
Formerly Utilized Sites Remedial
Action Program (FUSRAP)

Maywood Chemical Company Superfund Site

ADMINISTRATIVE RECORD

Document Number

MISS - 179



**US Army Corps
of Engineers**

October 2, 2002



Dr. Mr. Roos:

WE NEED YOUR HELP! This letter is in regards to the Cotter Corp.(Canon City, CO) plant near us owned by General Atomics. We retired here a short time ago. We knew of Cotter and its atrocious track record before we moved here.

The following comments are about Cotter and the future of the Canon City(Fremont Co.) area.

Enough is enough! Contrary to what Cotter says, we the residents of Canon City/Fremont Co.(Colo.) do not need more toxic waste brought in to be near us.

If the Maywood toxic "dirt" is as harmless as Cotter would have us believe, why is it being transported, at great expense 2,000 miles? (I have yet to get a straight answer to this question.)

My wife and I plus others we know here are OPPOSED to any present or future transport and placement of toxic material, from anywhere, to the Cotter plant near us.

Cotter's credibility is zero. We do not believe what they tell us. We see PR between Cotter and this community as an ongoing fiasco, past and present. Cotter wants what they want at any cost and will go to any lengths to get it. Cotter is all about Cotter. It shows!

The Arkansas River water situation is critical. Canon City depends on this flow solely for its water. The city has no dams or reservoirs for storage. We are currently in a multi year drought. If Cotter is allowed to bring in more and more toxic waste they will need more and more of our city water.

Why did Cotter hire one Ms. Bellantoni to head up a Canon City Outreach Committee? This tells us Cotter doesn't want to deal directly with our community. It's just another layer of stupid bureaucracy.

We do not trust the results of tests Cotter does on site. They can easily make their numbers look good and acceptable.

Transport of toxic waste to Cotter via rail is a big concern. This waste has to cross 19 streets in Canon City. Since Cotter is in Fremont County and not Canon City, whose responsibility is it to monitor and clean up an accidental spill if that happened within the city limits?

Our attitude about Cotter is WHAT YOU DO SPEAKS SO LOUDLY WE CAN NOT HEAR WHAT YOU SAY.

We heard the Cotter rail siding can't accommodate the frequency of rail cars (with Maywood dirt) so the overflow of incoming cars will have to sit (loaded) in downtown Canon City.

Future storage of any toxic waste brought in to Cotter could affect real estate values and economy of an area that relies on tourism and retirees. Some say it already has.

We understand the impoundments (Cotter) were built for milling waste, not chemical or mixed waste.

Cotter is attempting to change its license to allow the site to become a national toxic waste and radioactive dump site.

The documented waste contained in the Maywood "dirt" can permeate and destroy the Hypalon liner used in the impoundment ponds.

The attitude of city officials (Canon City) and Fremont County Commissioners is such that we think their silence and refusal to take a position (for or against) indicates they are pro Cotter. WE NEED YOUR HELP!

We are disappointed the Colorado State Dept. of Health and Environment hasn't and isn't taking a hard line with Cotter. It shows.

Just what authority and/or political clout do you have in this matter? Are you pro Cotter too? If you are then this letter has been a waste of time.

I'm speaking on behalf of my wife and I. We are not members of or associated with the CCAT group here in Canon City.


How do you know what to believe from what you hear from various sources about Cotter? Do you believe everything you see on paper? We don't.

We understand that the Colorado State Dept. of Health and Environment is the sole and final authority in dealing with Cotter.

Much much more could be written and said about Cotter. We are very concerned that once again politics will prevail in this matter. I hope I am wrong.

WE NEED YOUR HELP!

Sincerely,



David R. Bachman
Karen Bachman

Dave Browner

September 18, 2002

Jake Jacobi, Manager
Radiation Services Program
Colorado Dept. of Public Health & Environment
8100 Lowry Blvd.
Denver, CO 80230

Dear Mr. Jacobi:

I am writing to express some of my concerns re: the Cotter plan to store radioactive waste so close to Canon City. Cotter's past track record of protecting the environment and local citizens, including its own employees, as left much to be desired. Their failure to accept responsibility for past contamination as well as their recent lack of safety precautions at the site suggests that these issues are considered to be low priority.

At one of the public meetings held this summer, I heard Cotter staff state that the liner used in the tailings containment pond will last for 20 years. What, pray tell, happens then? Will we face another round of contamination, litigation, and eventual designation as a superfund site?

I would really like to see an environmental impact assessment done by an independent agency paid for by Cotter. I have always questioned the wisdom of any assessment made by the party which holds a vested interest. Cotter's own business interests can't help but color the outcome of their self-evaluation.

Another concern is the transport of the enormous quantity of hazardous materials across the country. Subject to accident or sabotage, what risk does this pose to the communities through which it will pass?

Once Cotter is permitted to store hazardous waste, the precedent will be set for accepting more and more such material. The Cotter mill is much too close to the population center of Canon City to be doing this kind of business. I do not propose to put Cotter out of business. I just want them to move their operation to a more remote and isolated setting where they will not be endangering the people around them.

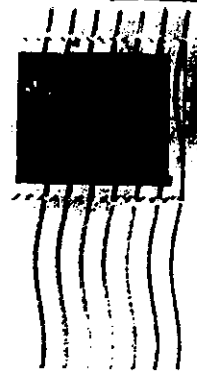
Sincerely yours,



Rita Everett



Cc: U.S. Army Corps of Engineers, CENAN-PP
US Environmental Protection Agency



U.S. Copies of Engineers, CENAN-AP
 26 Federal Plaza, Rm 2108
 New York, NY 10278-0090

10278+0004



**Public Comment Form on the
PROPOSED PLAN FOR SOIL AND BUILDINGS
AT THE FUSRAP MAYWOOD SUPERFUND SITE**

PLEASE RETURN THIS FORM BY MAIL TO:

Allen Roos
US Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Date: 9-10-02
Name (optional): Jody Enderle
Affiliation (if any): _____
Address (optional): _____
Telephone (optional): _____

Enter comments in the space below. Use the other side or additional sheets as needed. If comments are on specific sections or pages in the document, please note that information in the blank below. Please be specific so that comments can be clearly understood. Thanks.
Section or page #: _____

I live in Cañon City, CO, (Cotter Corporation's location.) I understand you need to get rid of "the dirt." However, I don't want it here. We have a petition with over 4000 signatures on it of people who don't want it here either. We have kept it out for 6 months and intend to do whatever it takes to keep it out forever.

Cotter Corporation has a terrible track record. They have been cited over 200 times for contaminations. They have lost numerous lawsuits for health damages and death.

We, the community intend to continue to apply

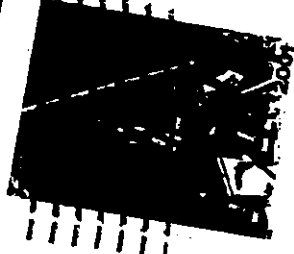
Comment forms can be submitted by mail in the pre-addressed envelope provided. Mail returns must be postmarked no later than September 12, 2002.

legal pressure, political pressure, media pressure and public pressure to fight this. I know that you have budgets and
→

time lines that need to be met so I strongly urge
you to keep the soil there or ship it to Utah
because you're going to have a major struggle
getting it into Colorado.

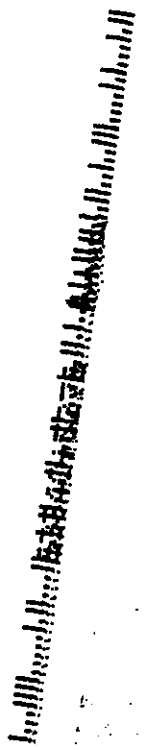
Sincerely,

Jody Enderle RN, BSN



attn: Allen Ross
 US Army Corps of Engineers
 CENAN-PP
 26 Federal Plaza, Rm 2108
 New York, NY 10278-0090.

10278+0004 03





US Army Corps
of Engineers
New York District

Public Comment Form on the

PROPOSED PLAN FOR SOIL AND BUILDINGS AT THE FUSRAP MAYWOOD SUPERFUND SITE

PLEASE RETURN THIS FORM BY MAIL TO:

Allen Roos
US Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Date: 9-5-2002
Name (optional): Mrs E. Baird
Affiliation (if any):
Address (optional): [REDACTED]
Telephone (optional):

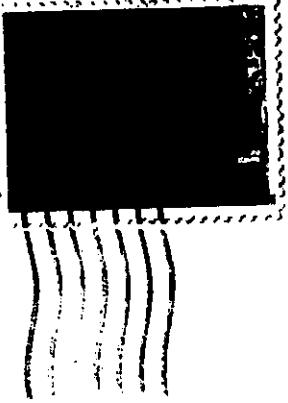
Enter comments in the space below. Use the other side or additional sheets as needed. If comments are on specific sections or pages in the document, please note that information in the blank below. Please be specific so that comments can be clearly understood. Thanks.

Section or page #:

The people of Maywood never wanted any more contamination brought into the Maywood site, however, if it must be done this way, the least you can do is get it out of here as fast as possible, put it onto to railroad cars & get it out, have some consideration for the people living close to the Maywood site, we don't want the soil cleaned & separated just send it out, clean up the Maywood site, let the Federal Gov. give the land back to Stephan Chemical so Stephan can pay their full share of Property Taxes in Maywood & have less of a Property Tax burden on the People of Maywood

Comment forms can be submitted by mail in the pre-addressed envelope provided. Mail returns must be postmarked no later than September 12, 2002.

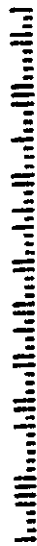
Thank You
Mrs E. Baird



Allen Roos
US Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090



10278+0090 03





**Public Comment Form on the
PROPOSED PLAN FOR SOIL AND BUILDINGS
AT THE FUSRAP MAYWOOD SUPERFUND SITE**

PLEASE RETURN THIS FORM BY MAIL TO:

Allen Roos
US Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Date: Aug 24th 02.
Name (optional): Michael Barnes M.I.
Affiliation (if any): _____
Address (optional): _____
Telephone (optional): _____

E Mail: _____
Enter comments in the space below. Use the other side or additional sheets as needed. If comments are on specific sections or pages in the document, please note that information in the blank below. Please be specific so that comments can be clearly understood. Thanks.

Section or page #: Waste Disposal.

See letter & enclosure

Comment forms can be submitted by mail in the pre-addressed envelope provided. Mail returns must be postmarked no later than September 12, 2002.

[REDACTED]
[REDACTED]
[REDACTED]

24th August, 2002

To: Mr. Allen Roos
The US Army Corps of Engineers
CENAN-PP, 26 Federal Plaza
New York, NY 10278-0090

From: CDR Michael Barnes MD US Public Health Service (Retired)

Subject: **Public Comment, FUSRAP Maywood Superfund Site**

1: The purpose of this letter is to register the concern of many people who live in Fremont County CO regarding the USACE intention of disposing of the wastes from the above Superfund Site into the Cotter impoundment tailing ponds just outside the City limits Of Canon City CO.

2: The impoundments were built for milling waste, not chemical or mixed waste and are situated over abandoned coalmines only a quarter of a mile from the City limits of Canon City CO. The City Center is only 2.5 miles from, and is both down hill and down wind of the Cotter Mill site. The Dam failure disaster at Inez Kentucky on Oct 11 2000 is of especial concern to us because the Cotter site is a very similar type of situation. (See enclosure A.) The old impoundment ponds actually did flood, overflow, and spill their contents into Canon City in the 60's. It poured down 12th street, among other places, and by the 80's a cluster of cancer was found in people living near 12th street. After the flood, they built an earthen flood dam.

Cotter is sitting on top of our whole watershed, with about 5 underground streams pouring through that area. Though the dam looks barren and dry, it is reported that even now 2-3 gallons a minute of underground water are seeping under it. It should be noted additionally that a sudden storm, fairly common in this part of Colorado, could dump 12-18 inches of rain in just a few hours and this could easily rupture the dam and release toxic waste downhill through Lincoln Park into the Arkansas river, the natural drainage of this area. The possibility that the tailing ponds could leak, or worse rupture, into the old mine shafts and then contaminate the Arkansas river is frightening.

3: Mr. Marcinowski of the EPA said normal tailings ponds haven't been tested for this kind of waste. The Hypalon liner could even be destroyed by certain chemicals, that are present in the Maywood waste. Although the impoundments were built for Slurry under water, our present drought could reduce or even eliminate the water supply to Cotter leaving the dry soil to blow in the wind.

4: Cotter, a subsidiary of General Atomics of California, has violations that have not been corrected since their inspections by the Colorado Department of Public Health and Environment (CDPHE) in 1999 and 2000. At this time Cotter's license is suspended for not correcting

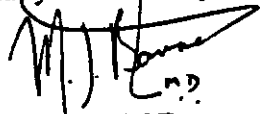
worker safety violations. It should be noted that The CDPHE has not changed it's radioactive regulations to make Cotter comply with HB1408.

Cotter's Environmental Assessment was so inadequate that it didn't even evaluate the condition of the railroad tracks, which run through Canon City to the mill, only feet from some houses. It didn't properly evaluate the social/economic impact on the area and didn't study the possible environmental problems such as how receiving the waste would impact on the water in the area, and didn't address a broad scenario of possible emergency situations and responses. Cotter told our community the soil is "JUST COMMON DIRT", that wouldn't hurt anyone! Cotter only gave chemical/radioactive characteristics of the first 30,000 tons of soil, not of the whole project.

5: Cotter's Uranium Mill and the surrounding community is already a superfund site, and it would be precedent setting to send further superfund CERCLA waste there. Some contaminated water and soil has still to be cleaned up in the Lincoln Park area of Canon City from the last superfund problem left by Cotter. An important violation of the Colorado Dept. of Public Health and Environment regulations by Cotter, that still hasn't been addressed, is the inadequate amount of funds guaranteed for final clean-up and decommissioning.

7: In conclusion, it is my opinion that Cotter is not suitably situated, nor capable of handling or storing toxic waste of any type, now or in the future. If such waste were shipped here now it is distinctly possible the whole site will have to be re-excavated and shipped elsewhere, at a huge cost to the US Government and the tax payer in the future. It should be shipped now to a site well away from human habitation, for example, to the Envirocare site in Utah (a desert site many miles from any population).

Respectfully submitted by,



Michael J. Barnes M.D.

Enclosures:

The Inez coal tailings dam failure (Kentucky, USA), information downloaded from the Herald Leader, Courier Journal and Charleston Gazette.

Copies to:

Environmental Protection Agency, Region 8, Denver
Colorado Department of Public Health and Environment, Doug Benevvento
US Senator, Wayne Allard
US Senator, Ben Nighthorse Campbell
Colorado Governor, Bill Owens

The Inez coal tailings dam failure (Kentucky, USA)

(last updated 1 Aug 2002)

Contents:

- [The dam failure and its impacts](#)
 - [The causes of the dam failure](#)
 - [The aftermath of the dam failure](#)
 - [Resources](#)
-

The dam failure and its impacts

On Oct 11, 2000, a coal tailings dam of Martin County Coal Corporation's preparation plant near Inez, Kentucky, USA, failed, releasing a slurry consisting of an estimated 250 million gallons (950,000 m³) of water and 155,000 cubic yards (118,500 m³) of coal waste into local streams.

About 75 miles (120 km) of rivers and streams turned an iridescent black, causing a fish kill along the Tug Fork of the Big Sandy River and some of its tributaries. Towns along the Tug were forced to turn off their drinking water intakes.

The spill contained measurable amounts of metals, including arsenic, mercury, lead, copper and chromium, but not enough to pose health problems in treated water, according to a federal official.

The full extent of the environmental damage isn't yet known, and estimates of the cleanup costs go as high as \$60 million.

At Martin County Coal's Inez operations, three mines feed coal into a preparation plant on conveyor belts through underground mine workings. Plant waste is poured into the 72-acre (29 ha) Big Branch impoundment that holds 2.3 billion gallons (8.7 million m³) of slurry.

Martin County Coal Corporation is a subsidiary of A.T. Massey Coal Company, Inc., Richmond, VA, which, in turn, is a subsidiary of Fluor Corp., Aliso Viejo, California.

The causes of the dam failure

According to the company, the failure was caused from the "sudden and unexpected" collapse of an abandoned underground coal mine next to the impoundment. The bottom of the slurry pond collapsed, allowing its contents to pour into the mine tunnels. The slurry then poured out of two

workings. Failure to fully comply with these provisions resulted in internal erosion (piping) of the material between the impoundment and the mine workings. Over a period of time, the seepage into this area began to carry sand (weathered material) into the mine opening (Figure 5). As this material was carried away, a "pipe" (void) formed and worked its way toward the impoundment. As more material was carried into the mine, a larger seepage path was created allowing additional and larger particles to be carried away. This process continued until the void developed close enough to the impoundment that the remaining plug of material failed suddenly, allowing the contents of the impoundment to discharge uncontrolled into the mine." (Overview section of MSHA report)

"MSHA cited Martin County Coal Company for two "unwarrantable failure" violations of federal mine safety standards that contributed to the spill. One contributory violation was the failure to spread the fine slurry layer as the approved plan specified. The second contributory violation was a failure to respond to signs that monitored water flow from the impoundment had increased. The increased flow should have been a signal that water flow from the impoundment into the mine was increasing, which could have led to corrective action." (MSHA release Oct. 17, 2001)

However, MSHA found there was no conclusive evidence that mine maps were wrong.

On March 4, 2002, The U.S. Office of Surface Mining released a report on the impoundment failure (see Resources below). It mainly concurs with MSHA on the causes of the slurry breakthrough.

In 1997, after two similar but smaller failures in Virginia *), the U.S. Mine Safety and Health Administration (MSHA) rated all coal-slurry impoundments across the country on their "breakthrough potential": 45 of the 225 impoundment ponds in Appalachia were classified as having a high risk for failure, and 32 were listed as moderate-risk. The rest were deemed low-risk.

The Martin County impoundment was deemed only a moderate risk to fail - despite a smaller leak in 1994. And if it failed, the survey said, the impact was expected to be on the safety of miners, not the environment. After the 1994 spill, improvements were made at the impoundment at MSHA's direction, but they failed to prevent the disaster.

Review and repair is not completed on more than half of 25 high-risk coal waste dams in the Appalachian coalfields, a MSHA report made public on Oct. 24, 2000 (but soon after removed from their [homepage](#) □), confirmed.

In December 2000, MSHA upgraded the risk classification of some of the impoundments, including the Martin County impoundment...

*) On Nov. 26, 1996, black water from a Consol coal waste dam at the company's Buchanan No. 1 Mine near Oakwood, Va., leaked into old underground mine workings and blew out the other side. The blowout sent coal slurry gushing into a tributary of the Levisa Fork of the Big Sandy River at a rate of up to 1,000 gallons a minute (3.8 m³/min). The 25-mile (40 km) spill blackened creeks and killed fish.

A month earlier, the same thing happened at the Lone Mountain Processing (subsidiary of Arch Mineral Corp.) coal waste impoundment in Lee County, Va.: the spill unleashed 6 million gallons (23,000 m³) of black water into tributaries of the Powell River. The Arch Mineral operation had a nearly identical problem a few months before that.

