Source	Description of Requirement	Determination	Comments
Protection of Wetlands (Executive Order 11990, 40 CFR 6.302(a))	Federal agencies must avoid, to the maximum extent possible, any adverse impacts associated with the destruction or loss of wetlands and the support of *new construction in wetlands if a practicable* alternative exists.	No	No jurisdictional wetlands are present in the area affected by the proposed action.
New Jersey Wetlands Act, and New Jersey Freshwater Wetlands Protection Act (N.J. Admin Code Title 7)	Establishes requirements for protection of the state's wetlands and for protection of the state's freshwater wetlands, respectively.	No	No jurisdictional wetlands are present in the area affected by the proposed action.
Wilderness Act (16 USC 1131; 50 CFR 35.1)	Administers federally owned wilderness areas to avoid impacts.	No	No wilderness area exists on-site or adjacent to the area affected by the proposed action.
National Wildlife Refuge System (16 USC 668, 50 CFR 27)	Restricts activities within a National Wildlife Refuge	No	No National Wildlife Refuge area exists on-site or adjacent to the area affected by the proposed action.
Scenic Rivers Act (16 USC 1271, 40 CFR 6.302(e))	Prohibits adverse impacts on a scenic river.	No	No scenic river exists on-site or adjacent to the area affected by the proposed action.
Coastal Zone Management Act (16 USC 1451)	Requires that activities within coastal zone be conducted in accordance with state-approved management program.	No	Affected area is not located in the coastal zone.

APPENDIX B

RESPONSIVENESS SUMMARY TO PUBLIC COMMENTS

RESPONSIVENESS SUMMARY TO PUBLIC COMMENT ON THE ENGINEERING EVALUATION/COST ANALYSIS FOR THE MAYWOOD SITE STORAGE PILE

1. INTRODUCTION

On May 12, 1994, the U.S. Department of Energy (DOE) published an Engineering Evaluation/Cost Analysis (EE/CA) for the proposed removal of contaminated materials from the Maywood interim storage pile. A number of comments were submitted to DOE over the 30-day comment period on the EE/CA. This responsiveness summary addresses the comments received from the public during the comment period.

After careful review of the comments received, DOE has decided to implement actions as described in the EE/CA; removal of the material in the Maywood site storage pile is scheduled to begin in October of 1994. At this time, a decision has not been made as to whether treatment will be used on any portion of the material in the storage pile; this Responsiveness Summary contains an explanation of the process DOE will use to determine if treatment will be utilized.

All comments received on the EE/CA have been placed in the Administrative Record file for the Maywood site. The EE/CA, which includes this responsiveness summary to public comment, has also been placed in the Administrative Record.

2. SCOPE AND ORGANIZATION OF THE RESPONSIVENESS SUMMARY

One hundred and fourteen letters of comment were received during the comment period. In some cases, multiple signatures were received on a single letter; a total of 141 individuals signed letters of comment. Many of the commentors expressed similar concerns. To prevent repetition and yet provide responses to all comments and questions, the comments were grouped under seven key subject areas. The seven key subjects are listed below in relative order, from most to least number of comments received:

- cleanup criteria
- treatment
- frustration and lack of trust
- health effects
- schedule delays
- costs
- remedial action strategy

Figure 1-1 shows the relative number of comments received in each of the seven key subject areas.

A number of comments were received that did not relate to removal of the storage pile. For example, a number of comments were made relative to another DOE site in Wayne, New Jersey. Because they were unconnected to the scope of the EE/CA, these comments are not specifically addressed in this responsiveness summary. Several requests for information were also received. Specific requests for information that were outside the scope of the EE/CA are being addressed on a case-by-case basis, and are not included in the responsiveness summary. Many comments addressed the entire Maywood site; these comments are addressed to the extent they are applicable to the proposed removal action for the Maywood pile. Also, attachments supporting the commentor's position were submitted with several of the letters, in some cases without explanation. The information in these attachments was considered during the preparation of the responsiveness summary, but specific responses were not developed for these cases.

3. COMMENTS AND RESPONSES

The format used to address each key subject area consists of a summation in italicized text of the main concerns raised by the commentors, followed by DOE's response. Table 1 provides an alphabetical listing of the individuals who submitted comments. The key subject areas are presented and addressed in order, with the subject area receiving the most comments addressed first.

Concerns about the cleanup criteria to be used for the Maywood site and the potential use of soil treatment accounted for the majority of comments. A wide range of issues were expressed on these two key subject areas. To keep the responses from becoming too lengthy, these key areas have been further subdivided.

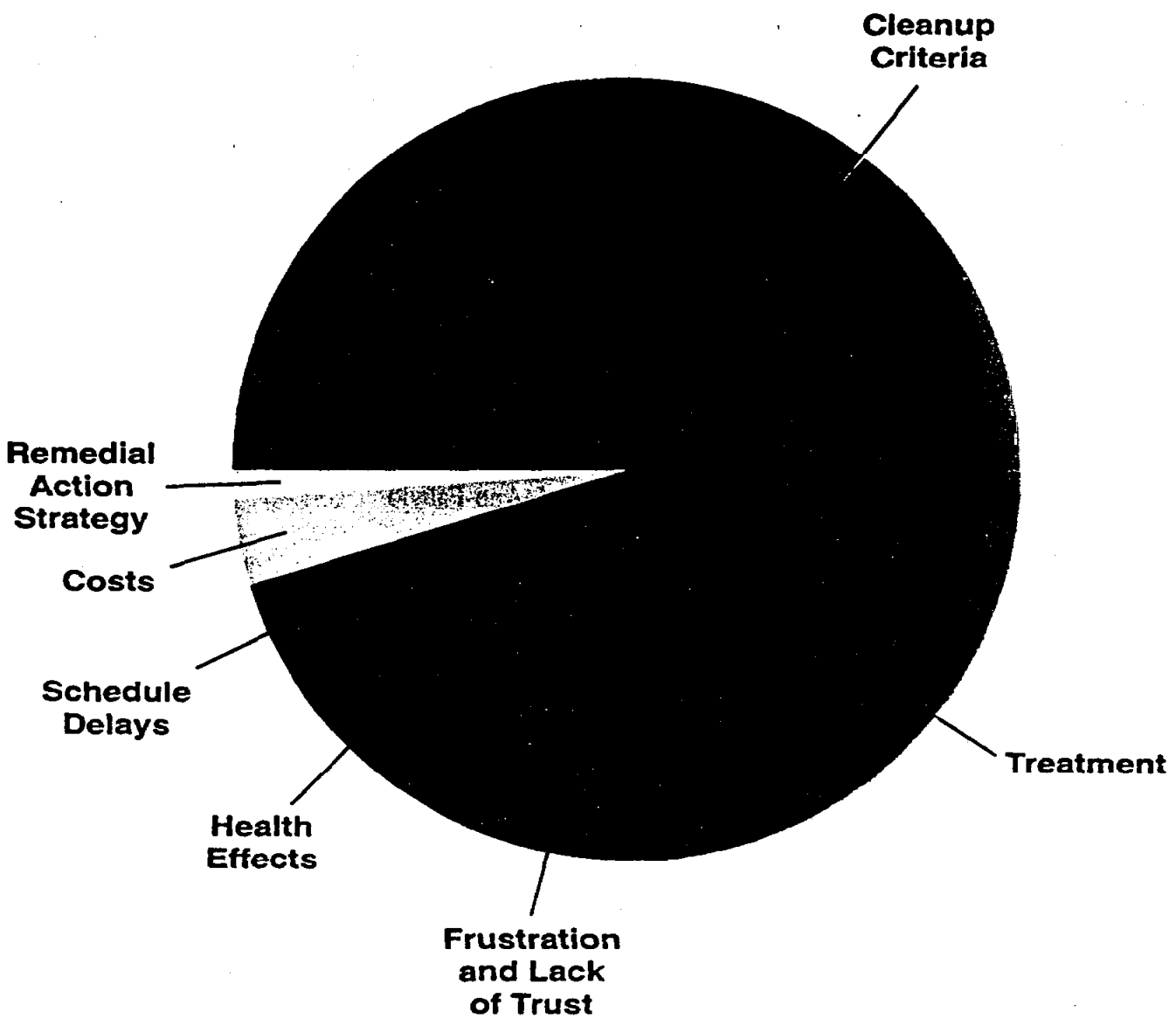


Figure 1-1. Relative Number of Comments Received in Seven Key Subject Areas

Table 1: List of Commentors*

Dawn M. Andrews

Mr. & Mrs. Pat Andrews

Jean Ayerlee
Don Ayerlee

Joseph Banica

Robert J. Belby

Frank T. Bieniek, Jr.

H. Broad

Sheena Buchanan

John C. Calat

Angelo Caso

Barbara Cassidy
Bob Cassidy

Josephine Cinnante

Robert Cloughley
Elizabeth Cloughley

Robert Cloughley
Ilene Cloughley

Chuck Parodi, President
Concerned Citizens of Maywood

Steve Cooper

William J. Cunan, Jr.

Viola D'Elia

Albert D'Huyvetter
Lynn D'Huyvetter

Madeline DeBonis

Jean Desmond
Tim Desmond

Martha DeYoung

Margarita Dillon

Patricia DiLorenzo
Frank E. DiLorenzo

Michael Doliton

Kathleen Donnelly

Mary Ann Donnelly

Joseph V. Ermilio
Dorothy Ermilio

JoAnn Fabyio

Andrew T. Fede

Rocco Ferrante

Debra Finch

Robert Fiscina
Lisa Fiscina

Arlene Formisano

D. Foy

Deborah Freesinger
George Freesinger

Dean Frenkian

Rebecca Fritz
Rick Fritz

* NOTE: Many of the commentors provided handwritten comments. Signatures were not always legible. DOE has compiled this list making the best attempt to accurately spell the names of the commentors, and apologizes for any misspellings which have occurred.

Table 1: List of Commentors* (continued)

Hannelore E. Furczyk

Anna F. Garriton

Doris Gehl
Richard Gehl

Elizabeth Georgetti

Josephine Gioia

Clare A. Green
Howell Green

Joseph C. Gring and family

Thomas Henenady

Thomas W. Henkal

Mr. & Mrs. Robert W. Holczer

David Holmes
Michele Holmes

Patrice Hubaugh

Irina Ivanova

Elaine Jakubcak

Barbara Johnson

Christine Kadonaga

Josephine Keating

Philip Keating

Jo Leigh Keleshian

Barton C. Knight

Norma Koeser

Vicki Koeser

Keith Kozaryn
Sara Kozaryn

John Kypu

Lynne Lepore
Don Lepore

Helen A. Lowry

Evelyn Lozier

K. M. Lu

John Maluski

A. Mancini

Steven Y. Mark

Serena McDonald

Noah McDowell and family

Margaret McKeane

Joan McKegny
Terry McKegny

Joseph P. McKenna
Elizabeth McKenna

Robert Meyer

Barbara Morris
Michael Morris

Edward Myers
Matilda Myers

* NOTE: Many of the commentors provided handwritten comments. Signatures were not always legible. DOE has compiled this list making the best attempt to accurately spell the names of the commentors, and apologizes for any misspellings which have occurred.

Table 1: List of Commentors* (continued)

Michael M. Nappi

Mary O. Neill

Rosemary K. Nevins

Michael J. Nolan

Angel Ojeda

John M. Otto

A. M. Pacciani

P. Pacciani

Margaret Parks

Bernadette E. Parodi

Cesare J. Parodi
Ethel J. Parodi

Jean Pelligen

Ken Petretti
Coral Petretti

Deborah Porta

Deanna K. Power

Charles L. Prex

Al Rettenberger

A. Reyes-Tate

William Rikew

Ruthann Robinson

Rose Samulha

Annette Schmidt

Pat Schmitt

William P. Schuber

Evelyn Louis Sieglen
Carol Sieglen

Lillian A. Single

Karen M. Smith

George B. Stanton, Jr.