The Martin County Coal impoundment dates to 1971, when it was approved as a dump for dry refuse. In 1984, the company applied for a permit to turn it into an impoundment and received

The change of administrations in Washington in January 2001 has forced the federal official heading the investigation into the collapse of the coal-waste reservoir to leave his job: Tony Oppgard, a former public interest lawyer from Kentucky specializing in mine safety, held a high-level position with the U.S. Mine Safety and Health Administration.

Federal investigators seeking the cause of the collapse of a coal-waste pond left Martin County Feb. 2, 2001, having completed drilling tests and most, if not all, of their interviews.

But even before the team has issued its findings, the Martin County Coal Corp. is seeking approval to resume dumping coal waste into the 72-acre impoundment. Martin County Coal filed a preliminary plan the same week for resuming use of the impoundment with the MSHA office in Pittsburgh and with the Kentucky Department of Surface Mining. The document proposes the storage of consolidated mud -- which has been partly dried -- and rock in the impoundment. When the reservoir broke, the presence of water facilitated the flow of sludge into two watersheds and eventually into the Big Sandy River.

On March 7, 2001, the Environmental Protection Agency (EPA) issued an Administrative Order to Martin County Coal for alleged violations of the Clean Water Act (CWA). The Order is to ensure a sustained and appropriate level of cleanup that will make sure the impacted rivers and streams are fully restored.

On April 4, 2001, two people with ties to the coal industry have been removed from a national committee studying the safety of coal-waste impoundments: a Lexington attorney who has represented coal companies in legal disputes, and a coal industry consultant from Tennessee. Their backgrounds in coal matters were viewed by the academy as possible conflicts of interest with their work on the study.

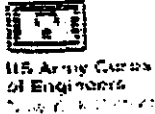
However, environmentalists complain that the National Academy of Sciences panel still lacks balance because several remaining members have ties to the industry, and there are no representatives of citizens' or other groups.

> View [Committee on Coal Waste Impoundments website](#) □

On April 6, 2001, the National Academy of Sciences has added three members to a national panel studying the safety of coal-waste impoundments. Those named to the panel include an environmental lawyer, an engineering professor and an engineering consultant.

On April 6, 2001, MSHA engineer Jack Spadaro asked to be taken off the agency's investigation team. In a resignation letter, Spadaro charged that top MSHA officials want to "leave unexamined serious deficiencies that were revealed during the investigation regarding the Mine Safety and Health Administration review and approval process for this impoundment." Spadaro said the investigation report was being watered down by Marvin Nichols, chief of coal mine safety for MSHA, and Timothy Thompson, an MSHA district manager in Morgantown.

On April 9, 2001, the president of Martin County Coal Corp. has announced he is resigning but declined to cite the company's Oct. 11 coal slurry spill as the reason.



Public Comment Form on the

PROPOSED PLAN FOR SOIL AND BUILDINGS AT THE FUSRAP MAYWOOD SUPERFUND SITE

PLEASE RETURN THIS FORM BY MAIL TO:

Allen Roos
US Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Date: Oct 2, 2002
Name (optional): BECKY K.
Affiliation (if any): _____
Address (optional): _____
Telephone (optional): _____

Enter comments in the space below. Use the other side or additional sheets as needed. If comments are on specific sections or pages in the document, please note that information in the blank below. Please be specific so that comments can be clearly understood. Thanks.

Section or page #: _____

- DO NOT BRING MAYWOOD WASTE TO COTTER IN CAÑON CITY!!!!
- 1. THE impoundments were built for milling, not chemical or mixed waste.
- 2. We have a drought. THIS SHIPMENT COULD HAVE A ~~AN~~ negative impact on our water levels.
- 3. THE CDPHE HAS NOT CREATED regulations to make COTTER COMPLY WITH HB 1408 and they do not have approval from the EPA to store or process CERCLA waste
- 4. THE documented waste contained in the MAYWOOD materials can permeate and destroy the Hypalon liner used in the impoundment ponds.

Comment forms can be submitted by mail in the pre-addressed envelope provided. Mail returns must be postmarked no later than October 12, 2002.



Allen Roos
 US ARMY CORPS OF ENGINEERS
 CENAN - PP
 26 FEDERAL PLAZA, ROOM 2108
 NEW YORK, NY 10278-9996
 10278+0004

[REDACTED]

September 10, 2002

Allen Roos, FUSRAP Project Manager
U.S. Army Corps of Engineers, CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

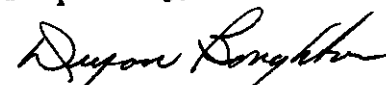
Re: USACE FUSRAP Maywood

Cotter Uranium Mill in Canon City, Fremont County, CO is a Superfund Site. Neighboring wells are contaminated from Cotter waste, neighboring farm soils are contaminated by Cotter waste. There are pockets of cancer in the Cotter residential neighborhood.

Cotter's tailings ponds are not acceptable for mixed waste. Cotter has been cited for safety violations that have not been corrected. Cotter may not have sufficient funds for decommissioning assurance. Cotter has lied to the community about the risks of contaminated soils.

Allowing Cotter Uranium Mill to become a national radioactive and toxic waste disposal site to accept USACE FUSRAP Maywood radioactive and toxic waste is unconscionable.

Respectfully,



Deyon Boughton



Allen Roos,
FUSRAP Project Manager
26 Federal Plaza, Room 2108
New York, NY 10278-0090

10278+0090 03





October 15, 2002

Allen Roos, FUSRAP Project Manager
U.S. Army Corps of Engineers, CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Re: USACE FUSRAP Maywood

Cotter Corporation opened in 1958. Cotter was closed for more than twenty years during the past forty-four and minimally productive for five years. That leaves eight productive years under AEC contract and eleven years as a privately owned milling operation during which time their conduct put the immediate neighborhood on the EPA National Priority List.

My husband began working for Cotter Corporation in 1958. We bought rural estate property in Lincoln Park in 1959. He was Assistant Chief Chemist for eight years and Chief Chemist for twelve years leaving in 1979 because he was ill. In 1984, our home was included in a Superfund area contaminated by Cotter Corporation. In 2001 he died of lymphoma cancer caused by long term low level radiation exposure.

Investigative reporters have recently compiled an alarming expose' concerning Cotter Corporation and the Colorado Department of Public Health and Environment. Cotter Corporation, Canon City, Colorado is not a proper site for radioactive, hazardous, toxic, t-norm, 11e2, or any other name you may assign.

Respectfully,


Deyon Boughton



September 4, 2002

U.S. Army Corps of Engineers, New York District
Attn: Allen Roos, FUSRAP Project Manager
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Dear Mr. Roos,

This letter is in support of bringing the Maywood soil to the Cotter Corporation's site in Fremont County Colorado. It is my understanding that this product would be used to cap the existing radioactive materials already there and would help minimize the potential danger that the open ponds create.

There is a very large, loud group that is opposed to the transfer of this soil but, there is a larger group that you haven't heard from. The majority of the County understands the intended use and the purpose of the shipment of Maywood soil.

I have been fortunate to have served with the Chamber of Commerce during the clean up that took place and was on the committee that worked with the EPA and Cotter to get the Lincoln Park area, and Fremont County de-listed as a clean up site. I have toured Cotter and attended the meetings and hearings. I feel that there is mass hysteria going on with people who have a set agenda to close the Cotter site. Most of these people are not from Cañon City, they have relocated here from other parts of the country and have no idea how important mining is to our economy. They do not want to listen or understand the actual data that has been presented by professionals in the industry.

This is not toxic waste! Fremont County, or the State of Colorado is not becoming a dump site for toxic waste. That is an extreme over statement.

Cotter has been a good neighbor and a good business to have in Fremont County. I hope you will give my letter some consideration.

Best Regards,

A handwritten signature in cursive script that reads "Pegi Brown".

Pegi Brown

Broker Associate, Reeves Real Estate

Owner of Jurassic Cañon Family Entertainment Ctr.

Member, Board of Directors, Cañon City Chamber of Commerce





U.S. Army Corps of Engineers, New York Dist.
 Attn: Allen H. ...
 26 Federal Plaza, Room 2108
 New York NY 10275-0090

1/10/78



International Computer
 Marketing Institute



State of New Jersey
Department of Environmental Protection
PO Box 402
Trenton, NJ 08625-0402

James E. McGreevey
Governor

Bradley M. Campbell
Commissioner
Tel. # (609) 291-2000
Fax # (609) 291-2000

September 11, 2002

Allen Roos, Project Manager
US Army Corps of Engineers, New York District
26 Federal Plaza, Room 2043
New York, NY 10278-0090

Dear Mr. Roos:

Governor James E. McGreevey has asked me to respond on his behalf to your August 12, 2002 letter regarding the Proposed Plan for Soils and Buildings for the Formerly Utilized Sites Remedial Action Program (FUSRAP) portion of the Maywood Chemical Superfund Site.

In addition to providing Governor McGreevey with a copy of the Proposed Plan for comment, you also provided a copy directly to the Department of Environmental Protection's (Department) Bureau of Case Management. The Case Manager, Donna Gaffigan, has been working very closely with you towards the remediation of this site. She reviewed the Proposed Plan and will be preparing our comments on the document. Our comments on the Proposed Plan will be provided to the United States Army Corps of Engineers (USACE) by September 12, 2002.

I assure you that the Department will continue to work with USACE towards the remediation of the Maywood Chemical Site.

Sincerely,

Bradley M. Campbell
Commissioner

State of New Jersey
Department of Environmental Protection
Office of the Commissioner
PO Box 402
Trenton, NJ 08625-0402

KILMER N. J. P&DC 03/12/02 18:15 JLB/155#2
NJ

PPMD
(18th floor)

Allen Roos, Project Manager
US Army Corps of Engineers, New York
District
CENAN-PL-EA
26 Federal Plaza, Room 2043
New York, NY 10278-0090

10278+0090 03



Public Comment Form on the

PROPOSED PLAN FOR SOIL AND BUILDINGS AT THE FUSRAP MAYWOOD SUPERFUND SITE

PLEASE RETURN THIS FORM BY MAIL TO:

Allen Roos
US Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Date: October 9, 2002
Name (optional): Canon City Regional Businesses
Affiliation (if any): _____
Address (optional): _____
Telephone (optional): _____

Enter comments in the space below. Use the other side or additional sheets as needed. If comments are on specific sections or pages in the document, please note that information in the blank below. Please be specific so that comments can be clearly understood. Thanks.
Section or page #: _____

We, the following 90 businesses, wish to express our opposition to allowing Cotter Corporation to store or process and store material from other contaminated or superfund sites. Business people rarely take a public stand on political issues because we feel that anyone who disagrees with our position will lost forever as a customer and in our ecominically depressed area, we can't afford to lose anyone. We have been wishing and hoping Cotter would become a better corporate neighbor, but in fact, the opposite has occurred. We believe Cotter will cause us irreparable enviromental and ecomonic disaster.

Cotter Corporation is located immediately adjacent to our local 18 hole golf course and within ¼ mile of a 900 lot subdivision. Cotter is in the wrong business and in the wrong location. Please help us!

Comment forms can be submitted by mail in the pre-addressed envelope provided. Mail returns must be postmarked no later than October 12, 2002.

The following business owners have signed a petition against
Cotter Corporations' plan to bring in toxic waste:

1. Oakwood Builders
2. Warren Insulation
3. K&G Construction
4. Superior Homes
5. Custom Log Creations
6. C&K of Fountain
7. Wet Mountain Design Builders
8. Shelver Service
9. ABE Log Homes
10. Elkhorn
11. Owl Cigar Store
12. All Masonry LLC
13. Aron Plumbing & Heating
14. Fremont Masonry
15. John Keeler
16. J.T. Custom Painting
17. Homeland Enterprises
18. Levis Contracting
19. Built 4 U
20. Cornerstone Construction
21. Knotty Pine Motel
22. Tractor Trader
23. L.O. Construction
24. Carl Arms Farms
25. Another Time Antiques
26. Longhorn Photography
27. John Provence Construction
28. Mountain Grizzley Wood
29. Alternative Choices INC
30. Wildwind

31. DT Construction Co
32. Prestige Homes
33. LLA Marketing
34. Adamic Excavating
35. Big O Tire
36. Goodall Construction
37. C&S construction
38. Duane Wilcoxson
39. Cornella Builders
40. A-1 Construction
41. Snyder Construction.
42. Ricks Pump Service
43. Canon Classic Homes
44. Adamson Construction
45. TLP Construction
46. Skyline Construction
47. Jarosz Construction
48. Limberis Construction
49. Hopper Construction
50. A.C.E. Builders
51. Mulberry Construction
52. MK Construction
53. Valco INC
54. Craftique
55. Home By Harding
56. The Last Straw
57. D.M.A. Excavating
58. Reynolds Watson Co
59. Kevin Schenk
60. Canon Woodshop
61. GT Enterprizes
62. Jeff's Home Repair
63. Warren Insulation
64. GT Enterprises
65. Homebuilders Const.

66. Moltin Const
 67. Moore's Quality Earthmoving
 68. Herman Rentals
 69. Silent Reminders
 70. Map Enterprises
 71. Short's Excavating
 72. Steve Lukassen
 73. Ideal Builders
 74. Grandview Arres
 75. Davis Designs
 76. Zimmerman Bodyshop
 77. Mikes Custom Interior
 78. Highland Golf
 79. Schricker Const.
 80. Osmundson Const
 81. Moore Heating & Cooling
 82. Rocky Mountain Home Service
 83. Freeman Crawford
 84. Lynn Burnette
 85. Ra Power
 86. North Fork Const.
 87. L&K Enterprises
 88. Sharon's Properties
 89. Sonny's Home Center
 90. Brookside Electric
-

C.C.A.T. Colorado Citizens Against ToxicWaste

We, the undersigned business owners of Fremont County, believe Cotter's proposed change in business will be detrimental to our community. It will be financially devastating to our future economy, as well as harmful to the health and environment of our citizens.

We are opposed to the plan of Cotter Corporation, currently owned by General Atomics, changing its business mission from ore milling to becoming a toxic landfill including receiving material from other contaminated or superfund sites. We ask that our local, state, and federal governmental officials represent our opposition to the importing and processing of radioactive and mixed toxic wastes by the Cotter Corporation.

Print Your Business Name	Print Your Business Address	Date
Brookside Electric	[REDACTED]	10/9/02
Your Signature	Print Your Name	Phone #
[Signature]	[REDACTED]	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

**When this petition is full please contact 276-7274, CCAT CO-Chair, for pick-up.
Or mail to CCAT, PO Box 964, Canon City, CO 81215-0964**

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Print Your Business Name	Print Your Business Address	Date
<i>Sonny's Home Center</i>	[REDACTED]	<i>9-4-02</i>
Your Signature	Print Your Name	Phone #
<i>Sonny Smeller</i>	[REDACTED]	<i>Canon City Co</i>

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

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Your Signature	Print Your Name	Phone #

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Print Your Business Name	Print Your Business Address	Date
Freeman Chandler &	[REDACTED]	
Your Signature	Print Your Name	Phone #
[Signature]	[REDACTED]	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
	[REDACTED]	9/10/02
Your Signature	Print Your Name	Phone #
[Signature]	[REDACTED]	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Ra Power	[REDACTED]	Canon City
Your Signature	Print Your Name	Phone #
[Signature]	[REDACTED]	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
NORTH FORK Const	[REDACTED]	Sept. 26 - 02
Your Signature	Print Your Name	Phone #
[Signature]	[REDACTED]	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
PK Enterprise	[REDACTED]	Sept. 15-02
Your Signature	Print Your Name	Phone #
[Signature]	[REDACTED]	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
SHARON'S PROP.	[REDACTED]	9-16-02
Your Signature	Print Your Name	Phone #
[Signature]	[REDACTED]	[REDACTED]

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Print Your Business Name	Print Your Business Address	Date
Mike's Custom Interior Carpentry	[REDACTED]	8-29-02
Your Signature	Print Your Name	Phone #
<i>Michael R. Linn</i>	[REDACTED]	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Highland Golf	[REDACTED]	8-29-02
Your Signature	Print Your Name	Phone #
<i>[Signature]</i>	[REDACTED]	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Schricker Const.	[REDACTED]	8-29-02
Your Signature	Print Your Name	Phone #
<i>Mark Schricker</i>	[REDACTED]	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Osmundson Const.	[REDACTED]	8-29-02
Your Signature	Print Your Name	Phone #
<i>[Signature]</i>	[REDACTED]	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Moore Heating & Cooling	[REDACTED]	8-29-02
Your Signature	Print Your Name	Phone #
<i>Ken Moore</i>	[REDACTED]	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Rocky Mountain Home Services	[REDACTED]	08/29/02
Your Signature	Print Your Name	Phone #
<i>[Signature]</i>	[REDACTED]	[REDACTED]

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Print Your Business Name	Print Your Business Address	Date
SHORTY'S EXCAVATING	[REDACTED]	9-4-02
Your Signature	Print Your Name	Phone #
<i>[Signature]</i>	ROLAND E DEVOR	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
STEVE LUKASSEN	Lukaszen Construction	9-4-02
Your Signature	Print Your Name	Phone #
<i>[Signature]</i>	STEVE LUKASSEN	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Ideal Builders	[REDACTED]	
Your Signature	Print Your Name	Phone #
<i>[Signature]</i>	Mark B Palmer	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Quandrius Carres	[REDACTED]	
Your Signature	Print Your Name	Phone #
<i>[Signature]</i>	TONY CARESTIA	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
DAVIS DESIGNS	[REDACTED]	9/4/02
Your Signature	Print Your Name	Phone #
<i>[Signature]</i>	PETER A DAVIS	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
ZIMMERMAN BODY SHOP	[REDACTED]	9/5/02
Your Signature	Print Your Name	Phone #
<i>[Signature]</i>	TOM ZIMMERMAN	[REDACTED]

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Print Your Business Name	Print Your Business Address	Date
Honobuilders Construction	[REDACTED]	Aug 28' 02
Your Signature	Print Your Name	Phone #
<i>Richard L. Schmitz</i>	Richard L. Schmitz	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Molitor Construction	[REDACTED]	Aug 30, 02
Your Signature	Print Your Name	Phone #
<i>Timothy J. Molitor</i>	Tim Molitor	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Moore's Quality Earthmoving	[REDACTED]	9-3-02
Your Signature	Print Your Name	Phone #
<i>Eric Moore</i>	Eric Moore	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
ACKMAN RENTALS	[REDACTED]	9-3-02
Your Signature	Print Your Name	Phone #
<i>Melvin L. Herman</i>	MELVIN L HERMAN	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
SILVERMOUNTAIN	[REDACTED]	9-3-02
Your Signature	Print Your Name	Phone #
<i>Keith Hilbert</i>	Keith Hilbert	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
MAP ENTERPRISES	[REDACTED]	9/4/02
Your Signature	Print Your Name	Phone #
<i>Mark A. Prebble</i>	MARK A. PREBBLE	[REDACTED]