William J. Stawicki

Lenore Titus

Mrs. A. Tomaseli

Peter Torell
Louise Torell

Loretta Weinberg
Assemblywoman, 37th District

Gary Wells

David West

Wayne H. Westworth

Dorothy Zaorski

Jeanette Zembower

* NOTE: Many of the commentors provided handwritten comments. Signatures were not always legible. DOE has compiled this list making the best attempt to accurately spell the names of the commentors, and apologizes for any misspellings which have occurred.

3.1 Comments on Cleanup Criteria

Several commentors expressed concerns regarding the proposed cleanup criteria for the Maywood site. Some commentors objected to the proposed cleanup criterion of 15 pCi/g for radium and thorium in subsurface commercial soils, calling for a "health-based" standard of 5 pCi/g. Others objected to the standard as being inconsistent with New Jersey Department of Environmental Protection (NJDEP) guidelines. A standard of 5 pCi/g was cited by commentors as consistent with NJDEP guidelines and with recent cleanup decisions at other sites with similar contaminants and characteristics (e.g., Montclair, Glen Ridge, and West Orange, New Jersey). Commentors noted that the land use at the Maywood site is primarily residential, and they suggested that all properties at the Maywood site should be remediated to the residential criteria selected for the site (5 pCi/g).

DOE RESPONSE: The issue of cleanup criteria is important for the remediation of the properties that comprise the Maywood site. However, for the storage pile, which this EE/CA addresses, they would only be important if treatment were to be implemented. If treatment is not implemented, then all of the soils in the storage pile would be taken offsite for disposal, regardless of the concentration of the contaminants. If treatment is implemented, then cleanup criteria become important for the cleaned soils that would be reused on the DOE-owned Maywood Interim Storage Site (MISS) (and possibly some adjacent commercial properties) as backfill. Section 3.1.1 provides information regarding the key issues requiring resolution before treatment could be selected as the preferred alternative for the Maywood pile soils.

Because of the limited extent to which cleanup standards are involved in the EE/CA, many of the issues raised by the community are outside of the scope of this responsiveness summary. However, due to the number of comments received and the importance of this issue to the community, DOE has provided the following response. Because of the wide range of issues expressed by the commentors on this topic, DOE's response to this key subject area has been broken into the following subheadings:

- Protectiveness of Cleanup Criteria and Restrictions on Future Land Use
- Consistency with NJDEP Guidelines
- Consistency with Other Cleanup Decisions

3.1.1 Protectiveness of Cleanup Criteria and Restrictions on Future Land Use

Many commentors questioned the cleanup criteria to be used on the Maywood site in general, and did not limit their comments to the storage pile. Commentors stated that the land use at the Maywood site is primarily residential, and they suggested that all properties should be remediated to residential criteria. Commentors expressed concern regarding the protectiveness of the cleanup criteria for the remediation of the entire Maywood site. Commentors called for a "health-based" standard of 5 pCi/g at all depths regardless of land use.

DOE RESPONSE: All of the cleanup criteria for the Maywood site are risk- (or "health-") based; they were established based on actual and predicted future site conditions, and they fall within EPA's range of acceptability for risk. DOE and EPA took the type and distribution of contamination at the various properties into account, as well as plausible current and future uses of the different contaminated properties. Safe levels of contaminants were then determined by modeling reasonable exposures under these conditions. The cleanup criteria were then established at the levels determined safe by EPA.

The primary contaminant of concern at the Maywood site is thorium-232, with lesser amounts of radium-226 also of concern. Using the process described above, DOE and EPA have established the following cleanup criteria for those substances at the Maywood site:

(1) For all residential properties and the unremediated portion of the Ballod property, concentrations of thorium and radium may not exceed 5 pCi/g above background, averaged over any 100 m^2 area.

(2) For nonresidential properties, concentrations of thorium and radium may not exceed 5 pCi/g above background for surface soils. Surface soils are defined as the top 6-inch layer, and concentrations are averaged over a 100 m^2 area.

For subsurface soils on these properties, concentrations may not exceed 15 pCi/g above background. Concentrations are averaged over any 6-inch layer below the surface layer, and are averaged over a 100 m^2 area. Additionally, for these subsurface soils, DOE will strive for a goal of 5 pCi/g. DOE will implement an aggressive ALARA program (ALARA stands for "As Low As Reasonably Achievable") to further reduce the actual concentrations after cleanup to levels as far below 15 pCi/g as is reasonably achievable. DOE's excavation plans and post-cleanup verification plans will be designed to meet the goal of 5 pCi/g. EPA approval of these plans is required before DOE can initiate the final cleanup of the site. (On previous cleanups conducted to a 15 pCi/g standard in the Maywood area, measurements taken after completion of the cleanup showed that the cleanup resulted in actual residual levels of less than 5 pCi/g on more than 90% of the properties).

(3) If soil treatment is selected for application at the site, treated soils with residual thorium and radium concentration below 15 pCi/g would be used as subsurface backfill at MISS and, if necessary, nearby commercial properties. Any treated backfill material would be covered by at least one foot of clean soil to further reduce potential exposures. An aggressive ALARA program is also a requirement of soil treatment. Any equipment utilized would be designed to clean the soil to ALARA levels.

Because the criteria for commercial properties are based on continued commercial use, additional actions would be taken to assure that changing land use on these properties in the

future will not create a problem. Similar to the previous cleanups conducted at the Maywood site, it is expected that many of the commercial properties will be cleaned to 5 pCi/g or less, based on post-remedial action sampling and analysis. No additional actions will be required on these properties. For those limited properties where average residual concentrations of radioactivity in soil range between 5 and 15 pCi/g above background, the following requirements would be imposed:

- Municipal authorities would be asked to notify DOE and EPA of any future changes in land use or zoning. This would include any construction, excavation, or demolition activities which would disturb the residual soils.

- DOE and EPA would evaluate these changes in site conditions on a case-by-case basis. If determined necessary, DOE would implement additional actions to ensure that protection of public health and the environment is maintained.

- A review of site conditions to ensure that the cleanup is protective will be performed at least every five years.

3.1.2 Consistency with NJDEP Guidelines

Comments were expressed questioning the consistency of the cleanup guidelines with those of the State of New Jersey; the Industrial Sites Recovery Act (ISRA) was mentioned specifically. Comparisons were also made to other cleanup decisions made in the State of New Jersey and elsewhere.

DOE RESPONSE: The cleanup criteria for the Maywood site are consistent with all promulgated standards and DOE requirements. DOE's criteria for thorium and radium contamination in soil are specified in DOE Order 5400.5. These requirements are based on EPA regulation 40 CFR 192. 40 CFR Part 192 was promulgated under the Uranium Mill Tailings Radiation Control Act (UMTRCA; PL 95-604); the criteria established for the Maywood site are consistent with these requirements and with DOE requirements under DOE Order 5400.5. While the 40 CFR 192 regulations are directly applicable only to the inactive uranium processing sites designated under UMTRCA, both DOE and EPA have identified these standards as relevant and appropriate for remediation of numerous other properties with similar characteristics. The 40 CFR 192 soil cleanup criteria were developed through the formal rulemaking process with extensive public comment; the protectiveness of these criteria was documented in the preamble to the final rule and the supporting Final Environmental Impact Statement, and upheld in a 1985 ruling from the U.S. Court of Appeals.

The criteria being implemented at the Maywood site are even more stringent than those promulgated in 40 CFR 192 or specified in DOE Order 5400.5. Rather than using these promulgated standards, EPA requested that specific risk-based criteria be developed that take into account actual site conditions at the Maywood site. In order to develop these criteria for the Maywood site, risk analyses were prepared by both EPA and DOE. These site-specific risk

analyses indicated that under some conservative residential scenarios, the standards promulgated in 40 CFR 192 might not be sufficiently protective. Therefore, for the Maywood site, residential cleanup criteria are more stringent than the 40 CFR 192 criteria.

DOE does not consider the New Jersey Industrial Sites Recovery (ISRA) (New Jersey P.L. 1993, Chapter 139, S-1070) as applicable or relevant and appropriate in the determination of cleanup standards for radionuclides at the Maywood site. This law as written applies only to certain types of businesses that are identified by specific standard industrial code (SIC) numbers. Neither the current nor past activities at the Maywood site fall within the classification of businesses to which this law applies. Additionally, specific cleanup standards have not yet been adopted by the State as required by the ISRA legislation. Therefore, the state does not have any promulgated standards to apply to the site.

It should also be noted that the requirements for cleanup in ISRA and its predecessor, the Environmental Cleanup Responsibility Act (ECRA), were not considered by EPA or the State as applicable or relevant and appropriate to the U.S. Radium Corporation site in West Orange, New Jersey, or the Montclair/Glen Ridge radium sites in Glen Ridge and Montclair, New Jersey. All of these sites are primarily contaminated with radioactive constituents.

EPA and DOE are involved in ongoing discussions with the State of New Jersey regarding cleanup criteria. DOE is hopeful that all three agencies can soon come to an agreement on the criteria to be utilized for the site.

3.1.3 Consistency with Other Cleanup Decisions

Some commentors questioned the consistency of the Maywood cleanup criteria with criteria used at other sites in New Jersey and elsewhere. A few commentors stated that use of treatment would be inconsistent with congressional directives, stating that excavation and disposal was mandated by Congress for the Maywood site soils.

DOE RESPONSE: The radionuclide of primary concern at the Maywood site is thorium-232, whereas the primary contaminant of concern at the Montclair, Glen Ridge, and West Orange (also referred to as the U.S. Radium site) New Jersey sites is radium-226. An important difference between these two contaminants is that they produce different forms of radon gas, a radioactive decay product. Radium-226 produces radon-222, which has a much longer life than the radon-220 produced by thorium-232 (the half-life of radon-220 is only 55 seconds). Thus, overall risks are higher with radium-226. Because the risks are different, it is reasonable that different cleanup criteria would exist for the different contaminants. In other words, there are different risks associated with the same levels of these two different contaminants. The criteria established for Maywood were based on a site-specific risk analysis which took into account the type of contamination and its distribution on the properties that comprise the Maywood site.

Potential remedies are evaluated in the feasibility study, including excavation and offsite disposal. It is important to understand that DOE is proposing to ultimately excavate and dispose of all contaminated soil above cleanup criteria on the Maywood site. Whether this material is taken directly for disposal or whether it will first be treated to reduce the volume for disposal is still under consideration.

3.2 Comments Expressing Opposition to Soil Treatment

Many of the commentors were opposed to the potential use of treatment for contaminated soils at the Maywood site. Commentors also expressed strong opposition to the potential for use of the cleaned stream from treatment as backfill, fearing that the site would be perceived as being a permanent disposal facility. Others were concerned about the impact to property values. A strong preference for immediate removal of the contaminated materials to an out-of-state location was voiced; this comment was applied to the Maywood site in general, and was not limited to the storage pile soils. Some commentors questioned the effectiveness of treatment;some viewed the technique as experimental. Comparisons were made to the Montclair cleanup, where treatment by soil washing was considered ineffective. Other commentors questioned the safety of treatment operations, including the impact on groundwater from any areas where treated soils would be used as backfill.