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Print Your Business Name	Print Your Business Address	Date
Reynolds/Watson <small>Your Signature</small>	[REDACTED]	9-4-02
<i>[Signature]</i>	William Kilgore	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Kevin Schark <small>Your Signature</small>	[REDACTED]	
<i>[Signature]</i>		[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Canon Wood Shop <small>Your Signature</small>	[REDACTED]	09-04-
R Hunter	Rex C. Hunter	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
G7 Enterprise <small>Your Signature</small>	[REDACTED]	9-4-02
Mindy Miller McCook	Mindy McCook	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
G7 Enterprises <small>Your Signature</small>	[REDACTED]	9-4-02
<i>[Signature]</i>	Glenn Smith	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
JEFF'S Home Repair <small>Your Signature</small>	[REDACTED]	
<i>[Signature]</i>	JEFF WEESNER	[REDACTED]

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Print Your Business Name	Print Your Business Address	Date
MK Cont		9-4-02
<i>[Signature]</i> Your Signature	Danell Erickson	[Redacted]

Print Your Business Name	Print Your Business Address	Date
VALCO Inc	[Redacted]	9-4-02
<i>[Signature]</i> Your Signature	Eldon Ragan	[Redacted]

Print Your Business Name	Print Your Business Address	Date
CRAFTIQUE	[Redacted]	9/4/02
<i>[Signature]</i> Your Signature	Jim McHargy	[Redacted]

Print Your Business Name	Print Your Business Address	Date
HOME BY HARDING	[Redacted]	9-4-02
<i>[Signature]</i> Your Signature	JOHN HARDING	[Redacted]

Print Your Business Name	Print Your Business Address	Date
The Last Straw	[Redacted]	9-4-02
<i>[Signature]</i> Your Signature	W-Roley Greer	[Redacted]

Print Your Business Name	Print Your Business Address	Date
D.M.A. EARTH TING	[Redacted]	9-4-02
<i>[Signature]</i> Your Signature	Fred Arndrey	[Redacted]

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Print Your Business Name	Print Your Business Address	Date
JAROSZ Const.	[REDACTED]	9-4-02
Your Signature	Print Your Name	Phone #
<i>Edward Jarosz</i>	Edward JAROSZ	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Limberis Const.	[REDACTED]	9-4-02
Your Signature	Print Your Name	Phone #2756
<i>Mike Limberis</i>	Mike Limberis	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Hager Const.	[REDACTED]	9-4-02
Your Signature	Print Your Name	Phone #
<i>Troy Hager</i>	Troy Hager	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
A.E. Builders	[REDACTED]	9/4/02
Your Signature	Print Your Name	Phone #
<i>[Signature]</i>		

Print Your Business Name	Print Your Business Address	Date
Mulberry Construction	[REDACTED]	9/4/02
Your Signature	Print Your Name	Phone #
<i>[Signature]</i>	Dwight Mulberry	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
WARREN Insulation	[REDACTED]	9-4-02
Your Signature	Print Your Name	Phone #
<i>[Signature]</i>	D.J. RUDEA	[REDACTED]

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Print Your Business Name	Print Your Business Address	Date
Canon Classic Homes	[REDACTED]	9/4/02
Your Signature	Print Your Name	Phone #
<i>UWay</i>	Chris Voopied	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
ADAMSON Const	[REDACTED]	9/4/02
Your Signature	Print Your Name	Phone #
<i>Robert Adamson</i>	Bob Adamson	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
TLP CONSTRUCTION	[REDACTED]	9/4/02
Your Signature	Print Your Name	Phone #
<i>Bob A Lee</i>	Robert A. Leck	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
SKYLINE Contracting	[REDACTED]	9/4/02
Your Signature	Print Your Name	Phone #
<i>[Signature]</i>	Jim Whitney	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

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Print Your Business Name	Print Your Business Address	Date <i>9-4-02</i>
<i>Snyder Corporation</i>	[REDACTED]	
Your Signature	Print Your Name	Phone #
<i>[Signature]</i>	<i>Douglas Snyder</i>	[REDACTED]

Print Your Business Name	Print Your Business Address	Date <i>9-4-02</i>
<i>Rick's Pump Service</i>	[REDACTED]	
Your Signature	Print Your Name	Phone #
<i>[Signature]</i>	<i>Rick Greenstreet</i>	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

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Print Your Business Name	Print Your Business Address	Date
Big O TIRE	[REDACTED]	9/4/02
Your Signature	Print Your Name	Phone #
Norman Smith	NORMAN Smith	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Goodall Constr.		
Your Signature	Print Your Name	Phone #
Dan Goodall	Dan Goodall	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Pandy Craft C-5 Const		
Your Signature	Print Your Name	Phone #
[Signature]	Pandy Craft	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
DUANE WILCOXSON	[REDACTED]	9-5-02
Your Signature	Print Your Name	Phone #
[Signature]		[REDACTED]

Print Your Business Name	Print Your Business Address	Date
CORNELLA BULLOCKS Gary Cornells	[REDACTED]	9/6/02
Your Signature	Print Your Name	Phone #
[Signature]	Gary Cornells	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
A-1 CONST.		
Your Signature	Print Your Name	Phone #
[Signature]		

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Print Your Business Name	Print Your Business Address	Date
Alternative Choices Inc	[REDACTED]	8/20/06 9-5
Your Signature	Print Your Name	Phone #
L. Campbell	Laune Campbell	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
WildWind	[REDACTED]	9-5
Your Signature	Print Your Name	Phone #
Beth	BETH HARTZ	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
DT Construction Co.	[REDACTED]	9-5-02
Your Signature	Print Your Name	Phone #
Teresa	Teresa	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Prestige Homes	[REDACTED]	9-6-02
Your Signature	Print Your Name	Phone #
Lanny Owerd	LANNY OWERD	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
LLA Marketing	[REDACTED]	9-7-02
Your Signature	Print Your Name	Phone #
Laura L. Anderson	Laura Anderson	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Adamic Excavating	[REDACTED]	9-9-02
Your Signature	Print Your Name	Phone #
Stephen Adamic	Stephen Adamic	[REDACTED]

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Or mail to CCAT, PO Box 964, Canon City, CO 81215-0964

C.C.A.T. Colorado Citizens Against ToxicWaste

We, the undersigned business owners of Fremont County, believe Cotter's proposed change in business will be detrimental to our community. It will be financially devastating to our future economy, as well as harmful to the health and environment of our citizens.

We are opposed to the plan of Cotter Corporation, currently owned by General Atomics, changing its business mission from ore milling to becoming a toxic landfill including receiving material from other contaminated or superfund sites. We ask that our local, state, and federal governmental officials represent our opposition to the importing and processing of radioactive and mixed toxic wastes by the Cotter Corporation.

Print Your Business Name	Print Your Business Address	Date
Homeland Enterprises	[REDACTED]	9/09/2002
Your Signature	Print Your Name	Phone #
[Signature]	Raymond W. Stone	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Leo's Contracting	TR	9-10-02
Your Signature	Print Your Name	Phone #
[Signature]	BILL KORKVA	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Burt 44	[REDACTED]	9-10-
Your Signature	Print Your Name	Phone #
[Signature]	[REDACTED]	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
CORNERSTONE CONST.		
Your Signature	Print Your Name	Phone #
[Signature]		

Print Your Business Name	Print Your Business Address	Date
Knoll Pine Motel	[REDACTED]	
Your Signature	Print Your Name	Phone #
[Signature]	[REDACTED]	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
TRACTOR TRADER	[REDACTED]	9-10-0
Your Signature	Print Your Name	Phone #
[Signature]	BILL KORKVA	[REDACTED]

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Print Your Business Name	Print Your Business Address	Date
OAKWOOD BULKERS	[REDACTED]	9-26-02
Your Signature	Print Your Name	Phone #
[Signature]	LARRY KLEVEN	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Warren Insulation	[REDACTED]	9-27-02
Your Signature	Print Your Name	Phone #
[Signature]	Steve Warren	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
KEG Const	[REDACTED]	10-20-02
Your Signature	Print Your Name	Phone #
[Signature]	Ryan Groling	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
[REDACTED]	[REDACTED]	10-2-02
Your Signature	Print Your Name	Phone #
[Signature]	Gar Whitely	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Custom Log Creations	[REDACTED]	10-2-02
Your Signature	Print Your Name	Phone #
[Signature]	David B. Doty	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

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Print Your Business Name	Print Your Business Address	Date
<i>CHK of Fountain</i>		
Your Signature	Print Your Name	Phone #
<i>Roy M... [Signature]</i>		

Print Your Business Name	Print Your Business Address	Date
<i>Wet Mt Design-Build</i>	[Redacted]	9-17-02
Your Signature	Print Your Name	Phone #
<i>Deborah Crippen</i>	DEBORAH CRIPPEN	[Redacted]

Print Your Business Name	Print Your Business Address	Date
<i>Shelved Service</i>	[Redacted]	
Your Signature	Print Your Name	Phone #
<i>Dave Shelton</i>	DAVE SHELTON	[Redacted]

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

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Print Your Business Name	Print Your Business Address	Date 9-10-2002
ABE Log Homes	[REDACTED]	81223
Your Signature	Print Your Name	Phone #

Print Your Business Name	Print Your Business Address	Date
ELKHORN	[REDACTED]	9/17/02
Your Signature	Print Your Name	Phone #
<i>Linda Simoneaux</i>	LINDA SIMONEAUX	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

Print Your Business Name	Print Your Business Address	Date
Your Signature	Print Your Name	Phone #

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Your Signature	Print Your Name	Phone #

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Colorado Citizens Against ToxicWaste**

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Print Your Business Name	Print Your Business Address	Date
Owl Cigar Store	[REDACTED]	9/4/02
Your Signature	Print Your Name	Phone #
Pete Santilli	Pete Santilli	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
ALL MASONRY LLC	[REDACTED]	09/04/02
Your Signature	Print Your Name	Phone #
Allen Knisley	Allen Knisley	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
FREMONT MASONRY	[REDACTED]	9-4-02
Your Signature	Print Your Name	Phone #
Dan R. Smith	Dan R. Smith	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
ARON P+H	[REDACTED]	
Your Signature	Print Your Name	Phone #
Anton Aron	ANTON-ARON	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
John Keller	[REDACTED]	9-4-02
Your Signature	Print Your Name	Phone #
	John Keller	[REDACTED]

Print Your Business Name	Print Your Business Address	Date
JG Custom Printing	[REDACTED]	9-5-02
Your Signature	Print Your Name	Phone #
Horri Proden	Horri Proden	[REDACTED]

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SALES & PROPERTY MANAGEMENT

Roger M. Kissack, Owner/Broker

FAX TRANSMITTAL

To: Bill Keller Date: 10/11/2002

for Allen Ross Pages w/ cover: 2

From: Kate Polby Fax Number: 784-0733

RE: Maywood Waste / Public Comment

Comments:
Please deliver my public
comment letter to Allen Ross
Thank you!
Kate Polby

Kate Colby

October 10, 2002

Mr. Allen Roos, FUSRAP Project Manager
U.S. Army Corps of Engineers
CENAN-PP 26
Federal Plaza, Room 2108
New York City, New York 10278-0090

RE: Public Comment re. Maywood Site Cleanup

Dear Mr. Roos:

As a resident of the Canon City, Colorado area, I strongly object to the proposed shipment of Maywood's toxic waste to Fremont County for offsite disposal at the Cotter Corporation. My objections are as follows:

- 1) What logical justification can possibly exist for shipping toxic waste from one densely populated area to another? Admittedly, Canon City is not as large as Maywood. BUT, we are a community of some 35,000 residents, many who live within 3 miles of Cotter's proposed disposal site! Many who don't live immediately adjacent to Cotter live along the railroad tracks where the waste will be shipped directly past their homes.
- 2) Canon City has already been designated as a Superfund site, requiring continual monitoring and cleanup, because of Cotter's contamination of our soils and water supplies. Why compound our pre-existing contamination woes by targeting us as the "offsite disposal" for Maywood's toxicity? Are you prepared to come here, a few years down the road, to deal a second time, with cleaning up OUR community, and re-shipping the waste elsewhere? Where are the economics of repetitive public contamination?
- 3) There are certainly more remote locations available in the country, where toxic waste would not so directly endanger people's lives, daily habitat, and precious water supplies. Disposal sites should logically be selected for minimizing of human exposure to airborne or waterborne hazards.
- 4) To make Canon City the offsite disposal for Maywood waste will further jeopardize the water supplies of all downstream users, who draw from the Arkansas River and from private wells. Immediate downstream water users include Florence (a community of 5,000 located 8 miles east of Canon City) and Pueblo (a town of some 300,000 located 35 miles east of Canon).
- 5) We live here! This is our home! We don't want to be a toxic waste dump! Help protect our children, our water, our soils, our health, and our future!

Sincerely,

Kate Colby
Kate Colby



Kate Colby

October 10, 2002

Mr. Allen Roos, FUSRAP Project Manager
U.S. Army Corps of Engineers
CENAN-PP 26
Federal Plaza, Room 2108
New York City, New York 10278-0090

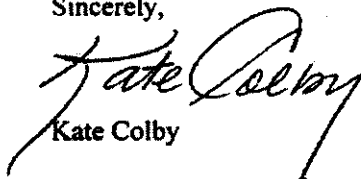
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Sincerely,


Kate Colby



Kate Colby

October 18, 2002

Mr. Allen Roos, FUSRAP Project Manager
U.S. Army Corps of Engineers
CENAN-PP 26
Federal Plaza, Room 2108
New York City, New York 10278-0090

RE: Public Comment re. Maywood Site Cleanup

Dear Mr. Roos:

As a follow-up to my letter of October 10, I wanted to share the enclosed news clippings from our local *Canon City Daily Record* as public comment about the proposed shipment of Maywood and other toxic wastes to Fremont County. I hope you will take the time to read them, as they give an excellent and insightful recap of the issues at hand.

I recently noted that the Army Corps of Engineers now focuses much of its efforts on river restoration. We are very concerned about our primary Fremont County asset, the lovely Arkansas River, which provides water for this area as well as for other cities located immediately downstream. The Arkansas River is also one of our primary tourist attractions, drawing river rafters here from around the world each summer.

Because of very poor water testing and health department monitoring of this area, after its designation as a Superfund site, no-one really knows how much damage is seeping into our water table and the Arkansas River. This should certainly be a major part of any environmental impact assessment. Cotter sits just a few miles uphill from the Arkansas. Its containment ponds sit atop land laced with old mines. Water and seepage can easily penetrate from these old mines and tunnel shafts into our water table.

Cotter was a mistakenly placed too close to a population center from the beginning. With area growth, it now is surrounded by housing. It makes no sense at all to shift the toxic waste from one population center to another. That does nothing to solve the need to decontaminate AWAY from human habitat and riparian lifeblood. Cotter (under the umbrella of General Atomics) bid on this waste processing contract for its own economic interests, with little concern for the health and welfare of the community it inhabits.

Thank you for your consideration of these vital issues.

Sincerely,


Kate Colby

P.S. As a Florence resident, 8 miles east of Canon City, my water supply flows downstream from Cotter, and the Maywood wastes would ride the rails directly past my home!



Health department has not done its job

No one who has reviewed the regulations or studied the regulatory process would dare suggest that the job of overseeing a uranium mill is easy. But the Colorado Department of Public Health and Environment, which agreed to take on the task in 1968, has done such a poor job of regulating the Cotter Corporation south of Cañon City that the residents of the area have been left virtually unprotected.

The state made a big deal of the negotiated settlement with Cotter in 1983 at the conclusion of its environmental pollution lawsuit, but the fact is that the settlement permitted the wolf to guard the chicken house. Wells were to be tested regularly. By Cotter. The health department failed to verify these test results on any consistent basis. Air samples were to be taken regularly. By Cotter. Again, no independent verification of the results. Workers exposure levels were to be monitored. By Cotter. The health department has done precious little over decades to assure that this practice happens each and every time a worker punches the clock.

The health department conducted regular inspections of Cotter, but in all but a few rare cases it gave the company advance notice. Even after the Colorado Bureau of Investigation identified that Cotter was cleaning up just ahead of the inspectors, the regulators — some of whom still oversee the operation — continued to do the same work in the same way.

In 1979, when the mill wanted permission to build a new facility on the same site, the Nuclear Regulatory Commission — an advocate for the nuclear industry if there ever was one — said it would probably not authorize a new mill there because of its proximity to the town. The Environmental Protection Agency also advised against and chastised the health department for allowing Cotter to build before deciding on whether to relicense the plant. The EPA said that the decision to permit construction put tremendous pressure on the health department to relicense, even if there were reservations.

Year after year, the health department would cite the company for violations of its operating license but did nothing but slap its hands — until this year when now acting health department director Doug Benevento suspended importation of all materials onto the Cotter mill.

To say that the relationship between the health department and Cotter has been lax would be an understatement. Some might even say it's incestuous, with people working for the state one year and Cotter the next.

Daily Record Editorial

The state agreed in 1968 that it would take on the lead role in overseeing activities of businesses that work with radioactive materials. It has an obligation to the people of the state and, for that matter, the nation, to protect the health and welfare of citizens. It failed prior to the Superfund designation of the 1980s and it has continued to fail to perform adequately up to and including the current year.

When the mill portrays its serious and, in some cases, repeated health and safety violations as "paperwork" problems, when it fails to monitor the exposure levels of a pregnant woman, when it permits a UPS driver unrestricted access to the facility and then says its been going on forever, it is clear that the company doesn't take the regulator seriously. The health department's oversight has been ineffective and dangerously close to being a joke.

Benevento has taken a tougher stance in recent weeks. He's left Cotter executives scratching their heads wondering what is up and how they're going to get around the rules this time. The decision last week to order independent testing for one of the most hazardous materials known to man — plutonium — would seem to indicate that the agency is finally paying attention.

If this new outlook on regulation is to stick, the agency will need support from the governor and legislature. Pressure from the industry will be brought to bear.

Industries such as Cotter's are regulated because the work they do has potential and real impacts on workers and on people who live nearby. Regulation isn't meant to hamstring business, but it is meant to assure that people are safe in the jobs and in their homes.

It's time that the health department took that mission to heart.

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Don't let Cotter take nuclear castoffs

The Colorado Department of Public Health and Environment should not permit the Cotter Corporation to turn the mill site into a dump for radioactive and contaminated materials found elsewhere in Colorado or the nation.

The decision issued Tuesday leaves the door open for further consideration, and Cotter officials have indicated they will submit additional information to satisfy state health department requirements. Officials said the environmental assessment, done as required by House Bill 1408, was not adequate. In fact, the ruling said,

Daily Record Editorial

"The analyses of public and occupational health risk and safety, both radiological and non-radiological, are acceptable."

Still on the table are safety issues surrounding the transport of hazardous materials, and an analysis of the non-economic social impacts such as the "perceived stigma associated with radioactive waste."

The Fremont Economic Development Corporation today passed a resolution in support of the Cotter Corp. continuing to operate in its current location. The FEDC said it "strongly encourages open, honest and civil discussion by the citizens of our community to resolve issues on a factual and scientific basis."

It is time for that unemotional discussion to take place.

Cotter would like to receive and dispose of 470,000 tons of contaminated soil from Maywood, N.J. It already has received contaminated materials from other Superfund sites. It has, for example, 3,120 drums of calcium fluoride on the site that it received from Honeywell. In the 17 months since the shipments concluded, the company still hasn't figured out how to process the material and, according to a letter from the Environmental Protection Agency dated Sept. 13, is not even able to open the drums.

The public record —lawsuits filed against the company (and won), documentation at the state health department, the EPA, the Nuclear Regulatory Commission and elsewhere —are clear evidence that the company has been unable to control what it already has at the site. It should not be permitted to bring in more.

Of great concern to Cañon City specifically and Colorado generally is whether the site is suitable for disposal of radioactive and hazardous materials. Cotter's location, just south of a populated area and up hill from the city and the Arkansas River, also sits atop a maze of abandoned coal mines through which spilled or leaked contaminants could flow who knows where.

The location probably was not suitable 40 years ago and it certainly isn't today.

It was never envisioned at the time that Cañon City recruited the mill's founders or in recent years that the site would become home to the castoffs of the nuclear age. Material not suitable for storage or disposal in populated areas of New Jersey, New York, Oklahoma, Illinois and elsewhere is not suitable for disposal in Cañon City's backyard.

The health department must do all that it can to prevent the conversion of the mill site into a waste dump. Barring that, the governor and Legislature must step in to prevent this travesty from occurring.

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Opinions & Ideas

Cotter's time has come and gone

It's time to consider decommissioning the Cotter uranium mill south of Cañon City and moving all contaminated materials to a location that won't endanger a population center. The Colorado Department of Public Health and Environment should begin that process with consideration of what would be required to refuse its relicensing.

There will be many in Cañon City who consider such an action to be a drastic step. But the situation speaks for itself for anyone really interested in the truth of the matter. Reasons for considering this option are numerous:

— The mill was created to process uranium, not take on hazardous materials from elsewhere in the country. No one in Cañon City wants a hazardous dump site up the hill from the city. But incremental changes in federal regulations already permit the plant to take on more material than those who recruited the industry 40 years ago intended.

— Mill operators have denied that alternative feed material — material other than uranium ore — is in their business plan. But the chairman of the board of the Cotter Corporation has said otherwise in speeches and trade publications. It's little wonder that many in the community distrust the operators of the mill. If mill operators want the community to believe their denials, then commit to them in a writ-

ten contract with the community. Agree to pay the community every dime they might earn from disposing of waste from elsewhere in the country.

— The mill has a horrendous health-and-safety violation record going back to the very first year of operation and continuing to this year, when it had a record number of violations in one year. These are not mere paperwork deficiencies. They are real, not imagined, license violations that affect the health and safety of workers and the community.

— The Cotter facility was responsible for the Lincoln Park contamination. This is contamination that still exists. People still can't use their wells. People still can't grow food for consumption without risk. Face it: The blight on Lincoln Park is permanent, at least in the lifetimes of those there now.

— Cotter's location was never right. We can apologize for it by saying science hadn't progressed far enough in the late 1950s for anyone to know, but the fact is that even then it was known that mills would produce dangerous residue and that water flows downhill. What more information was needed? Now, Cañon City has grown up to Cotter's doorstep; it's time to take drastic action to protect that population from the known contaminants of the industry.

— The mill sits atop a maze of coal mines which make sub-

mill years ago and moved them to a dry reservoir between Grand Junction and Delta. This would be a costly maneuver, but it could be done. Indeed, the people who live near the Maywood, N.J., refuse impoundments — materials characterized as much less harmful than what Cotter admits to having in its ponds — found a way to get rid of the material. This step would require help from U.S. representatives and senators, but it could be done.

— As long as the site is there, and as long as it is designated to take certain radioactive materials, someone somewhere — be it General Atomics or another Superfund site — will try to send material there that the community would rather not have. Whether the issue is high level or low level wastes, the nuclear industry has produced much more than anyone knows what to do with. Cañon City residents will be much safer if the Cotter impoundments are not there.

— A serious question has already been raised by federal agencies about whether the Department of Energy will accept the Cotter site when it is decommissioned. There may already be materials in the ponds that would force the state to take over the site for the rest of time. For the long-term good of state taxpayers, the problem must be solved once and for all.

— While the company has out the tailings of its uranium

provided well-paying jobs in Cañon City, it's unclear how many high-paying jobs have been lost when companies refused to locate their operations and employees in a town with a Superfund site. Cañon City has much to offer and the question has to be asked and answered: Is there something that has held back the community from taking its place among similar Colorado towns that have achieved success in economic development?

— A shutdown of the mill might cause an economic blip, but since mining and milling account for only 2 percent of the local economy and because a cleanup would require high-paying jobs for five to 10 years, the community has a good chance of being better off in both the short and long term.

— A shutdown would establish that the people of Cañon City have value greater than the value of an industry that has polluted the environment. Shutting down the mill places the health and well being of the residents ahead of dollars and cents. The return on that investment — establishing the value of the people who live in Cañon City — will pay more dividends than Cotter ever has or could.

The community should step forward to examine the mill's relicensing. It should begin work now with legislators and U.S. representatives to take the steps necessary to remove the threat from Cañon City.

surface flow of water and contaminants difficult to predict. Soil scientists believe the deepest of the mines probably didn't contribute to the contamination of Lincoln Park, but what about those mines closer to the surface? While maps of the mines exist, tunnels and shafts created in the waning years of the coal boom of Fremont County were not accurately portrayed on maps. It isn't certain where they run, thus creating an uncertain risk for the people living below the mill. The Arkansas River, in many ways more important to Cañon City than any other feature in the region, must be protected.

— No one really knows what's in the tailings ponds. There are some who claim to know, but testimony in lawsuits from Cotter executives and those pressing claims against the company makes it clear that what is in the ponds is somewhat of a mystery. For sure, the health department doesn't know and no one will acknowledge whether tests have been done.

— In the event of a 100-year flood — or, God forbid, an event like the Big Thompson flood — the detention ponds would end up in Cañon City and Pueblo.

— There's precedent in Colorado for moving the material out of where it could be harmful. Grand Junction cleaned out the tailings of its uranium

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— There's precedent in Colorado for moving the material out of where it could be harmful. Grand Junction cleaned out the tailings of its uranium

Cotter a sloppily run operation

To the editor:

Hallelujah, the Daily Record finally printed the truth about our toxic waste dump. Remarkably, some still seem to love the dump.

The facts are that Cotter benefits less than 1/2 of 1 percent of the population. To the rest of us, it seems to be of dubious value. Economically, it is a negative, and will have an increasingly negative impact, especially as water needs increase to keep all of the "material" dampened down. What a waste of water.

Some people seem to think that this is all too "technical" for the people to understand. Actually, the opponents of Cotter have pretty much had it right all of these years.

Let's face it: If Cotter Corporation had been a person, who would speak to him? This is a sloppily run operation that views the locals pretty much as "lab rats," with very little regulation or oversight. It seems that the subject was "too technical" for the officials that made this bad marriage generations ago.

And by the way, spending your life walking around on a toxic-waste dump doesn't qualify anyone as an expert on anything,

except maybe, human credulity.

Also, dumping this junk is not mining. The simple question that never gets answered is: "If this stuff is so safe, how come it's here instead of there?"

Here is a happy ending all around: Quit hauling the junk in and start a bio-remediation site and laboratory. Bio-remediation or "phytoremediation" is a service that is in demand all over the world — and this is a perfect place to develop and document the process.

It would require little capital to set up such a unit here. An example: It turns out that Brassica juncea, commonly known as "mustard," is the champion at sucking lead, chromium, cadmium, zinc and copper levels. In fact, Rutgers University helped establish a New Jersey company called Phytotech to carry out such research.

The local community college could offer a degree in Phytotech. Failing that, maybe the whole operation should be a cutting-edge Reality TV show.

Allan Armstrong,
Cañon City

10/15/02

Cotter decision motivated by profit

To the editor:

Hooray for you and your staff for your fine investigative reporting on the Cotter Corporation.

Without the truth, how can a community ever make the appropriate tough decisions? How can it enlist or even know where to go for the help and protection it needs? How can it insulate its citizens from hazards spawned in the darkness of ignorance and corporate greed?

Cotter's secretive decision to import toxic waste to Cañon City appears to have been motivated solely by profit margins. Cotter does not have a history of being a good neighbor. After contaminating Lincoln Park soils and water supplies, turning it into a Superfund site, the company continues to solicit the importation of more hazardous stuff. Legal maneuvering to downgrade waste toxicity for acceptance does not disguise the fact that someone is paying dearly, and for good reason, to rid other Superfund sites of the nightmare.

One justification used is that Cotter needs the profits from processing such materials to finance its transformation into a less hazardous zirconium production facility. Another

justification is that Cotter needs to somehow remain a viable and profitable Cañon City employer.

But at what price? Are we, as a community, willing to pay it? Are we that desperate for jobs? Do we want to risk further soil and water contamination? Do we want to risk airborne pollutants that endanger the health of our children? Do we want to risk further tainting our own water supplies, as well as those of neighboring downstream users?

Certainly there is enough scientific intelligence at General Atomics to puzzle out some kind of useful and non-hazardous productive capacity for Cotter. Some kind of retooling, research or manufacturing that could prove an asset to Fremont County without putting our environment or our lives at risk.

Cañon City is a populous area. It is not remote or isolated enough to ever be credibly appropriate as a toxic dump site. Let General Atomics impose such a quagmire next to their own La Jolla, Calif., homes and headquarters and watch the fireworks.

Cañon Daily Record
10/15/2002
Kate Colby,
Florence

September 11, 2002
what they say. This needs to be allowed to come in

U.S. Army Corps of Engineers, CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

ATTENTION: ALLEN ROSS, FUSRAP PROJECT MANAGER

I am writing to make my opions in support of Cotter Corporation in Canon City
Here is my equation of CCAT= Nazi Hitler Party.

1. Employee's safety and workplace:

- A.. From a reliable source (Laid off worker from Cotter): Cotter had very strict working rules and regulations, more than was probably necessary compared to the Hospital. Testing was done regularly.
- B. The Rules and Regulations are there to protect the workers and the community.

In summary CCAT says they know about the workers safety, but in reality they don't know anything, they are just trying to cause problems and they did just that by being a large part of why Cotter had to layoff workers and they say they're not to blame. (People who support Cotter know who's to blame.)

2. Water Issues:

- A. Cotter uses less water than allocated and they spray the roads etc to keep workers and the community safe
- B. Cotter using Wolf Park Coal mine shafts to augment water needs for the tailing ponds. a reliable source from someone laid off because of CCAT that this is definetly not true.

In summary, Cotter probably uses less water than some of the residences of this community. Wolf Park Mine water isn't suitable for use. CCAT could be sued for false information to the public-(Not a bad idea)

3. Violations:

- A. It is true they have gotten violations but so does the hospital etc., but they are willing to continuiely work on solving the violations. They should not be penalized for something they are continuely doing.
- B. The Hospital probably gets the same or more violations but CCAT doesn't get on them (This is a Political Issue), But the Hospitals have not made them mad at them YET, but wait until CCAT get angry at them or anyone else.

4. Maywood NJ Waste:

- A. This soil is as harmless as any soil, Cotter wouldn't bring in any waste that would be dangerous to worker's safety and to the community.
- B. X-rays have more REM than the Maywood NJ waste coming in.
So hospitals with radiation is more dangerous to people, why aren't you doing something about that.

In summary, this waste isn't as harmful than CCAT put on and Cotter needs to be able to do business without CCAT blowing everything up to a scared tactic because they think they are Hitler and everyone should do exactly

what they say. This needs to be allowed to come in.

Known fact about CCAT:

1. They are known to take sentences, words, out of Context to get people scared and to get the public attention. But in fact they are lying to the public.
2. I think of them as the Nazi Hitler: They order people to do what they want or if you object, you're in trouble and they will get you laid off and you lose your job.
3. Mission is to Educate and Inform the public:
 - A. Mission is to destroy COTTER , Busines, or people who disagree with them. (Remember the Nazi party)
4. If CCAT wins this, they will feel indestructable and the community will have to do everything they say and do, or face the destruction of CCAT.

In summary Cotter know what they can bring in to the mill and will not bring in any waste that would be harmful to the workers and to the community. Cotter hasn't in any way given false information to the public and CCAT has blown up the issues where there is a big split in this town as they never heard what Cotter has said..

My husband and I support Cotter as Cotter has never lied to its employees about the issues. They know that they can improve on issues(trying very hard), and this dirt needs to come in. CCAT needs to stay out of the business as they know nothing of it, except that they can cause trouble.

My solution to False information given by CCAT is Jail time .

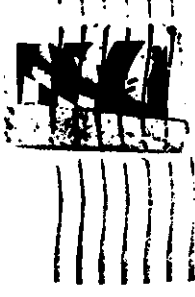
I cannot give my name as CCAT will hunt us down and will destroy our family.

Sincrcely,

Concerned Citizen of Fremont County.

CITIZEN
CANDU CITY, CO 81212

ATTN: ALLEN ROOS, FUSRAP PROJECT MANAGER
CEN AN - PP - E Room 7108



U.S. ARMY CORPS OF ENGINEER,
CENAN
216 FEDERAL PLAZA, ROOM 2108
NEW YORK, NY 10278-0080

Allen Roos PPMD 2108

10278+0084



Public Comment Form on the

PROPOSED PLAN FOR SOIL AND BUILDINGS AT THE FUSRAP MAYWOOD SUPERFUND SITE

PLEASE RETURN THIS FORM BY MAIL TO:

Allen Roos
US Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Date: _____
Name (optional): _____
Affiliation (if any): _____
Address (optional): _____
Telephone (optional): _____

Enter comments in the space below. Use the other side or additional sheets as needed. If comments are on specific sections or pages in the document, please note that information in the blank below. Please be specific so that comments can be clearly understood. Thanks.
Section or page #: _____

I am a resident of Canon City, Co.
I am 100% against Cotter Corp. bringing any + all toxic wastes into our community threatening the grounds, enviroment and the well being of all of us enjoying our lives here. The threat is a burden to each and everyone of us and our children should have and deserve the opportunity to grow and prosper creating their own families knowing that their enviroment is safe and that their health is not at risk while living in this beautiful land.
Thank you,
A concerned resident

Comment forms can be submitted by mail in the pre-addressed envelope provided. Mail returns must be postmarked no later than October 12, 2002.



Public Comment Form on the

PROPOSED PLAN FOR SOIL AND BUILDINGS AT THE FUSRAP MAYWOOD SUPERFUND SITE

PLEASE RETURN THIS FORM BY MAIL TO:

Allen Roos
US Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Date: Sept. 10, 2002
Name (optional): JOHN COOPER
Affiliation (if any): C.C.A.T. MEMBER
Address (optional): [REDACTED]
Telephone (optional): _____

Enter comments in the space below. Use the other side or additional sheets as needed. If comments are on specific sections or pages in the document, please note that information in the blank below. Please be specific so that comments can be clearly understood. Thanks.
Section or page #: _____

Mr. Roos

Are you aware of just how close these contaminated soils are going to be placed in relation to our community? Cotter is less than 1 mile, from residential housing within our city limits. The railroad tracks that would carry these toxic soils within 30 feet of some of these homes. These tracks are not designed to carry 110 ton train carloads. I ask you, would you want a "toxic waste" dump in your

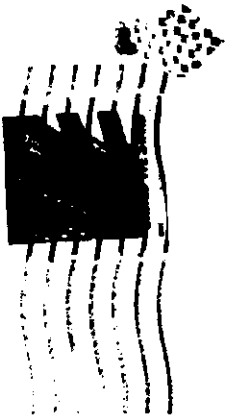
Comment forms can be submitted by mail in the pre-addressed envelope provided. Mail returns must be postmarked no later than October 12, 2002.

backyard. Would you, your family, your neighbors feel safe knowing what could be contaminating your air (wind blown) your soil (leaching from rain)?
be honest with yourself. continued 3

The possible health hazard^{are} our biggest concern. There are other concerns; economic and how others will perceive our community. We do not want to be labelled a toxic waste dump. Our primary draw as a community is tourism. We are a small beautiful area nestled just below the most gorgeous mountain range in the Rocky Mountains (the Sangre De Cristo Mountain Range). People all over the country want to live here! That will all disappear if Cotter persists and you, Mr. Roos allow this to happen.

Why isn't the state of New Jersey taking responsibility ^{for} corporations within their own state to find a place within their own state or a place more isolated. Instead Cotter and you are taking advantage of our small community because Cotter is the "low bidder".

Sincerely
a concerned citizen & father
John Cooper



Allen Roos, Project Manager
U.S. Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

10278+0090 03



US Army Corps
of Engineers
New York District

Public Comment Form on the

PROPOSED PLAN FOR SOIL AND BUILDINGS AT THE FUSRAP MAYWOOD SUPERFUND SITE

PLEASE RETURN THIS FORM BY MAIL TO:

Allen Roos
US Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Date:

9/6/02

Name (optional):

John Corso

Affiliation (if any):

Address (optional):

Telephone (optional):

Enter comments in the space below. Use the other side or additional sheets as needed. If comments are on specific sections or pages in the document, please note that information in the blank below. Please be specific so that comments can be clearly understood. Thanks.
Section or page #: _____

As a resident of Maywood, I would like to see all the contaminated soil excavated and removed.

Comment forms can be submitted by mail in the pre-addressed envelope provided. Mail returns must be postmarked no later than September 12, 2002.

Oct 8, 2002

Dear Mr Allen Roos,

As a resident of Fremont County and
a neighbor of the Cotter Mill - I BEG
you to do EVERYTHING YOU CAN
to →

Not let Cotter Mill Poison US!

IF Cotter were properly prepared to
take the Maywood waste that would be
one thing, but they are Not. There are
many reasons why. The 3 biggest reasons
to not take the waste + to SHUT Cotter
down are:

1.) Cotter's impoundments were built
for milling waste, Not Chemical or Mixed
waste - that means
More Sickness + Deaths for US !!!

2.) Just 1 of the many violations
Cotter has not addressed is the
Inadequate Funds for final Cleanup
Our country couldnot afford to do it
who will?

3.) Cotter will make tons of \$ by taking Maywood's waste.

Fremont county residents do not think it's worth any amount of money for some of us to get Sick + Die of cancer or autoimmune diseases.

Would you want Maywood's

Waste in Your Backyard?

!

Please Think on this,
Sincerely,

Deborah Crippen





Public Comment Form on the

PROPOSED PLAN FOR SOIL AND BUILDINGS AT THE FUSRAP MAYWOOD SUPERFUND SITE

PLEASE RETURN THIS FORM BY MAIL TO:

Allen Roos
US Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Date: 10-10-02
Name (optional): Sue Dame
Affiliation (if any): _____
Address (optional): _____
Telephone (optional): _____

Enter comments in the space below. Use the other side or additional sheets as needed. If comments are on specific sections or pages in the document, please note that information in the blank below. Please be specific so that comments can be clearly understood. Thanks.