DOE'S RESPONSE: Because of the wide range of issues expressed by the commentors on this topic, DOE's response to this key subject area has been broken into the following subheadings:

- Potential for Use of Treatment on the Maywood Pile Soils
- Safety and Environmental Impact of Soil Washing Operations
- Safety of Treated Soils and Impacts on Property Values
- Treatment Effectiveness
- Groundwater

3.2.1 Potential for Use of Treatment on the Maywood Pile Soils

Several commentors voiced their objection to any use of treatment, broadening their comments to encompass the entire site. Some commentors attached information which documents the local community's desire for complete and immediate excavation and offsite disposal of all contaminated material on the Maywood site.

DOE RESPONSE: The following explanation is provided to clarify DOE's decision-making process regarding the potential use of treatment. This decision-making process is separate, but related, for both the storage pile and remaining site soils.

Treatment of contaminated soils by soil washing has been proposed by DOE as a potential alternative for use on the pile soils. Implementation of this alternative is contingent on a number of factors, the most significant of which are technical feasibility, cost-effectiveness,

resolution of key stakeholder concerns, and the ability to support the pile removal schedule. Each of these key factors is discussed below.

Technical Feasibility

DOE is currently conducting treatment studies to determine the technical feasibility of soil washing. Preliminary studies conducted in a laboratory have shown the potential for volume reduction of the Maywood soils by soil washing. By physically separating the fine particles of soil from the coarser particles, the contamination (which tends to be associated with fine particles) can be reduced to acceptable levels in the coarser portion of the soils. Additional tests with field-scale equipment are now necessary to test the results of the laboratory studies. DOE is currently conducting field tests at a DOE facility in Oak Ridge, Tennessee; other studies are also planned. Key information will be collected from these studies to enable DOE to determine the technical feasibility of soil washing, including such factors as equipment capabilities, support requirements, requirements for noise and dust control.

Cost Effectiveness

The results of the laboratory tests, along with vendor quotes on equipment and processing costs, indicate that soil washing could result in significant cost savings to DOE, and ultimately the taxpayer. Additional cost data will be collected during the treatment studies discussed above. This information on actual costs for the field tests will enable DOE's current cost estimates to be refined, so that more accurate estimates can be used to compare the cost of alternatives. It is important to note that costs are only considered after an alternative is determined to both provide protection of human health and the environment, and comply with all pertinent laws.

Resolution of Key Stakeholder Concerns

DOE is also working with the community to understand and respond to the wide variety of concerns that have been expressed. Many of the concerns about soil washing are related to reservations about the safety of the cleanup criteria that EPA and DOE have proposed for the site; commentors stated that the proposed criteria were unacceptable to the State of New Jersey. DOE, EPA, and the State of New Jersey have been working together and hope to have this issue resolved soon. Before making the decision to implement treatment, DOE will also work with federal and local officials.

Ability to Support the Pile Removal Schedule

DOE has committed to EPA and the community that treatment will not be implemented on any portion of the Maywood pile unless it can be done without delaying pile removal activities. The information collected from the processes described above will be used by DOE to make a decision on whether treatment will be utilized on the soils in the Maywood pile. Because the pile removal will be performed over a period of two to three years, depending on

funding, it is possible that treatment could be utilized on some portion of the Maywood pile soils, but not others.

It is important to remember that the soils at the site outside of the storage pile are not in the scope of this EE/CA; those soils will be addressed in the Feasibility Study (FS) and Proposed Plan for the Maywood site. Information gathered to support a decision on treatment will be evaluated in the FS. DOE's preferred alternative will be presented to the public in the Proposed Plan. After a public comment period, DOE and EPA will reach a final decision for the cleanup of the Maywood site. This decision will be documented in a Record of Decision (ROD). The ROD will include a responsiveness summary to public comment made during the public comment period. At this point, the Maywood FS and Proposed Plan have not been released for public comment.

3.2.2 Safety and Environmental Impact of Soil Washing Operations

Several commentors expressed concern about the environmental impact of a soil washing machine, especially with regard to dust, wastewater, and noise.

DOE RESPONSE: It is important to note that, if implemented, DOE would conduct treatment operations in accordance with all standards for safety. The treatment process uses water to separate the fine and coarse fractions of soil, so dust is not a concern during operations. Soil would be wetted as necessary to prevent the production of dust during excavation and loading activities.

Soil washing machines are typically closed systems that do not produce a continuing wastewater stream. The water is reused over and over in the system. In fact, it is possible that the only wastewater generated would be at the end of operations when the equipment is disassembled. Because the radioactive contaminants present in the soil are not very soluble, it is also likely that simple filtering would be sufficient to clean the water to levels below regulatory criteria. This treated water would then be disposed of in accordance with applicable environmental regulations.

Noise would be produced by the soil washing equipment similar to the noise which will be produced by the standard construction equipment which will be used on the site for excavation, loading, and hauling. Similar soil washing equipment was measured for noise levels, and produced approximately 90 decibels of noise when measured at the equipment. This level of noise is similar to that caused by heavy city traffic or a home lawn mower. This noise level would require that the operators of the equipment wear hearing protection. Noise levels are reduced significantly as an individual's distance from the machine increases, so the machine would be expected to comply with all local noise ordinances which generally specify allowable noise levels at property lines or the nearest residence. DOE would also perform noise measurements during operations to ensure the safety of the workers and the public and compliance with all noise ordinances. If noise levels are measured above those specified in

ordinances, then additional measures can be taken to reduce noise, such as construction of noise attenuation barriers.

3.2.3 Safety of Treated Soils and Impacts to Property Values

Many of the commentors who objected to soil washing focused their objection on the use of treated soils as backfill. Most of these comments centered on a perceived potential for loss of property values; commentors felt that real estate in the general vicinity of the site would be impacted by the continued presence of radioactive materials. Other comments focused on the safety of replacing a treated stream back onsite.