Section or page #: _____

I am a resident of Canon City, CO. I am very opposed to better bringing in toxic waste. My family + I moved here from the east coast about 3 yrs ago. There are several reasons why we moved here, but one of them was to be able to take advantage of Colorado's clean air + living. Now I hear that toxic waste will be "dumped in my backyard." it is very disturbing. I have two girls 10 + 12, and I would like them to grow up here and raise their families here, without worries from what this toxic waste could be doing to them + future generations! We have enough problems without better adding to them. It is my understanding that there are places to put this without risk to anyone, so my question is why on earth would better bring this in to our community and affect so many of their families + friends? And other Canon City residents for that matter. Please don't allow this to happen, to many lives are at risk! Thank Sue Dame

Comment forms can be submitted by mail in the pre-addressed envelope provided. Mail returns must be postmarked no later than October 12, 2002.

COOPER, ROSE & ENGLISH, LLP
COUNSELLORS AT LAW

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BRIAN D. DONNELLY

ONE OR MORE ATTORNEYS ARE ALSO
ADMITTED IN NY OR DC
*CERTIFIED BY THE SUPREME COURT
OF NEW JERSEY AS A CIVIL
TRIAL ATTORNEY

September 9, 2002

BY CERTIFIED MAIL - RRR

Mr. Allen Roos
U.S. Army Corps of Engineers
New York District
26 Federal Plaza, Room 2108
New York, NY 10278

Re: Comments on the Proposed Plan for Soils and Buildings
at FUSRAP Maywood Superfund Site

Dear Mr. Roos:

This firm represents Kin Properties, Inc. (Kin), the representative of Jeco Corporation, owner of the property at 149-151 Maywood Avenue, Maywood, NJ (Sears). On behalf of Kin, we are submitting the below listed comments regarding the above referenced Proposed Plan (PP).

1. Kin agrees with the selection of Alternate 4, Excavation, Treatment and Offsite Disposal as being the appropriate remedy to meet CERCLA requirements in a practical and implementable manner. We do not believe that alternative 1 or 2 adequately meet the requirements and allow for reasonable future development to occur.
2. The PP indicates that for Alternate 4, materials treated to a level of less than 15 pCi/g would be considered for backfill at the MISS. Its use as backfill at the Sears site or other commercial properties is not specifically mentioned and we assume, therefore, that treated material would not be used for backfill at Kin's property. This issue is raised because, in Appendix C to the August 2002 Feasibility Study at page C-5, EPA Region 2 discusses use of "treated" soils under 15 pCi/g as backfill with 30 cm of clean cover "possibly" at the Sears site. However, the initial excavation is to be done

to reach a **minimum** of 15 pCi/g with an "as low as reasonably achievable" (ALARA) goal of 5 pCi/g. The potential then exists for an excavation to actually achieve the ALARA, but be back filled with treated materials back up to 15 pCi/g. This would defeat the purpose of cleaning up to as close to the unrestricted level as reasonably achievable. Backfill should be at a level no higher than the actual concentration reached at the bottom of the excavation, and preferably with virgin soils. This avoids administrative difficulties in tracking concentrations of backfill allowable for each separate excavated area, and achieves a maximum thickness of clean barrier soils at a small incremental cost increase. Therefore, any material used for backfill on the Sears site should meet an unrestricted use standard as to exposure. This will minimize the concerns and requirements for governmental approvals relative to activities that may occur within the backfill. Additionally, it should be clearly stated in the PP that all disturbed areas would be restored to their previously existing conditions, e.g. parking areas repaved.

3. There is no definition as to what is meant by residential use. There are situations where future uses could be considered as both commercial and residential. We assume that the distinction comes from the exposure assumptions that have been used to calculate a 15 mrem/yr exposure level. However, there is no statement as to the assumptions that have been used. We believe that the record should contain a clear statement of the criteria. This will provide guidance as to exactly what types of uses will be permitted in the future, and how engineering controls may be applied, if desired by the property owners, to allow for residential types of use. As an example, an assisted living facility may be considered as both residential and commercial, and may be acceptable since no children will be present, and soil exposures may be limited.
4. An important aspect of the proposed alternative relies upon the use of institutional controls. The PP states on page 12 that "USACE will develop an Institutional Control Implementation Plan which will establish a tiered approach to implementing institutional controls as determined necessary by USACE. Institutional controls would be tailored to meet the needs of each individual property owner in order to restrict land use to commercial usage". The details of this plan are critical to the future use and development of the affected properties. A mechanism must be put in place for the long term that will provide a realistic way for property owners to be able to make minor changes without prior environmental approvals, and major changes without inordinate delays. It appears to be anticipated that the local municipality would be required to notify EPA and ACE of any changes. It is not clear if NJDEP would also become involved. If a change to a building that was over inaccessible soils was involved, arrangements may then be required to be made under the PP to have ACE excavate those soils, if funds are then available. Without a previously

Mr. Allen Roos
September 9, 2002
Page 3

determined mechanism, the net affect may be that the properties will be limited to current uses and configurations.

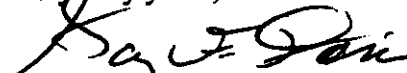
Kin suggests that future institutional controls should be modeled after NJDEP's current implementation. Affected areas, as they exist after the remediation, must be clearly delineated on maps to show, within each property, where the restricted areas are located both horizontally and vertically. One agency, such as NJDEP, should be designated to advise the municipality as to the acceptability of proposed work or changes to land use within an affected area. If buildings over inaccessible soils are to be modified, or disturbed, the landowner should have the option of maintaining the soils in place in a manner similar to what now exists, as long as exposure is limited to the existing levels, or to request excavation by ACE.

The PP should also clearly state that the use of engineering controls would not be a requirement. The maintenance of caps, fencing, soil barriers and other types of engineering controls, which are all subsets of institutional controls, are burdensome to the property owners and further hinder site improvements and changes. While the discussion in the PP does not seem to anticipate the use of engineering controls, this should be specifically stated for future guidance.

5. The cost estimate to implement Alternative 4 includes future excavation and disposal of inaccessible soils. It is not stated as to whether funding will actually be requested by ACE to be set aside for this purpose to meet the future requirements. If funds are not requested and isolated for this purpose ahead of time, the practical aspects are such that the timing would most likely make it impractical to implement a development project that might require such excavation and off-site disposal. If funds are not set aside in advance, there is an even greater need for the landowner to have the option to move forward with a project that might involve demolition, while leaving the soils in place as discussed above.

Thank you for this opportunity to comment on the Proposed Plan. Please contact me if you require and clarifications.

Very truly yours,



Gary F. Danis

GFD/lbm

cc: Howard Heller, Esq., Kin Properties
302424_1

COOPER, ROSE & ENGLISH, LLP

COUNSELLORS AT LAW

480 MORRIS AVENUE

SUMMIT, NEW JERSEY 07901-1527



Mr. Allen Roos
U.S. Army Corps of Engineers
New York District
26 Federal Plaza, Room 2108
New York, NY 10278

2119

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RICHARD JON CONTANT*
BRUCE L. ATKINS*♦
ANDREW T. FEDE

GERALDINE E. BEERS*
SUZANNE J. RUDERMAN*
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CHRISTINA A. STONEBURNER♦

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(845) 920-0200

LAURA G. WEISS, ESQ.
OF COUNSEL

* ALSO MEMBER OF NY BAR
♦ ALSO MEMBER OF FLA BAR
♦ ALSO MEMBER OF PA BAR

October 3, 2002

VIA CERTIFIED AND REGULAR MAIL

Mr. Allen Roos
U.S. Army Corps of Engineers
New York District
26 Federal Plaza, Room 2108
New York, NY 10278

Re: Proposed Plan for the Portion of the Soils/Buildings Operable Unit
Containing Radiologically Contaminated Soils and Buildings at 24
Commercial and Government Properties (Phase II) at the Fusrap Maywood
Superfund Site, Maywood, New Jersey, August 2002.

Dear Mr. Roos:

Please be advised that I am the attorney for the Borough of Maywood ("Borough"). I am submitting this letter on behalf of, and at the direction of, the Mayor and Council, the Borough's municipal governing body. This letter contains the input that the Mayor and Council is submitting for your consideration during the public comment period referred to on page 34 of the above-referenced plan, as extend to October 12, 2002.

First, the Mayor and Council objects to the plan to the extent that it endorses alternative 4, "excavation, treatment, and disposal" over alternative 3, "excavation and disposal." According to table 6, the cost of alternative 3 is only 4% more than the cost of alternative 4. This minor cost difference is far outweighed by the doubts that exist as to the safety and effectiveness of any soil treatment technology, and the delay that may be

Mr. Allen Roos
U.S. Army Corps of Engineers
October 3, 2002
Page 2

associated with the need to evaluate the effectiveness of any such technology.

The need for the remediation of the affected properties has been known for many years, but the process is far from complete. Throughout this process, the Mayor and Council has consistently sought the expeditious removal of all contaminated soil, and has consistently objected to the use of any on-site soil treatment. I attach to this letter copies of Resolution #137-89, which was adopted by the Mayor and Council on November 28, 1989, Resolution #66-93, adopted on April 27, 1993, and Resolution #143 -94, adopted on December 27, 1994, as examples. In addition, I attach copies of my August 10, 1994, June 9, 1994, June 6, 1994, and April 13, 1994 letters that express the Mayor and Council's position then and now on this issue.

Second, as indicated by the documents attached, the Mayor and Council has since 1994 opposed any clean up standard other than 5 pCi/g of radium -226 and thorium -232 for all surface soils, even those that are currently under buildings or paving. The Mayor and Council has consistently demanded compliance with the 5 pCi/g standard because it is the only health-based standard. The Mayor and Council contends that 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.

In addition, the use of the 15 pCi/g standard will hamper the Borough's attempt to encourage and bring about a redevelopment of the properties in the affected area. The Mayor and Council has for some time reasonably believed that the Route 17 properties in the Borough are, for the most part, underutilized and in need of redevelopment under the applicable state laws, when compared to the rest of the Route 17 corridor, which contains some of the most valuable land in the area due to its location on Route 17. In recent years, in fact, certain Route 17 properties in the Borough have been redeveloped by private ownership. Nevertheless, the Mayor and Council believes that for other properties to be redeveloped to their full potential for properties on Route 17, the achievement of the 5 pCi/g clean-up standard is a must. Put another way, if the "clean-up" is based on any other standard, this will hamper the Borough's efforts to encourage the redevelopment of its Route 17 properties.

The redevelopment alternatives that the Mayor and Council wishes to encourage include those that one finds along Route 17 both north and south of the affected properties. These uses include retail, office, residential, and recreational uses. The Mayor and Council has, moreover, found that a need for recreational uses in the Borough is crucial, because Maywood lacks park space. If the 15 pCi/g standard is employed it will, in effect, limit the Borough's options for redevelopment; it will preclude desirable uses, including recreational uses, which will benefit the Borough and its residents, as well as residents in the surrounding communities, who would benefit from improvements along Maywood's Route 17 corridor.

Mr. Allen Roos
U.S. Army Corps of Engineers
October 3, 2002
Page 3

The Mayor and Council is also aware of the fact that the 5 pCi/g standard was used by the Army Corps to clean up industrial-commercial property in Lodi and elsewhere. Maywood asks that the same consideration be provided to its "industrial-commercial" properties for several reasons. First, these properties are in the vicinity of current residential uses. Second, the Borough hopes that new recreational uses will be possible in the future redevelopment of the affected properties if the health-based 5 pCi/g clean-up standard is employed. Third, the 5 pCi/g standard will allow for the future redevelopment flexibility that is in the public interest. On the other hand, the 15 pCi/g standard will have the effect of "locking in" the current uses, which are not the optimal uses, thus impairing the public health, safety, and welfare. Accordingly, the Mayor and Council urges you to stop advancing the clean-up levels other than the 5 pCi/g standard. The Mayor and Council insists that you reconsider your proposal to use any other clean up standard.

In addition, the Mayor and Council again demands 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 opposes any soil treatment 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 on-site soil treatment is an effective remediation measure that will reduce the level of contamination to the 5 pCi/g standard. Again, the Mayor and Council asks you to immediately revise your position in regard to soil treatment 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:rr
Enclosure
cc: Mayor and Council (w/encl.)

BOROUGH OF MAYWOOD

RESOLUTION NO. 137-89

RESOLUTION ENDORSING NEW JERSEY DEPARTMENT
OF ENVIRONMENTAL PLAN FOR DISPOSAL OF WASTES
FROM THE MAYWOOD INTERIM STORAGE SITE,
PREPARED SEPTEMBER 14, 1989

WHEREAS, the Borough of Maywood has long suffered the presence of radioactive thorium in and about its borders, which presence constitutes a menace to the health, safety and welfare of the current residents of the Borough of Maywood and future generations thereof; and

WHEREAS, the United States Department of Energy, in conjunction with the Environmental Protection Agency of the United States, has been charged with the safe storage and removal of the aforesaid thorium soil; and

WHEREAS, in accordance with law, there has been established a Maywood Interim Storage Site, which site was designated and designed to be an interim measure to safely store the aforesaid radioactive thorium waste, until such time as a permanent site may be found, designated and licensed; and

WHEREAS, the aforesaid Maywood Interim Storage Site has been declared as falling under the jurisdiction of the "Formerly Utilized Sites Remedial Action Program," (FUSRAP); and

WHEREAS, there is common agreement that the aforesaid thorium laden soil does not fall within the purview of New Jersey's Low-Level Radioactive Waste Siting Program, and therefore, compels all parties concerned to consider the permanent siting of this radioactive waste upon sites both within and without the State of New Jersey; and

WHEREAS, both interim and long-term planning proposals suggested by the United States Department of Energy appear to address only sites located within the State of New Jersey; and

WHEREAS, the planning presumption of siting within the State of New Jersey has caused serious concern within the New Jersey Department of Environmental Protection, and has delayed the program for the removal of soil from the Maywood Interim Storage Site to a permanent location; and

WHEREAS, on September 14, 1989 the New Jersey Department of Environmental Protection briefed the United States Department of Energy on a long-range program for the testing and removal of the Maywood Interim Storage Site to a permanent site within the State of Utah, which site is already licensed for thorium laden soil, and has made application for licensing for mixed radiation and toxic contaminated soil; and

WHEREAS, it appears to the Mayor and Council of the Borough of Maywood that the draft proposal of the N.J.D.E.P., aforesaid, offers a reasonable and timely basis for plans for removing the thorium laden soil from the Borough of Maywood to a permanent site,

NOW, THEREFORE, BE IT RESOLVED, by the Mayor and Council of the Borough of Maywood, County of Bergen, State of New Jersey, that the governing body of the Borough of Maywood supports the concept and structure of the New Jersey Department of Environmental Protection Plan for the use of a Utah facility for the disposal of wastes from the Maywood Interim Storage Site, in that said plan calls for more effective cooperation between State and Federal Agencies, accelerates the entire progress and process of planning and disposal for the radioactive waste by inserting a more efficient, established permanent site, thus relieving Maywood and neighboring municipalities of the health threat posed by the thorium waste; and

BE IT FURTHER RESOLVED, that the United States Department of Energy and the United States Environmental Protection Agency be encouraged and urged to incorporate the N.J.D.E.P. plan into their own program for the removal of thorium laden soil from the Maywood Interim Storage Site; and

BE IT FURTHER RESOLVED, that the Borough Clerk be and she is hereby directed to forward copies of this Resolution to the United States Environmental Protection Agency, the United States Department of Energy, the New Jersey Department of Environmental Protection, Legislative Representatives of the 38th District of the New Jersey Legislature, and to the governing bodies of Lodi and Rochelle Park, and annexed thereto a letter, signed by the Mayor of the Borough of Maywood, urging that all concerned parties endorse and support the N.J.D.E.P. proposal.


Date of Passage: November 28, 1989

APPROVED:

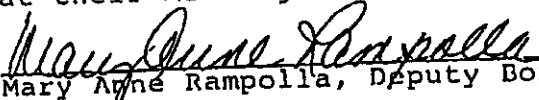

JOHN A. STEUERT, JR.

Mayor

ATTEST:


MARY ANNE RAMPOLLA
Deputy Borough Clerk

This is to certify this is a true copy of a resolution adopted by the Mayor & Council at their meeting held on Nov. 28, 1989.


Mary Anne Rampolla, Deputy Borough Clerk

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



MAYOR
JOHN A. STEUERT, JR.

COUNCIL PRESIDENT
ANTHONY NAPOLI

COUNCIL MEMBERS
JOAN T. WINNIE
THOMAS M. BERNTSON
RICHARD P. O'NEIL
MICHAEL J. RUBER
ANNE SALVATORE SCHMIDT

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 contaminants 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, Borough Clerk

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



BOROUGH OF MAYWOOD

459 Maywood Avenue, Maywood, NJ 07607

MAYOR
JOHN A. STEUERT, JR.

COUNCIL PRESIDENT
ANNE SCHMIDT

COUNCIL MEMBERS
JOAN T. WINNIE
RICHARD P. O'NEIL
MICHAEL J. RUBER
THOMAS F. GAFFNEY, JR.
BRANDON F. MARRAZZO

RESOLUTION NO. 143-94

OPPOSING SOIL WASHING AS A REMEDIAL ALTERNATIVE IN THE BOROUGH OF MAYWOOD

WHEREAS, the Mayor and Council of the Borough of Maywood authorized a referendum in August 1991, requesting that the voters of the Borough express their opinion regarding the storage of contaminated soil in the Borough; and

WHEREAS, on November 5, 1991, the voters of the Borough overwhelmingly indicated their support for the clean up of all contaminated soil in the Borough; and

WHEREAS, the Mayor and Council has on more than one occasion notified the Department of Energy and the Environmental Protection Agency that the immediate removal of all contaminated soil and clean up of the Maywood Interim Storage Site ("MISS") and vicinity properties is a matter of concern that should be given the highest priority; and

WHEREAS, the Mayor and Council has endorsed the health-based 5 pCi/g clean-up standard as the only viable clean-up criterion for the MISS and the other affected properties; and

WHEREAS, the Mayor and Council has also expressed its opposition to soil washing as a remedial alternative for the clean up; and

WHEREAS, the Borough Attorney wrote to the Department of Energy on November 3, 1994, requesting a written commitment that the Department of Energy will not conduct soil washing at the MISS; and

WHEREAS, on December 2, 1994, Thomas P. Grumbly, Assistant Secretary for Environmental Management of the Department of Energy ("DOE") wrote to the Borough Attorney stating that the DOE decided not to conduct a "pilot soil washing" test on the MISS but would not rule out soil treatment technologies in the future; and

WHEREAS, the Mayor and Council do not oppose the testing of soil removed from Maywood for general research purposes as long as the soil washing is conducted in an appropriate site other than the MISS, or any other site in the Borough of Maywood; and

WHEREAS, the Mayor and Council remain steadfast in its opposition to soil washing on the MISS and anywhere else in the Borough of Maywood;

NOW, THEREFORE, BE IT RESOLVED by the Mayor and Council of the Borough of Maywood that:

1. A copy of this Resolution expressing the continued opposition of the Mayor and Council to soil washing in the Borough of Maywood be sent to Secretary Hazel O'Leary of the Department of Energy and Carol Browner, Administrator of the Environmental Protection Agency, and that these heads of federal agencies involved with the clean up are requested to intervene in this matter and once and for all provide a written commitment on behalf of both agencies that soil washing will not be conducted in the Borough of Maywood.
2. Secretary O'Leary and Administrator Browner are also asked to commit to the 5pCi/g clean-up standard as the only health-based clean-up level.
3. Congressman Robert G. Torricelli also be sent a copy of this written Resolution, and he is asked to continue his efforts to obtain a commitment from the federal agencies as referred to herein.
4. A copy of this Resolution shall also be sent to Bergen County Executive William P. Schuber, and he too is asked to continue his efforts to obtain the written commitment referred to above in view of public health concerns raised by the soil washing technology which concern not only the Borough of Maywood but the entire environment of the MISS and the other affected properties. He is also reequested to ask the Governor and the State Department of Environmental Protection and Energy to continue to press for a 5pCi/g clean up, and continue to oppose soil washing in Maywood.
5. A copy of this Resolution shall also be sent to President Bill Clinton, Vice President Al Gore, Senators Frank R. Lautenberg and Bill Bradley, Governor Christine Todd Whitman, the Mayor and Council of the Township of Wayne, the Mayor and Council of the Borough of Lodi, the Mayor and Council of the Township of Rochelle Park, and Commissioner Robert E. Shinn of the New Jersey DEPE, all of whom are asked to support this Resolution as the public health concerns raised affect the neighboring municipalities; and

BE IT FURTHER RESOLVED that each member of the Mayor and Council has signed this Resolution to emphasize the importance of this matter; 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: Dec. 27, 1994

APPROVED: Anne Schmidt
Anne Schmidt, Council President

ATTEST: Mary Anne Rampolla
Mary Anne Rampolla, Borough Clerk

Anne Schmidt
ANNE SCHMIDT

Joan T. Winnie
JOAN T. WINNIE

Richard P. O'Neil
RICHARD P. O'NEIL

Michael J. Ruber
MICHAEL J. RUBER

Thomas F. Gaffney, Jr.
THOMAS F. GAFFNEY, JR.