DOE RESPONSE: It is important to note that the final disposition of the cleaned treated soils is not covered under this EE/CA. If treatment is implemented, the EE/CA calls for these soils to be stockpiled for disposition during the final remediation of the site, at which time it is expected that these soils would be utilized for subsurface backfill of the excavations on MISS. However, a final decision has not been made regarding the remedy for the Maywood site. Therefore, the ultimate disposition of any cleaned stream from treatment of the Maywood pile will not be determined until a ROD is final. Use of treated soil as backfill, while outside the scope of this EE/CA, is addressed here because of the number of concerns expressed by the community, and its relevance to a final decision for the Maywood site.

Protection of human health and the environment is the first priority. Soils from treatment would not be classified as clean and used as backfill unless they were below the applicable cleanup criteria established by DOE and EPA for the site. DOE and EPA performed extensive modeling before selecting cleanup criteria for the Maywood site. Use of the treated cleaned soils as backfill was one of the many scenarios which DOE and EPA considered before selecting the criteria. All regulatory stakeholders agree that protection of human health and the environment can and will be accomplished if treatment is implemented.

Also, it is important to note that very few properties have the potential to be impacted by this issue. All residential properties, the parks, and most commercial properties will be backfilled with clean fill purchased from a local supplier of backfill, whether treatment is utilized or not. The number of properties to be backfilled with treated soil would depend on the fraction of cleaned soils obtained from treatment ("treatment efficiency"). MISS would be utilized first, then adjacent commercial properties would be utilized, if necessary, based on the volume of cleaned soils obtained from treatment. The maximum treatment efficiency expected based on current studies is 80%. This means that at best 80% of the soils would be cleaned to be below the cleanup criteria, and would potentially be used as backfill on the site. If you consider that the volume of contaminated soils to be excavated on the MISS and Stepan properties alone comprise almost 80% of the site soils, it's easy to see that the cleaned stream from treatment will likely fit on these two properties.

On those few properties where treated backfill is used, additional measures would be taken. Clean fill from a commercial supplier would be used to provide a minimum of one foot

of cover over any treated soils. As a final measure to further assure long-term protectiveness even with changing land use conditions, the local municipalities would be requested to notify EPA and DOE of any land use changes on these properties. Taken together, these measures assure the safety of using the cleaned stream from treatment as backfill.

Property values would not be expected to decrease as a result of cleaned soils from treatment being used as backfill on limited portions of the site. Soils would not be classified as clean and used as backfill until they were below all applicable limits acceptable to EPA. Cleanup activities, with or without treatment, will take properties that currently contain contaminants above applicable limits and clean them to acceptable levels. Because no radioactive materials above the cleanup criteria would remain at the site, the site should not be perceived as a permanent waste disposal site.

3.2.4 Treatment Effectiveness

The effectiveness of treatment was questioned by some commentors; the Montclair, New Jersey, project was called out as a project where treatment was eliminated from final consideration based on effectiveness. Others saw treatment as experimental.

DOE RESPONSE: Laboratory tests conducted by EPA have indicated that treatment by soil washing will be effective in reducing the volume of contaminated soils at the Maywood site. The effectiveness of this particular type of treatment is very dependent on the characteristics of the soil at a particular site. Since it relies on separating the fine soil particles (which contain most of the contamination) from the coarse soil particles, it is most effective if the soil contains a large fraction of coarse soil compared to the fine soil. This is the case for the Maywood soils tested to date.

It is true that the Montclair project considered, then eliminated, treatment as the final solution for that site. It is also true that, based on preliminary studies, the Maywood soils achieved significantly better treatment results than the Montclair soils. In fact, according to EPA, equipment designed by EPA specifically for use on the Montclair soils is likely to achieve better results on the Maywood soils. EPA has provided this equipment to DOE to perform additional testing. DOE has modified this equipment to further suit it for use on the Maywood soils, and plans to conduct additional tests with the equipment to gain more experience and more accurately determine the potential for treatment to be effective on the Maywood soils.

Soil washing is not a new technology. It has been a standard operation for the mining and minerals processing industries for decades; only the application to treatment of contaminated soils is relatively new, and even this is rapidly changing. Soil washing has been used successfully on many sites that have radioactive contamination, including the Uranium Mining site in Bruni, Texas; Johnston Atoll on Johnston Island in the South Pacific; China Lake Naval Weapons Test Center in California; and Twin Cities Army Ammunitions Plant in Brighton, Minnesota. In addition, soil washing has been successfully used at many more chemically contaminated sites, including the most recent application at the King of Prussia site in Winslow,

New Jersey. Soil washing has also recently been effectively demonstrated in field tests at DOE's Idaho National Engineering Laboratory in Idaho Falls, Idaho, and at DOE's Hanford Reservation in Richland, Washington.

DOE is required by the legislation which accompanies the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) to "select a remedial action that is protective of human health and the environment, that is cost-effective, and that utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable" (42 U.S.C. 9621). As stewards of public funding, and because initial test results on treatment are promising, DOE is exploring treatment technologies that could promise significant cost savings. DOE anticipates a large cost savings if treatment is successful for these soils, as compared to the high-cost approach of excavation and disposal out-of-state without treatment. Further testing and field demonstrations will be necessary for DOE to determine the efficacy of treatment and gain sufficient cost information to make fair comparisons between treatment and other alternatives.

3.2.5 Groundwater

Some commentors questioned the Maywood site's impact on groundwater, including potential impacts related to the use of treated material as backfill.

DOE RESPONSE: The proposed removal action for the waste storage pile does not directly address groundwater at the site. However, the remediation of the site planned by DOE will address potential groundwater contamination through removal of the primary contaminant sources (the waste pits and retention ponds on MISS and Stepan). At the request of EPA, groundwater is not directly addressed in the feasibility study being prepared by DOE because of the continuing investigation being performed by Stepan Company. EPA will assure that actions taken by DOE and Stepan will comprehensively address the groundwater contamination at the site.

Extensive modeling has been conducted by EPA, DOE, and NJDEP to assure that use of any treated material as backfill on the site will not have an adverse effect on groundwater. Modeling was performed to predict potential exposures which could result from drinking the site groundwater after remediation and replacement of treated soils at the maximum acceptable residual concentration (15 pCi/g for commercial properties). This analysis is highly conservative because local residents receive their drinking water from the municipality and not individual wells placed directly within the area of replacement soils, and the average radionuclide concentration in the treated soils is likely to be lower than 15 pCi/g. The modeling predicted no unacceptable risks from this conservative scenario.

3.3 Frustration and Lack of Trust in DOE

Comments were received that expressed frustration with DOE's ability or willingness to clean up the Maywood site. Requests were made for DOE to turn over responsibility for the cleanup

to EPA, the State of New Jersey, or some other government agency. Comments were also made challenging DOE's use of funds on community relations as needless.

DOE RESPONSE: DOE has no desire to postpone work at the Maywood site. In fact, in order to enable work at the site to proceed, DOE developed the EE/CA for the Maywood pile during the period that EPA and DOE were negotiating cleanup standards. Although work has been limited to the pile, this action has allowed DOE to begin cleanup on approximately the same schedule as if there had been no delay. DOE has informed the public about all activities pertaining to the remedy selection process for the site.

A public participation program is mandated by the environmental regulations that govern the cleanup of the Maywood site. DOE has followed EPA guidance, and has expanded its program to ensure that the public has the opportunity to be informed and involved in decisions impacting the site. The cost of implementing the community relations program for the Maywood site is approximately 5 percent of the annual site budget at this time. This includes the cost of operating the DOE Public Information Center, holding community information meetings, working with the Tri-Borough and County Thorium Coalition, providing a technical assistance grant so the community can hire a technical expert to help them review DOE's reports, and other ongoing efforts to involve the community in DOE activities associated with the Maywood site. In addition to providing the public with information about the site, the public relations program also helps the project team better understand the issues and concerns of the public. This two-way communication is valuable to, and worth the funds expended by, DOE.

Congress assigned DOE the responsibility for the Maywood site, and only Congress can re-assign the project. If directed by Congress, DOE would transfer responsibility for the site to another agency. DOE personnel understand the need to rebuild trust with the community. For those stakeholders who do not and will not trust DOE, the involvement of EPA and the NJDEP should provide assurance that the interests of the community and the environment are protected by the process. EPA has formal oversight responsibility for cleanup of the Maywood site, as specified in a Federal Facility Agreement (FFA) between EPA and DOE. The State of New Jersey chose not to become a part of the formal FFA, but has been involved in the review and comment process for all work performed to date for the Maywood site.

3.4 Health Effects

Commentors expressed concern regarding potential health effects from exposure to radioactive contaminants and suggested an additional study of the incidence of cancer and other disease in the communities surrounding the site. Several commentors attached a copy of a report in Rachel's Hazardous Waste News, which summarized a cancer study which reported a higher incidence of health problems associated with a site similar to the Maywood site. Others questioned possible health effects from future cleanup operations at the site, expressing concerns about the safety of the actions to be taken during cleanup.

DOE RESPONSE: DOE has evaluated the potential risks and health effects from current and possible future conditions at the site, but has not evaluated the potential for current health effects from past radioactive releases. The baseline risk assessment performed for the site evaluates current and future risks in the absence of remedial action. This study is performed to determine if action at the site is necessary, and serves as the baseline against which remediation alternatives are compared. Based on data from the remedial investigation and the ongoing environmental monitoring program, there are no unacceptable risks under the current uses of the properties on the Maywood site.

The Agency for Toxic Substances and Disease Registry (ATSDR), a part of the U.S. Public Health Service, is the federal agency responsible for performing health studies. CERCLA requires that ATSDR perform health assessments at all sites listed on the National Priorities List. ATSDR performed a health assessment for the Maywood site, and the results were inconclusive. At the request of the community, which petitioned ATSDR to perform another study, ATSDR has scheduled an additional health study to be performed sometime in the coming year. In addition, ATSDR has contracted with the state of New Jersey to perform a cancer cluster study in Maywood. The results are expected to be available in fiscal year 1995.

The report referenced in Rachel's Hazardous Waste News was published by the American Journal of Public Health in the April, 1990 issue. The authors of Rachel's Hazardous Waste News drew conclusions from the report (entitled "Health Effects of a Thorium Waste Disposal Site") which were not supported by the authors of the actual study. According to the abstract which accompanied the original publication of the study, the study was inconclusive because the relative numbers of health incidences were small and the confidence intervals were wide.

Measures will be taken to ensure the safety and health of the workers and the community during remedial activities at the site. The primary routes of exposure to the contaminants during remedial action are direct gamma exposure, ingestion, and inhalation of contaminants. Members of the public will be kept out of work areas, which will provide protection from direct gamma radiation. Soils will be wetted to prevent widespread dust generation to reduce the potential for inhalation exposure. Erosion control measures will be implemented to assure that contaminants do not leave the site by surface water runoff. Sensitive instrumentation will be used to measure direct gamma exposure rates and airborne contaminant concentrations at the perimeter of the work zones; additional actions would be taken if determined necessary based on these measurements.

As a part of the evaluation of alternatives for the removal action, DOE performed modeling to determine potential exposures from the actions to be taken at the site. This modeling assumes that protective measures are not taken, so it provides a "worst-case" estimate of potential exposures from the removal action. Under these conservative modeling conditions, the dose to any member of the public as a result of the proposed removal action is conservatively estimated at less than 5 mrem/year, with a resultant incremental lifetime cancer risk of approximately 4×10^{-7} (4 in 10 million) for each year that the removal action is underway. This dose is very small relative to the dose received from background sources of radiation, and is

well within current radiation protection guidelines. Throughout the removal action, appropriate health physics practices and engineering measures would be implemented to minimize radiation exposures, so that the actual dose to the public is expected to be even lower.