Brandon F. Marrazzo
BRANDON F. MARRAZZO

	Noted	Secord	Ates	Watts	Absent	Present
Forest						✓
Thurman			✓			
Ruber	✓		✓			
Marrasco			✓			
Almudt			✓			
O'Neil			✓	✓		
Laffrey		✓	✓			

12/28/94 - CC dist. to all
per pg. 2 #1-5

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. 10958
(914) 638-4925**

**FENSTER & WEISS, ESQS.
OF COUNSEL**

JOHN M. CONTANT (1931-1986)

RICHARD JON CONTANT*

MICHAEL L. SCHERBY**

BRUCE L. ATKINS**

DANIEL R. 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

August 10, 1994

**Hazel O'Leary, Secretary
Department of Energy
1000 Independence Avenue
Washington, DC 20585**

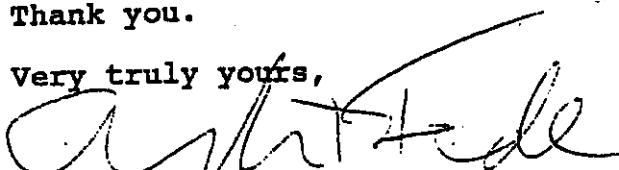
**Re: Maywood, New Jersey - EPA Region 2's Position
on the Dispute Regarding Clean Up Levels for
Radionuclide Contamination at the Maywood
Chemical Company Superfund Site**

Dear Ms. Secretary:

I am the attorney for the Borough of Maywood, New Jersey, the municipality in which the above-mentioned Superfund site is located. The Mayor and Council asked me to write to you to reiterate their opposition to any clean up standard other than the 5 pCi/g standard. I enclose a copy of my June 9, 1994 letter (with all attachments) that I sent to your Department. That letter elaborates upon this point and sets forth the governing body's opposition to the "soil washing" plan that was originally proposed for the Maywood site. The Mayor and Council also wish to reiterate their opposition to soil washing on the site.

Thank you.

Very truly yours,


ANDREW T. FEDE

ATF:RG

Enclosure

cc: Mayor and Council

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.

Susan M. Cange, Site Manager
Re: Borough of Maywood, New Jersey
June 9, 1994
Page 2

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

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:

Kathleen C. Callahan, Director
Re: Borough of Maywood
June 6, 1994
Page 2

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 Pasquale, New Jersey Department of Health
Nicholas Martone, New Jersey DEPE
Governor Christine Todd Whitman
Commissioner Robert Shinn, New Jersey DEPE

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.

William J. Muszynski, P.E.

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

April 13, 1994

Page 2

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,

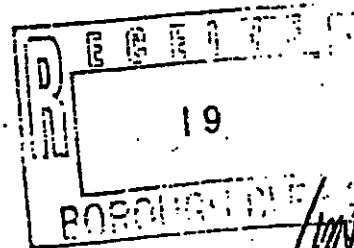
ANDREW T. FEDE

ATF:RG

cc: Joe La Grone
Mayor and Council



NEW JERSEY SENATE



BYRON BAER
SENATOR, 37TH DISTRICT
BERGEN COUNTY
125 STATE STREET
SUITE 205
HACKENSACK, NEW JERSEY 07601
(201) 343-3333
FAX (201) 343-1524

May 17, 1994

*Amie Fede
Atty. Gen.
M. Nolan*

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

STATE OF NEW JERSEY

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 Sits 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,

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.

099 3400 0010 0602 0602



FIRST CLASS MAIL

CONTANT, ATKINS, ROGERS, FEDE & HILLE, L.L.C.
ATTORNEYS AT LAW
COURT PLAZA NORTH
25 MAIN STREET
HACKENSACK, N.J. 07601

TO:

Mr. Allen Roos
U.S. Army Corps of Engineers
New York District
26 Federal Plaza, Room 2108
New York, NY 10278



CONTANT, ATKINS & FEDE, L.L.C.

JOHN M. CONTANT (1931-1988)
RICHARD JON CONTANT*
BRUCE L. ATKINS*
ANDREW T. FEDE

GERALDINE E. BEERS*
SUZANNE J. RUDERMAN*
LISA R. ALJIAN*
CHRISTINA A. STONEBURNER*

MICHAEL L. SCHERBY - RETIRED

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LAURA G. WEISS, ESQ.
OF COUNSEL

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

October 10, 2002

VIA UPS AND REGULAR MAIL

Mr. Allen Roos
U.S. Army Corps of Engineers
New York District
26 Federal Plaza, Room 2108
New York, NY 10278

Re: Proposed Plan for the Portion of the Soils/Buildings Operable Unit
Containing Radiologically Contaminated Soils and Buildings at 24
Commercial and Government Properties (Phase II) at the Fusrap Maywood
Superfund Site, Maywood, New Jersey, August 2002.

Dear Mr. Roos:

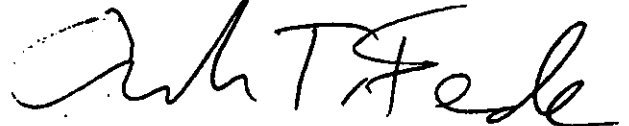
This letter will supplement the October 3, 2002 letter that I sent to you on behalf of the Borough of Maywood ("Borough"). These letters contain the input that the Mayor and Council is submitting for your consideration during the public comment period referred to on page 34 of the above-referenced plan, as extend to October 12, 2002.

I enclose with this letter a copy of the October 4, 2002 letter that I received from the attorney for the Maywood Planning Board. That letter confirms that the Planning Board has determined that the properties referred to in the letter should be cleaned up to the 5 pCi/g of radium -226 and thorium -232 standard, so that the proposed use of the properties as municipal parks and/or playgrounds can be accomplished. Therefore, I repeat the Borough's request that the 5 pCi/g clean up standard be employed, as outlined in my October 3, 2002 letter and the attachments thereto.

Mr. Allen Roos
U.S. Army Corps of Engineers
October 3, 2002
Page 2

Thank you for your consideration of the comments made in this letter, and my October 3, 2002 letter. If you have any questions, please do not hesitate to contact me.

Very truly yours,



ANDREW T. FEDE

ATF:rr
Enclosure
cc: Mayor and Council (w/encl.)
Gregg A. Padovano (w/encl.)

BEATTIE PADOVANO, LLC

COUNSELLORS AT LAW

30 CHESTNUT RIDGE ROAD

P.O. BOX 244

MONTVALE, NEW JERSEY 07645-0244

(201) 573-1810

**HACKENSACK AREA
(201) 489-3012**

October 4, 2002

JAMES R. BEATTIE (NJ, NY, DC BARS)
RALPH J. PADOVANO (NJ, NY BARS)
THOMAS W. DUNN (NJ, NY BARS)
MARTIN W. KAFKIAN (NJ, NY, DC BARS)
ADOLPH A. ROMEL (NJ, NY BARS)
JOHN J. LAMB (NJ BARS)
JOHN R. HOLSINGER (NJ, NY BARS)
ANTONIO A. DEL VECCHIO (NJ, NY, DC BARS)
ROBERT A. BLASS (NJ, NY BARS)
IRA J. KALTMAN (NJ, NY BARS)

COUNSEL TO THE FIRM
ROGER W. BRESLIN, JR. (NJ, NY BARS)
JOSEPH A. RIZZI (NJ, NY BARS)

OF COUNSEL
FRANCIS B. SHEEHAN (NJ, NY BARS)
DANA B. COBB (NJ, NY BARS)

*Certified by the Supreme Court of
New Jersey as a Civil Trial Attorney

OUR FILE NO. 094824-1

Via Facsimile Transmission (201) 342-5213 and regular mail

Andrew T. Fede, Esq.
Contant Atkins Rogers Fede & Hill, LLC
25 Main Street
Court Plaza North
Hackensack, NJ 07601

Re: Maywood Planning Board

Dear Mr. Fede:

As you are aware, we represent the Maywood Planning Board. The Planning Board is currently revising and preparing a new Master Plan. The Board has specifically indicated its desire that the minimum remediation of contaminated property identified as Block 124, Lots 31, 32, 33, 45 and 46 on the current municipal tax map be at a level acceptable for use of the property as a municipal park or playground land. The Board has indicated that it will include this recommendation and goal as part of the new Master Plan. I will provide you with a draft copy of the relevant element of the proposed Master Plan as soon as it is available.

If you or the Mayor and Council require any additional information or have any questions or comments regarding this issue please do not hesitate to contact me. Thank you for your assistance with this matter.

Very truly yours,

Gregg A. Padovano
Gregg A. Padovano

GAP/sav

cc: Ms. Mary Carton, Maywood Planning Board Secretary
(via Facsimile Transmission and First Class Mail)

EMERY C. DUELL (NJ, CA, NY BARS)
KATHERIN S. COOK (NJ, NY, CA BARS)
STEVEN A. WEISFELD (NJ, NY BARS)
VANESSA R. ELLIOTT (NJ, NY BARS)
DOUGLAS V. SANCHEZ (NJ, FL BARS)

GREGG A. PADOVANO (NJ, DC BARS)
JAMES V. ZARRILLO (NJ, NY BARS)
JENNIFER BRETZ (NJ, PA BARS)
RENATA A. HELSTOSKI (NJ, NY BARS)
JEANETTE A. ODYSKI (NJ, NY BARS)
DAVID L. BLANK (NJ, NY BARS)
AMY C. BUCK (NJ BARS)

FAX: (201) 573-9736 & (201) 573-9369

WRITERS DIRECT ACCESS:
Email: gpadovano@beattielaw.com
Telephone Ext.: 272

The Preferred Alternative is Alternative 4, Excavation, Treatment, and Off-Site Disposal of the contaminated soil at the 24 commercial, industrial and government-owned properties.

Upon review of the FS and the Proposed Plan, and after numerous conversations and meetings with USACE, NJDEP agrees that the majority of the FUSRAP Waste present at the 24 properties will be addressed by the Preferred Alternative. However, NJDEP disagrees that the Preferred Alternative addresses "all of the contamination, both radiological and chemical, whether mixed together or not, on the MISS," since it does not address the chemical contaminants in soil at the MISS.

USACE's decision not to include the New Jersey Soil Cleanup Criteria (SCC) is based on the BRA. The BRA, prepared by USDOE in 1993, identified unacceptable risks associated with exposures to the radioactive contamination present in the soil, and established Th-232, Ra-226, U-238, and their decay products, as contaminants of concern (COCs) for the Site that would require remediation. Potential chemical COCs in soil initially included metals, volatile organic compounds and semi-volatile organic compounds. However, the BRA identified no unacceptable risks or hazards associated with exposures to the chemicals present in the soil (i.e., within the risk range of 1×10^{-4} to 1×10^{-6} and a Hazard Index not to exceed 1.0), therefore, no chemical COCs were identified that would require remediation. These determinations were based on the definition of acceptable risks in CERCLA. Both USACE and USEPA agree with these conclusions. Therefore, the ARARs and cleanup criteria identified in the 2002 Feasibility Study (FS) are for the radioactive contamination only.

The conclusion that no chemical COCs require remediation is not shared by NJDEP. Even though the risks and hazards from the chemical contaminants are acceptable under the CERCLA definition, they are not acceptable to NJDEP. The SCC were developed pursuant to the Brownfield and Contaminated Site Remediation Act which set more stringent risk requirements (i.e., less than 1×10^{-6} and a Hazard Index not to exceed 1.0) than CERCLA.

As indicated on page 2-46 of the FS, the concentrations of several metals and organic chemicals in the soil on the MISS sporadically (in terms of depth and areal extent) exceed the Residential Direct Contact SCC (Residential SCC), and some exceed both the Residential SCC and the Non-Residential Direct Contact SCC (Non-Residential SCC), and thus require remediation pursuant to NJDEP rules and regulations.

In addition, the Preferred Alternative does not address the need for institutional or engineering controls if the remedial action does not meet the Residential SCC. Since the MISS is a non-residential property the Technical Requirements for Site Remediation (Tech Regs), N.J.A.C. 7:26E-5.1(e), allow for the selection of a limited restricted or restricted use remedial action, which require engineering and/or institutional controls. The Tech Regs, N.J.A.C. 7:26E-6.4(e), also require, institutional controls in the form of a deed notice when a limited restricted or restricted use remedial action is selected. The



Public Comment Form on the

PROPOSED PLAN FOR SOIL AND BUILDINGS AT THE FUSRAP MAYWOOD SUPERFUND SITE

PLEASE RETURN THIS FORM BY MAIL TO:

Allen Roos
US Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Date: 9/16/02
Name (optional): LINA FINCH
Affiliation (if any): CONCERNED CITIZEN
Address (optional): [REDACTED]
Telephone (optional): [REDACTED]

Enter comments in the space below. Use the other side or additional sheets as needed. If comments are on specific sections or pages in the document, please note that information in the blank below. Please be specific so that comments can be clearly understood. Thanks.
Section or page #: _____

PLEASE CONSIDER TRANSPORTING
YOUR CONTAMINATED SOIL ELSEWHERE
OTHER THAN TO COTTER. WOLF PARK
SUBDIVISION IS ONLY 1/4 MILE FROM
COTTER - "TALK ABOUT A SIGNIFRANT
THREAT TO PUBLIC HEALTH!"
COTTER ALREADY HAS VIOLATIONS
FROM CONORADO'S DEPT. OF HEALTH

Comment forms can be submitted by mail in the pre-addressed envelope provided. Mail returns must be postmarked no later than October 12, 2002.

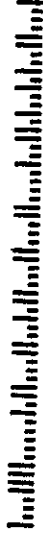
IN OTHER WORDS, IT APPEARS THEY
ARE NOT TAKING CARE OF WHAT
THEY ALREADY HAVE.

INA FINCH



Allen Roos, Project Manager
U.S. Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

10278-0004 03





State of New Jersey

Department of Environmental Protection

James E. McGreevey
Governor

Bradley M. Campbell
Commissioner

Allen Roos
US Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

OCT - 8 2002

Re: Feasibility Study and Proposed Plan
Maywood FUSRAP Superfund Site
Maywood Borough, Bergen County

Dear Mr. Roos:

The New Jersey Department of Environmental Protection (NJDEP) is in receipt of the Feasibility Study and Proposed Plan for Soil and Buildings at the FUSRAP Maywood Superfund Site (Site) dated August 2002. The Feasibility Study (FS) summarizes the Remedial Investigation and Baseline Risk Assessment (BRA) and evaluates alternatives for remediating the soil contamination at the remaining 24 of the 88 properties, which comprise the Site. The Proposed Plan summarizes the FS and presents USACE's Preferred Alternative for addressing the soil contaminated with "FUSRAP waste" as defined below:

- All contamination, both radiological and chemical, whether mixed together or not, on the Maywood Interim Storage Site (MISS);
- All radiological contamination above cleanup levels related to past thorium processing from the old Maywood Chemical Works occurring on any of the Vicinity Properties;
- Any chemical or non-radiological contamination on Vicinity Properties that would satisfy either of the following requirements:
 1. The chemical or non-radiological contaminants which are mixed or commingled with radiological contamination above cleanup levels; or
 2. The chemical or non-radiological contaminants which originated at the MISS or were associated with the specific thorium manufacturing or processing activities at the MCW which resulted in the radiological contamination.

The Preferred Alternative is Alternative 4, Excavation, Treatment, and Off-Site Disposal of the contaminated soil at the 24 commercial, industrial and government-owned properties.

Upon review of the FS and the Proposed Plan, and after numerous conversations and meetings with USACE, NJDEP agrees that the majority of the FUSRAP Waste present at the 24 properties will be addressed by the Preferred Alternative. However, NJDEP disagrees that the Preferred Alternative addresses "all of the contamination, both radiological and chemical, whether mixed together or not, on the MISS," since it does not address the chemical contaminants in soil at the MISS.

USACE's decision not to include the New Jersey Soil Cleanup Criteria (SCC) is based on the BRA. The BRA, prepared by USDOE in 1993, identified unacceptable risks associated with exposures to the radioactive contamination present in the soil, and established Th-232, Ra-226, U-238, and their decay products, as contaminants of concern (COCs) for the Site that would require remediation. Potential chemical COCs in soil initially included metals, volatile organic compounds and semi-volatile organic compounds. However, the BRA identified no unacceptable risks or hazards associated with exposures to the chemicals present in the soil (i.e., within the risk range of 1×10^{-4} to 1×10^{-6} and a Hazard Index not to exceed 1.0), therefore, no chemical COCs were identified that would require remediation. These determinations were based on the definition of acceptable risks in CERCLA. Both USACE and USEPA agree with these conclusions. Therefore, the ARARs and cleanup criteria identified in the 2002 Feasibility Study (FS) are for the radioactive contamination only.

The conclusion that no chemical COCs require remediation is not shared by NJDEP.

Even though the risks and hazards from the chemical contaminants are acceptable under the CERCLA definition, they are not acceptable to NJDEP. The SCC were developed pursuant to the Brownfield and Contaminated Site Remediation Act which set more stringent risk requirements (i.e., less than 1×10^{-6} and a Hazard Index not to exceed 1.0) than CERCLA.

As indicated on page 2-46 of the FS, the concentrations of several metals and organic chemicals in the soil on the MISS sporadically (in terms of depth and areal extent) exceed the Residential Direct Contact SCC (Residential SCC), and some exceed both the Residential SCC and the Non-Residential Direct Contact SCC (Non-Residential SCC), and thus require remediation pursuant to NJDEP rules and regulations.

In addition, the Preferred Alternative does not address the need for institutional or engineering controls if the remedial action does not meet the Residential SCC. Since the MISS is a non-residential property the Technical Requirements for Site Remediation (Tech Regs), N.J.A.C. 7:26E-5.1(e), allow for the selection of a limited restricted or restricted use remedial action, which require engineering and/or institutional controls. The Tech Regs, N.J.A.C. 7:26E-6.4(e), also require, institutional controls in the form of a deed notice when a limited restricted or restricted use remedial action is selected. The

proposed institutional controls only address the radioactive contamination.

Because of these issues, NJDEP cannot concur with the proposed remedial action.

Finally, NJDEP is concerned about the effectiveness of the soil treatment technologies that are currently available. We realize that this concern is also shared by USACE and USEPA, hence the evaluation of the treatment demonstration that is included as part of the preferred alternative. NJDEP appreciates the opportunity to review the treatment demonstration data along with these agencies and to be part of the decision process for the selection of which, if any, treatment technology will be employed at the Site.

If you have any questions regarding this letter, please contact me at (609) 633-1455.

Sincerely,



Donna L. Gaffigan, Case Manager
Bureau of Case Management, Southern Region

C: Angela Carpenter, USEPA

Valerie Green
[REDACTED]
[REDACTED]
[REDACTED]

Allen Roos, FUSRAP Project Manager,
US Army Corps of Engineers, CENNAN-PP
26 Federal Plaza, RM 2108
New York, NY 10278-0090

Dear Sir:

This letter pertains to the planned shipment of radioactive and chemically contaminated soil to Cotter Uranium mill in Canon City Colorado. As a Canon City resident I find such a proposal an outrage and totally unacceptable. I believe that these plans pose a significant risk to the health and safety of my family and community. It seems entirely illogical that these soils are too dangerous for the citizens of Maywood, but are safe enough for us. Cotter facilities are now within 1/4 of a mile of residential homes. Shipments of toxic waste most definitely need disposal, but such disposal sites should be remote from communities and their inhabitants.

There are many potential problems with this transfer. The impoundments constructed at Cotter were intended for mill waste, not chemical waste. The pond liners are already beyond their life expectancy and the chemicals would have a high chance of seeping into nearby aquifers. Cotter Corporation has a very poor track record as a corporate citizen in our community. They have a long track record of safety violations many of which have never been corrected. I have no confidence in them to correct past deficiencies or to safely handle and dispose of the waste material that Maywood wants to send us. Cotter has not made sufficient plans for eventual decommissioning of the plant. Chemical contamination from the proposed imported waste may preclude the eventual custodianship of the site by the Department of Energy once the plant is decommissioned. This would put the eventual stewardship of the decommissioned plant squarely on the shoulders of the citizens of Fremont County and the State of Colorado, which we do not want.

We do not want this material to endanger our community and our lives.

Sincerely,



Valerie Green, Ph.D.

Curtis Harlow

10-5-02

Allen Roos
FUSRAP Project Manager
US Army Corps of Engineers
CENNAN-PP
26 Federal Plaza, RM 2108
New York, NY 10278-0090

Dear Sir:

I wish to comment during the public comment period regarding the planned shipment of radioactive and chemically contaminated soil to Cotter Uranium mill in Canon City Colorado. As a Canon City resident I find such a proposal an outrage and totally unacceptable. I believe that these plans pose a significant risk to the health and safety of my family and community. It seems entirely illogical that these soils are too dangerous for the citizens of Maywood, but are safe enough for us. Perhaps in years past Cotter was isolated from the nearby community, but over time the city has grown and now there are houses and public facilities within 1/4 of a mile of the plant. Shipments of toxic waste most definitely need disposal, but such disposal sites should be remote from communities and their inhabitants.

There are many potential problems with this transfer. Allow me to illustrate just a few. The impoundments constructed at Cotter were intended for mill waste, not chemical waste. The pond liners are already beyond their life expectancy and the chemicals would have a high chance of seeping into nearby aquifers. Cotter Corporation has a very poor track record as a corporate citizen in our community. They have a long track record of safety violations many of which have never been corrected. I have no confidence in them to correct past deficiencies or to safely handle and dispose of the waste material that Maywood wants to send us.

Cotter has not made sufficient plans for eventual decommissioning of the plant. Chemical contamination from the proposed imported waste may preclude the eventual custodianship of the site by the Department of Energy once the plant is decommissioned. This would put the eventual stewardship of the decommissioned plant squarely on the shoulders of the citizens of Fremont County and the State of Colorado.

One more comment. Cotter's license is under suspension. Enough said.

Sincerely,

Curtis Harlow, M.D.

Curtis Harlow, M.D.

Allan Roos, FUSRAP project manager,

As you know, I not only have to write you a letter, but in my best interests I need to write to several other committees/ corporations to let them know how absurd this toxic waste coming into our community (Canon City) is. The Cotter uranium mill has never had approval to store or process Superfund CERCLA Waste, such as will come from Li Tungsten in New York, so why now is Cotters' plan to process radioactive and chemically contaminated waste at their facility approved? I grew up in Colorado, and I think it is absurd to let any part of this state accept any of this! After hours upon hours of research, I have come to the conclusion that this issue not only faces our community but it is global and needs to be explored. I will pursue this, and I am dumbfounded on the uninformed people that insist this radioactive waste being brought into our town and state is OK.

There is tremendous information out there **insisting** against transporting toxic material across our country. There are dreadful hazards to people traveling highways, people living next to railroads and people living in the vicinity to these particles being stored, like us. It can have serious consequences on our health (cancer). There are no positive effects that radio active particles that have half-lives of 10,000 years that have good effects on human health. Cancer patients with radiation treatments deal with half-lives of 68 seconds to fight cancer in chemotherapy! Do we really know what's being brought in - among so many other elements that have effects on humans that science has yet to discover? Is everything that's being shipped in monitored? If it is then to what extent? What can this do to our future generations that live within the vicinity of this toxic waste? I believe that as a wife and mother of two, it is my duty to do all that I can to stop this atrocity from happening to our community, our state, and our country, and I CERTAINLY believe that it is your duty to protect the people here in Colorado.

There **definitely** are options to this. Why bring in this waste, bury it in our back yards, effecting us in the near future, and many others for thousands of years to come, just "sweep it under the rug" so to speak? There are ways to contain radioactive/ toxic material **at the site** it is being produced, keeping it contained and monitored in barrels for years to come. Shouldn't that be the most obvious solution now until research shows there is something more permanent? Please, before you okay the newest shipments of toxic waste into our town/state (here in the Midwest who don't yet have laws to protect ourselves like the people from the East Coast) think of the effects it has on us now - not only health effects on the people who live here, but the growth of our town as a thriving community. What about the decision this effects in a global way? Who wants to live here now that we are labeled as a toxic waste town? Hey, everyone from Maywood New Jersey (and all the other places radioactive substances are destined to come from) coming to Canon City Colorado are at risk of serious disasters... do you want that on our highways?

You should be well-versed in science and the decisions effecting the health of society. You should be protecting us, not letting this atrocity take place. Please, make the right decisions -do it for us, do it for our families, do all that is right for our community -we have to fight this absurd, corporate crap that's trying to overpower our town! Cotter does not comply with the regulations and standards you've set already - we don't believe they deserve another "chance".

Sincerely,
Jennifer Hayes

J. Hayes

[Redacted]

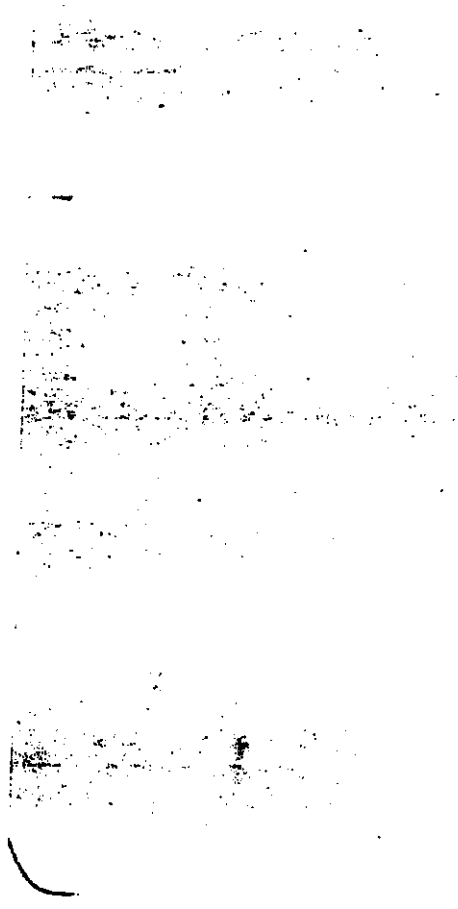
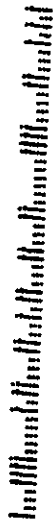
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81212



Allan Pooos, FUSRAP Project Mgr.
U.S. Army Corps Engineers, CENANHP
26 Federal Plaza, Room 2108
New York, NY, 10278-0090

10278/0090



10/22/02

Dear Sir: I just want to add my words of concern about the local Cotter Corp. proposal to accept soil from Maywood in New Jersey. If it is not good enough for the East to handle, why is it good enough for us in Essex City? I refer to our already serious drought and the dangers of contamination, the hazardous chemicals involved, the dangers of and to cleanup, the environmental contamination dangers to everyone in our area. Please share our concern for the health of local citizens. Thank you!

Jeanne Hygarty

Public Comment Form on the

PROPOSED PLAN FOR SOIL AND BUILDINGS AT THE FUSRAP MAYWOOD SUPERFUND SITE

PLEASE RETURN THIS FORM BY MAIL TO:

Allen Roos
US Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Date: 9-15-02
Name (optional): Johnny A. HEARD
Affiliation (if any): _____
Address (optional): CANON CITY CO. #1212
Telephone (optional): [REDACTED]

Enter comments in the space below. Use the other side or additional sheets as needed. If comments are on specific sections or pages in the document, please note that information in the blank below. Please be specific so that comments can be clearly understood. Thanks.

Section or page #: _____

It seems foolish to place any contaminated materials from maywood, or elsewhere, at the CANON CITY facility! We have dense population and have already suffered greatly from previous contamination from Cotter facility. Dump the mess ON SADAM HUSSEIN! Our lovely city does NOT NEED THIS KIND OF INDUSTRIAL WASTE- HOW ABOUT cleaning up Cotter and dumping it on maywood? TURN ABOUT IS FAIR PLAY!

Comment forms can be submitted by mail in the pre-addressed envelope provided. Mail returns must be postmarked no later than ~~September~~ ^{October} 12, 2002.

THANK YOU FOR DOING THE RIGHT THING!



Dear FUSRAP Project Manager Mr. Allen Rossi,

I am writing you in regards to the Maywood Waste coming to Cotter Uranium Mill in Cañon City.

I'm sure it seems to you that no community wants waste and somebody has to take it. However, Cotter is not the place. Cotter has such a bad reputation in Fremont County. They have a poor record with Worker Safety. They have lied in the past to our community and have omitted much information from us. Our local paper, the Daily Record, has recently done a series on Cotter and the facts have shocked Fremont County. You could probably get copies of the Daily Record from the Cañon City public Library. We will shut cotter down. We want no more waste on what is already a superfund site.

I want to urge you to find another place. actually, I would suggest to you above ground, monitored, retrievable storage.

Please make no contract with Cotter.
Help us shut them down,

Thank You,
KAREN HIXON
Karen Hixon

Ciminera, Michael

From: Kollar, William
Sent: Monday, September 09, 2002 6:34
To: Allen Roos (E-mail)
Cc: Ciminera, Michael
Subject: FW: Thorium Cleanup in Maywood,
Maywood public comment.
-----Original Message-----
From: [REDACTED]
Sent: Friday, September 06, 2002 9:39 PM
To: Kollar, William
Subject: Thorium Cleanup in Maywood, NJ

I am a Maywood resident for the past 22 years. For many years we were told that Maywood would be a temporary storage site for other town's contaminants. For that acceptance, Maywood would be eventually cleaned of all Thorium stored here. After many years and many promises by officials that this would happen, I now feel that this will never happen. **GET THE THORIUM OUT OF MAYWOOD.** This community is very heavily populated and there cannot be any other alternative. Besides, we were promised many times that the Thorium would be removed!! I hope to be thanking you for keeping that promise.

John Huss

[REDACTED]
Maywood, NJ 07607
[REDACTED]



BOROUGH OF LODI

ONE MEMORIAL DRIVE
LODI, NEW JERSEY 07644
(973) 385-4005
FAX (973) 385-1723

GARY PAPAROZZI
MAYOR

KAREN VISCANA
DEPUTY MAYOR

JOSEPH PIPARO
COUNCILMAN

BERNADETTE McCASKEY
COUNCILWOMAN

MARC N. SCHRIEKS
COUNCILMAN

STEPHEN LO IACONO, JR.
MUNICIPAL MANAGER

DEBRA A. CANNIZZO
BOROUGH CLERK

August 23, 2002

Mr. Allen Roos
U.S. Army Corps of Engineers
New York District
26 Federal Plaza, Room 2108
New York, New York 10278

RE: Proposal Plan, Maywood Superfund Site

Dear Mr. Roos:

I am the Municipal Manager for the Borough of Lodi. I have received and, with our Chemical Engineer, George Stanton PE, CSP, CIH, FRSH, reviewed the above referenced plan.

On behalf of the Borough of Lodi, I offer the following comments regarding the plan;

- A. Alternative 4 is a reasonable solution to the problem needing remediation.
- B. The Borough of Lodi does request however that the USACE conduct a public information program about the final plan well before actual site work begins.

Please feel free to call me should you wish to discuss these issues.


Thank you.

Yours truly,


Stephen Lo Iacono, Jr.
Municipal Manager

SL/md

c. Mayor and Council
John J. Baldino, Esq.
George Stanton


October 1, 2002

Allen Roos, FUSRAP Project Manager
U.S. Army Corps of Engineers, CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

I beg of you to please do everything in your power to close down Cotter, to stop any processing or storage. It is unthinkable to me that we build prisons on land which is removed from populated areas..... yet Cotter is located right next to a golf course and to populated areas with no regard for people or animals. The railroad tracks travel through neighborhoods. Two elementary schools are located within the 'hot' zone. Teachers at one of those schools drink bottled water or bring their own water in.

I remember when there was a clean up going on so that the train depot located near 4th Street Bridge and the land surrounding it could be renovated for development for a restaurant, and for rafters and kayakers.... There were men in head-to-toe white suits in that contaminated area. It was my understanding that it had been contaminated by trains from Cotter. Nothing was said/ no signs were posted as warnings or for information for the many walkers, fishermen, rafters, and kayakers who were using and continue to use that area.

I remember looking for housing property to buy, and was amazed when the property owner told me Cotter came in every month to test the well water----- and it was property still inhabited by human beings. In my investigation, I called someone at the Colorado Department of Health and told them some of the readings on the Cotter reports the homeowner had. I was told by the person at CDH that they would never live within 5-10 miles of the 'hot zone'. They also told me about air testing program that was going on throughout Canon City.

Now, I've always thought that an organization with a title like, The Colorado Department of Health, would be there to PROTECT THE CITIZENS OF OUR STATE. ... Yet, I have not found out any of this information from them, but from my personal investigation. I definitely see something wrong with that--- We need our representatives, from local government to the state level on the front lines informing the citizens and not allowing the desecration of Colorado land. We need you to be constantly protecting our citizens from life-threatening businesses--- no matter what potential revenues they profess to bring into the state. No dollar amount can be put on Colorado's land/ animals/ resources/ and its people.

It is my understanding that Cotter is still on the EPA clean up list, so I can not understand how those who make decisions can allow the same life threatening business to even think that it can start up operations again, plus process superfund CERCLA Waste! I'm sure they have been made aware that:

1. The impoundments were built for milling waste, not chemical or mixed waste.

2. Cotter is attempting to change its license to allow the site to become a national toxic waste, radioactive dump site.
3. The documented waste contained in the Maywood materials can permeate and destroy the Hypalon liner used in the impoundment ponds.
4. The CDPHE has not created regulations to make Cotter comply with HB 1406 and Cotter does not have approval from the EPA to store or process CERCLA waste.
5. The drought and its impact on water and the shipment of wastes.
6. Cotter still hasn't supplied CDPHE with the data and the accuracy of calculations of worker exposure for 2001 and 2002, even though these are repeat violations.

Please be there to protect and inform us. Our lives and future depend on you.
Linda Jensen

Statement of Edward. S. Kaminski
At the
U.S. Army Corps of Engineers
Public Meeting on the Proposed Plan for
Cleanup of the Maywood Site
August 28, 2002
Maywood, New Jersey

Good evening and thank you for allowing me to add my comments tonight.

One of the key concerns of many of the citizens of Maywood is the manner in which the contaminated soil is removed from our town.

While Alternative Three of the proposed plan indicates that the contaminated soil will be transported to the disposal site in the Colorado or Utah by rail, the plan also states that "the details of the offsite disposal will be evaluated and finalized during the implementation phase of this alternative."

The summary of Alternative Four simply states that "the contaminated soils would be shipped from the MISS to the disposal facility."

Both of these statements are vague, and leave the details of the transportation proposal up to the contractor. We would like it made very clear in the wording of any final plan adopted by the Corps that this material must be shipped by rail, simply and safely, directly from the MISS, as it is now.

We do not want to see this material carried out of Maywood in a convoy of trucks.

We do not want the selection of transportation shipping methods a part of the plan left up to the contractor. We need to see specific instructions regarding the direct movement of the contaminated soil by rail from the MISS incorporated into the record of decision.

With rail tracks located directly adjacent to the MISS, it simply makes no sense to complicate the process by loading the contaminated soil into trucks and dragging it through the streets of Maywood, Rochelle Park, Saddle Brook, Elmwood Park or any of our other neighboring towns.

Along with being grossly inefficient, that option would be grossly inconvenient and dangerous for the people of Maywood. Frankly, we have suffered enough over the past two decades as we have waited and waited for this site to be cleaned up. The last thing we need is 80 to 100 trucks, full of thorium-contaminated soil, rumbling down our streets each month.

E. S. Kaminski/Page 2

I would also like to note that in terms of the transportation of any type of contaminated or hazardous material, direct rail has been proven to be much safer than trucking. In many cases, removal by rail is the only mode used, since the addition of a significant number of truck movements into the equation increases the possibility of a spill, release or an accident.

We know that there are uncertainties about the various disposal sites in Colorado and Utah, and that the contractor needs some flexibility in creating a disposal plan. But none of those uncertainties have anything to do with the manner in which the material moves out of Maywood on the first leg of its journey.

We would ask that the final record of decision specifically state that the material must depart from the MISS by rail. We think that the people of Maywood need and deserve that reassurance.