3.5 Delays in Cleanup

Several comments were received that expressed frustration at delays in cleaning up the Maywood site. Comments were received which referred to DOE's rejection of the State's "Utah Plan" as a prime factor in delay in cleanup. Other comments forecast continued delays associated with soil washing and the state's position on cleanup standards. Commentors requested DOE work with the regulators and the community to resolve these issues and prevent additional delays in the future.

DOE RESPONSE: The process aimed at cleanup of the Maywood site has been a lengthy one. A variety of factors have contributed to delays in the past, for example:

- early cleanups were halted by the community of Maywood due to concerns regarding storage of the waste from neighboring communities at the DOE-owned MISS;
- inability to identify an adequate location for in-state disposal;
- lack of adequate out-of-state disposal capacity (the first commercially licensed disposal cell for this material is currently under construction at the Envirocare facility in Clive, Utah);
- changing environmental laws have occasionally caused schedule delays, additional work, or changes in approach to the work at the site;
- the Maywood site is on the National Priorities List; thus, the lengthy RI/FS process mandated by CERCLA must be followed. (Note: The feasibility study for the Maywood site evaluates various options which could be used to remedy the site. The State's "Utah Plan", which basically calls for all material to be excavated and taken to Utah for disposal, is evaluated in the feasibility study as a potential remedy, as are other potential remedies, including treatment);
- the Federal Facilities Agreement between EPA and DOE mandated multiple review cycles before releasing documents for public comment; and
- the RI/FS process for the Maywood site was delayed for approximately 10 months while EPA and DOE negotiated cleanup standards; however, during this time, DOE developed the EE/CA for the Maywood waste storage pile to enable work to proceed at the Maywood site.

DOE is working with the regulators and community leaders to resolve issues associated with the cleanup standards and concerns about soil washing so that these issues do not continue to delay decisions on the properties comprising the Maywood site.

Once cleanup decisions are final, then the cost of implementing the remedy will impact the schedule. Treatment, if selected as the remedy for the site, is not likely to delay cleanup. In fact, the reverse is more likely to be true. The amount of time needed for cleanup is driven by the availability of funding; the physical constraints of construction and operation activities won't impact the cleanup schedules nearly as much as annual Congressional funding constraints. At this time, DOE expects the funds to be available for the Maywood site to be limited to $10 to $20 million per year. With current cost estimates ranging from $211 million for treatment to $373 million a year for direct disposal out-of-state, it is easy to see that the cleanup schedule for the Maywood site will be driven by the overall costs. Since DOE's funding is obtained on an annual basis, money saved by soil washing will enable additional cleanup to occur in any given year than could be accomplished with direct disposal out-of-state.

3.6 Cost

Several commentors objected to the consideration of cost in determining the cleanup criteria or solution for the site. These commentors suggested that the cost constraints identified by DOE are artificial, and that additional cost recovery from potentially responsible parties should be pursued. Commentors expressed frustration that the local community, the state, and taxpayers are paying for the Maywood cleanup instead of the responsible parties.

DOE RESPONSE: There are currently 46 sites in DOE's Formerly Utilized Sites Remedial Action Program (FUSRAP), and there are multiple other cleanup programs within DOE alone. Other agencies (e.g., the Department of Defense) have many more sites requiring public dollars to address. Currently, over 24,000 sites have been identified as the responsibility of the federal government; it has been reported that these cleanups may ultimately cost the taxpayer as much as $400 billion dollars, with work on these sites extending well into the next century. It is clear from the magnitude of the problem that prudent stewardship of limited financial resources is necessary.

Consideration of cost effectiveness is also mandated by federal regulations. However, it is important to understand that DOE only looks at cost effectiveness after it has been determined that a remedy is protective and complies with pertinent environmental regulations.

Pursuing cost recovery would be difficult since the responsible party, the Maywood Chemical Works, is no longer in existence. The property which comprised the Maywood Chemical Works was sold to the Stepan Company in 1959. Stepan is conducting a separate evaluation under the coordination and oversight of EPA for the chemicals that are present on the site (unless they are commingled with radioactive contaminants, in which case they are DOE's responsibility).

3.7 Remedial Action Strategy

Comments were received regarding the schedule for the cleanup of the entire Maywood site; frustration was expressed regarding the focus on removal of the storage pile instead of the site as a whole. Another commentor objected to the possibility of soil washing operations being conducted in Maywood, versus conducting these operations in each of the communities which are a part of the Maywood site. Others objected to cleaned soil from Lodi and Rochelle Park being placed back in Maywood. Another requested that the residential areas be cleaned up first, before the pile and any other properties.

DOE RESPONSE: The EE/CA was developed during a period when DOE and EPA were deciding on appropriate cleanup criteria for the site. This removal action was proposed to continue progress at the site, and was possible because it was not affected by the question of cleanup criteria. This is because the material is already stockpiled, and there was no question as to how much material should be excavated. Current plans call for the removal of the storage pile to begin in the fall of 1994. Completion of the pile removal is expected to take two to three years, depending on funding. Cleanup of the residential properties is expected to begin in 1996. The exact order in which the residential cleanups will be performed has not been determined; DOE will be seeking input from the Tri-Borough and County Thorium Coalition and other members of the community on the sequence of cleanup.

It is important to understand the role that MISS will play as a central staging area for any remedy selected for the site. MISS is the only DOE-owned property at the Maywood site; it has rail access and the space necessary to conduct operations in a safe and efficient manner. If treatment is utilized, cleaned soils will be backfilled in the excavations on MISS left from the removal of contaminated material; adjoining properties will be utilized only if required by the volume of cleaned material obtained from treatment. Following treatment, the material which is above criteria would be disposed offsite; only material which is below cleanup criteria would be used as backfill in Maywood.