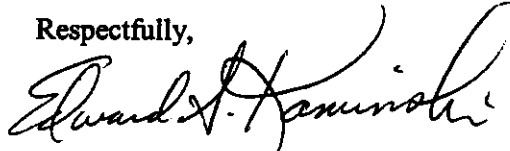
I would also like to state my preference for Alternative Three, which calls for the transportation of all of the contaminated material at federally approved disposal sites. We want to see a permanent clean-up of these properties. We don't want Maywood to become a disposal site, or a Corps experiment in treatment and testing. Maywood needs new industry and commercial establishments. Once the contaminated soil is completely removed, the site would offer a golden opportunity to attract new business, which would help reduce the already high burden of tax money that the taxpayers of Maywood encumber.

We do not want the site used in any manner for a "segmented gate system" of separating the contaminated soil as well as the possibility of bringing in more contaminated soil from other outside locations. The proposed alternate of treating the soil and backfilling it at the site using today's technology is unacceptable because it will be more cost effective than excavation and disposal and could save \$10 million dollars out of the \$254 million plan. Who's to say that the current environmental regulations won't change over time and new standards are put into effect and we are back to square one with another contaminated soil situation. The associated costs will skyrocket, not to mention any potential health claims that might arise. Simply put, the contaminated soil needs to be fully removed, certified that it is safe to inhabit and redevelopment of the site initiated.

Thank you for your attention and for your consideration of our request to include specific language regarding the direct transportation of the material by rail from the site.

E. S. Kaminski/Page 3

Respectfully,

A handwritten signature in cursive script that reads "Edward S. Kaminski". The signature is written in black ink and is positioned above the printed name.

Edward S. Kaminski

██████████
Maywood, NJ 07607

Becky Kelly

October 16, 2002

Allen Roos, FUSRAP Project Manager
U.S. Army Corps of Engineers, CENAN_PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Dear Mr. Roos:

I am very concerned about the propose shipping of toxic waste to the Cotter Mill in Cañon City, CO. I am totally against shipping this radioactive and chemically contaminated soil to our city. Please look elsewhere! The impoundments were built for milling waste, not chemical or mixed waste. I do not want my children or I exposed to this dangerous material. Please do not allow the Maywood soil to come to Cañon City, Col

Sincerely,



Becky Kelly

[Click here and type slogan]



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

October 22, 2002

Mr. Allen D. Roos
Project Manager
Programs and Project Management Division
Department of the Army
New York District, Corps of Engineers
Jacob K. Javits Federal Building
New York, N.Y. 10278-0090

Dear Mr. Roos:

I am responding to your letter dated August 12, 2002, regarding the Feasibility Study and Proposed Plan (PP) for soils and buildings at the Formerly Utilized Sites Remedial Action Program (FUSRAP) Maywood Superfund Site, Maywood, New Jersey, issued by the New York District, U.S. Army Corps of Engineers (USACE), dated August 2002. In your letter you offered U.S. Nuclear Regulatory Commission (NRC) an opportunity to comment on the reports. Our comments are limited to the PP. We note that the PP was prepared under the Comprehensive Environmental Response, Compensation, and Liability Act, 1980, as amended, and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), and identifies compliance with NRC's unrestricted release criteria for the licensed burial pits. The PP is consistent with the NRC/USACE FUSRAP Memorandum of Understanding (66 FR 36606, July 12, 2001), and the PP provides for USACE's cleanup of the NRC licensed burial pits to the requirements for unrestricted release in 10 CFR 20.1402. Our comments are as follows.

1. On page 9, 2nd paragraph states: "The USACE will confirm that the remedial action for the Site complies with these ARARS, or establishes the basis for waiving an ARAR pursuant to the procedures of the NCP at 40 CFR 300.430(f)(1)(ii)(C) for ARAR waivers." We recommend after the first "ARAR" in the sentence, inserting the following parenthetical: [for example, NRC regulation at 10 CFR 20.1402 or a more stringent requirement is the ARAR for burial pit cleanup].
2. On page 9, after 2nd paragraph, we recommend your adding a new paragraph as follows. "U.S. Nuclear Regulatory Commission, in its evaluation of the licensed burial pits remediation, will assure compliance with 10 CFR 20.1402 by reviewing the dose modeling and final site surveys."
3. On page 22, 1st paragraph states: "The NRC-licensed burial pits on Stepan will be remediated to the criteria of 15 mrem/yr above background in compliance with NJAC 7:28-12.8(a)1 and 10 CFR 20.1402. " Please revise the paragraph to read as follows: "The NRC-licensed burial pits on Stepan will be remediated to meet the requirements of 10 CFR 20.1402, and the NJAC 7:28-12.8(a)1." Also, please review the full text of the PP to assure that the compliance with 10 CFR20.1402 for the cleanup of NRC-licensed burial pits is indicated throughout the document.

A. Roos

-2-

Again, we appreciate the opportunity to comment. If you have any question or comments, please contact me at 301-415-0023.

Sincerely,

A handwritten signature in black ink, appearing to read "A. A. Kouhestani". The signature is written in a cursive style with a large, sweeping flourish at the end.

Amir Kouhestani
Project Manager
Special Projects Section
Decommissioning Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards



Public Comment Form on the

PROPOSED PLAN FOR SOIL AND BUILDINGS AT THE FUSRAP MAYWOOD SUPERFUND SITE

PLEASE RETURN THIS FORM BY MAIL TO:

Allen Roos
US Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Date: 10/02/02
Name (optional): Donette and Ivan R Lacey Jr.
Affiliation (if any): homeowner/employee
Address (optional): [REDACTED]
Telephone (optional): [REDACTED]

Enter comments in the space below. Use the other side or additional sheets as needed. If comments are on specific sections or pages in the document, please note that information in the blank below. Please be specific so that comments can be clearly understood. Thanks.
Section or page #: _____

Sirs, We are homeowners in Cañon City. A year ago we moved into our new home in Dawson Ranch. This area is close to the Cotter site. We asked about mining and toxic waste at the time we purchased our property. Cotter was listed as a Superfund site with the main problem contaminated soil and well water in Lincoln park. We were assured Cotter was planning to start up a zirconium milling site. If we had been told Cotter was going to be storing toxic waste & radioactive material, we never would have moved to Cañon City! Your company has contracted to move your toxic waste to the Cotter property. This property has a long term record of mis management, deception, law suits, mis information leading back to the beginning. That includes secretly bring in radioactive materials from the Manhattan project.

Comment forms can be submitted by mail in the pre-addressed envelope provided. Mail returns must be postmarked no later than October 12, 2002.

(over)

Willmoor Court
Canon City, CO81212
September 12, 2002

Allen Roos, FUSRAP Project Manager
U.S. Army Corps of Engineers, CENAN_PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

I urge you to do whatever you can to prevent the Cotter Corporation, and any other greed-motivated company from bringing hazardous waste from Maywood, or anywhere else to Colorado. The simple fact that other places wish to get rid of these materials is a good reason not to import them to our state. Why would anyone with the best interests of the people of Colorado want to contaminate our state? Cotter has demonstrated time and time again that its only interest is making money at any cost to the community and its residents. Please don't enable these people without integrity to profit at the expense of the health of Colorado residents.

Sincerely,

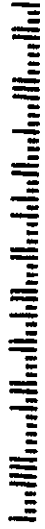
Fran Miller

F. Miller



Allen Roos; FUSRAP Project Manager
U>S> Army Corps of Engineers, CENAN_PP
26 Federal Plaza, Room 21008
New York, NY 10278-0090

10278+0090 03





US Army Corps
of Engineers.
New York District

Public Comment Form on the

PROPOSED PLAN FOR SOIL AND BUILDINGS AT THE FUSRAP MAYWOOD SUPERFUND SITE

PLEASE RETURN THIS FORM BY MAIL TO:

Allen Roos
US Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Date: 8/27/02
Name (optional): Joseph Muscarelle
Affiliation (if any): for L. Muscarelle Inc employee
Address (optional): [REDACTED]
Telephone (optional): [REDACTED]

Enter comments in the space below. Use the other side or additional sheets as needed. If comments are on specific sections or pages in the document, please note that information in the blank below. Please be specific so that comments can be clearly understood. Thanks.

Section or page #: 2-35, 2-36, 2-37 Figures 2-8, 2-9, 2-10

- ① These maps seem to show that 99 Essex St is below the clean-up criteria. Is this correct?
- ② Pages 2-63, 2-64, 2-65 + 2-66 Figures 2-15, 2-16, 2-17 + 2-18 designate 99 Essex St as Excess Radiological Cancer Risks as 10^{-3} . Does this mean the risk is negative to less than 1 in 1000 persons?
- ③ what is the schedule and timing of the clean-up at 99 Essex St?
- ④ In front parking lot (Facing Essex St) can clean-up be done in two phases, East or west side first and other side later so that JLM Inc entrance can remain servicable to our ~~employees~~ visitors and not use the northern access up a flight of stairs or the elevator servicing

Comment forms can be submitted by mail in the pre-addressed envelope provided. Mail returns must be postmarked no later than September 12, 2002.

our general office area?

Reason for this is that I will not be able to attend the public hearing on Wednesday 8/28/02

Very truly yours
J. Muscarelle

9-12-2002

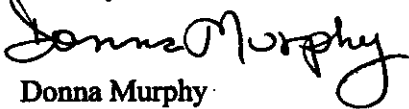
Alan Roos, FUSRAP Project Manager
U S Army Corps of Engineers, CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Dear Mr. Roos,

Why would the Army Corps want to send superfund waste to another superfund site? Please do not send Canon City 470,000 tons of Maywood, New Jersey soils to fill up a tailings pond that was intended to serve a mill, not to be a mixed toxic waste repository. If these soils were common dirt, I assume you would leave them in New Jersey. Cotter has only tested (randomly, I assume) 30,000 tons of soil. It would seem to me that radioactive or toxic "hot spots" might miss detection. Since Cotter plans to close in the next ten or twenty years, what will happen if you bring in chemicals that cause problems in the closure? Who will be ultimately responsible- the Taxpayer and the future generations of Taxpayers.

I know you have to clean up Maywood, but please treat on site. And if you must put the toxic end products of cleanup somewhere, please put them in a place designed for that purpose. Do not put them at Cotter, two and a half miles from a city center, next to a subdivision, and historically known for its safety violations.

Thank you,



Donna Murphy



September 10, 2002
Jon and Judy Nelson

[REDACTED]

Dear Mr. Allen Roos:

We live in the Wolf Park Subdivision, about 1/2 mile or so from the Cotter Mill site. The rail line to Cotter borders the back section of our house lot. We have lived in Canon City for the past 15 years, and have been residents in Wolf Park for the past three years. I am a school teacher by profession and my wife is a retired dental assistant. We were not informed that there was toxic soil on our lot, waste from the Wolf Park Mine and Mill (cadmium, arsenic are in high levels to mention a few). Our next door neighbor had the EPA investigate their soil, the report advised covering the ground, not growing vegetables for human consumption, they did not advise a cleanup. Having this experience colors our outlook when we heard that Cotter was planning to ship toxic waste into our community.

We are concerned about the perception of lax enforcement of rules when it comes to Cotter. As neighbors we are grateful for Colorado's inspections and findings that Cotter is in violation of regulations relating to worker safety and the safety of the environment. With the Wolf Park, Eagle Heights, and new Dawson Ranch subdivisions, several thousand people or more now and will reside within a mile of the Cotter Mill. I am quite worried for our property values if the Mill is to become a storage facility for waste. I am concerned over the waste generated by the Mill and their attitude in handling their operations. I believe that the Mill is located too close to a residential area, that their operation is a detriment to the environment, and the community as a whole.

An example of Cotter's inability to work with our community resides in the spur rail line that travels to the Mill. In the past Cotter has consistently received rail shipments at night. Rock and Rail is the operator and owner of the line. They would push half a dozen or so cars up to the mill, as late as ten in the evening, and have a worker with a flashlight shining on the track to check for obstructions. This raised discussion, however I became quite concerned when I discovered late last winter, that Cotter was shipping ammonia and sulfuric acid up through our neighborhood. I asked Cotter if there was an evacuation plan in place if there was a spill. They said "no." What about hazmat cleanup crews, and shipping the chemicals during the day? The answers were less reassuring.

Several of the rail crossings are in disrepair. When I approached the City and Rock & Rail, there was no cooperation. When I say disrepair I am talking about spikes improperly placed to the point they damage auto tires. I am talking about rotten wood. When the shipper (who agreed about the disrepair of the crossings) for the Maywood Soil and I visited, I was promised in March that there would be improvements to all the crossings to the mill, nothing has happened.

To add to ones frustrations is the drought we are facing here in Fremont County. As in other areas of the state water is in short supply. Cotter consumes water on a daily basis to keep their tailings ponds covered. The Maywood soil would be sprayed with water to keep the soil from blowing into the air. I am worried that if Cotter is allowed to accept the Maywood or Litungston soil, with their increased water usage, that the community would pay. Here in Canon City we are supplying homeowners living with cisterns in the outlying areas, as far away as the Copper Creek area, and Penrose. To support the mill I am afraid that residents would have to drastically cut back on their water usage in the event of a continued drought. We as a community could not allow Cotter not to take water for the larger health risk of blowing soil with radio active particles.

In summary, this is a complicated problem. The Cotter Mill is old, it is a superfund site, and for the betterment of the community I would vote for the cleanup of the total site. I believe that the folks living in Denver would not want the Mill in their backyard. If this was anywhere else on the Front Range the Mill would be closed down and cleaned up, period! The problem of the Mill becomes worse when they bid to take radioactive waste soil to "process" and use the soil for capping their Mill waste. No one (except those people working at the Mill and their friends) in this community wants us to be known as a radioactive waste dump. To close, the issue hit home this past week, when a fellow teacher (who taught in the Lincoln Park area) passed away due to cancer. It is said that one does not suffer as the result of Cotter. My friend taught in Lincoln Park, he drank the water coming through pipes buried in the soil. He worked down wind from the Mill. He suffered from Leukemia for the past two years, retired in May, looked good for several months and is now gone. Cotter and their toxicity touches one from time to time. I would hope and pray that the Environmental Protection Agency would take a long hard look at the decision you will make concerning Cotter, and act in the best interests of our community.

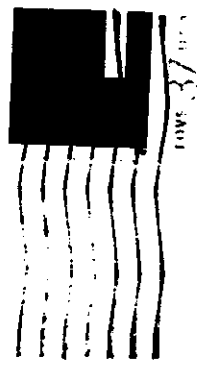
Thank you very much,

Handwritten signature of Jon and Judy Nelson in cursive script.

Jon and Judy Nelson

Alamo's

[Redacted]



1005 37 1005

Allen Ross, FUSRAP Project Manager
U.S. Army Corps of Engineers, CENAN-PP
26 Federal Plaza, Room 2108
New York, N.Y. 10278-0090

1005 37 1005

September 24, 2002

Allen Roos
FUSRAP Project Manager
US Army Corps of Engineer, CENAN-PP
26 Federal Plaza, Room 210
New York, NY 10278-0090

Dear Mr. Roos:

We are writing in opposition to shipping radioactive and chemically contaminated soil to the Cotter Uranium Mill in Cañon City, Fremont County, Colorado. We understand the contract with Cotter is pending at this time.

We, along with 4,115+ people in this community, are opposed to this action. First of all the train tracks from the Arkansas River, south to Cotter, are not made to carry 110-ton train carloads. Homes, in which people currently reside, are within 20 to 30 feet of the tracks, and this presents a grave danger in the event of a spillage, plus the certainty that there will be some air-borne contaminates. People's health should be given a high priority, higher than the "bottom line." The Dupont liners in the existing ponds can be destroyed by some of the chemicals in this waste material.

Cotter is classified as a "Small Quantity Generator," which exempts them from EPA hazardous oversight; however, we understand Cotter has permits to store 3,300,000 gallons of hydrochloric acid per year, and another 545,900 gallons of sulfuric acid. The sheer volume of material permitted should require some hazardous oversight, and a Colorado Hazardous Waste License.

Time estimated for delivery of 470,000 tons of Maywood soil is 7 to 8 years, during which time nearly 4,500 train carloads, or 46 carloads per month will be transported over railroad tracks never designed to handle this volume.

While Maywood may benefit from this operation, the people in Fremont County are at risk of suffering health consequences as well as economic hardships. What is the plan for cleanup when Cotter leaves in 20 to 30 years? We understand at this time there has been no money set aside for this in which case the taxpayers will be held responsible. We were in the middle of a Super Site not too long ago; we don't want to go through that again.

Please include this in your comment file and consider them prior to making a decision to allow this plan to go into effect.

Sincerely,

Carlos & Bev Neuben

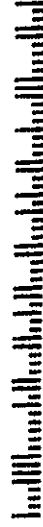
Carlos and Bev Neuben





Allen Roos, Project Manager
 U.S. Army Corps of Engineers
 CENAN-PP
 26 Federal Plaza, Room 2108
 New York, NY 10278-0090

10278+0090 03



[REDACTED]

October 15, 2002

Allen Roos, F'USRAP Project Mgr.
US Army Corps of Engineers, CENAN-PP
26 Federal Plaza, Room 2108

Dear Mr. Roos:

I am very concerned about the Lincoln Park (Cañon City, Fremont County) contaminated storage site. We, and many others live very close to the Cotter site and have not been impressed with their track record of honesty and responsibility. The administrators at Cotter have been secretive and have made some unfortunate mistakes. I believe that our families are at risk and that Cotter is not following the regulations put in place to keep us from getting sick.

Isn't it possible to find a storage site which is not so close to families?

I am opposed to bringing this extra hazardous threat to an area where the people are already frightened about the level of radiation they are absorbing from what is present at the Cotter site. Surely there is another place further from housing developments where this material can be stored.

Please reconsider sending more dangerous soil to our community,

Thank you for your time.

Sincerely,


Elizabeth Nichols

CONCERNED CITIZENS OF MAYWOOD



FAX:201-845-3271

09/26/02

To: Allen Roos
U.S. Army Corps of Engineers
Maywood, New Jersey 07607 Fax:201-843-5749

From: Michael J. Nolan – ENV. CHMN

Re: Request for comment period on the Proposed Plan for the Maywood site be extended to a 60 day period requested August 22nd, 2002. – New Request.

The reason for request was because of the time needed for CCM's consultant to study and report on the FS/PP for the site. Also in order for Mr. RESNIKOFF to commence it was and is necessary for CCM to obtain a funding amendment to their TAG GRANT. Unless and until the amendment is received the consultant cannot commence his work.

While we felt sure the approval would have come in sufficient time, yesterday we were informed the approved amendment would take about two weeks more to prepare. This of course erases the use of the original 30 day extension leaving us no choice but to request a second 30 day extension.

The funding involved represents funds set aside by CCM in their last budget period to assure there would be funds for the consultant if the long delayed FS/PP was announced. Since it was carried over, an amendment is required, thus the delay.

You can confirm these events with EPA and we look forward to your approval of our request.

Michael J. Nolan
Michael J. Nolan

Received by *E. Ann Smith*
Date 9/27/02

cc:EPA
Mr. Resnikoff

Sept 15, 2002

To Allen Ross,

I am writing to you because I have no computer and can not view your plan for shipping radioactive & chemically contaminated waste to Canon City,

We live in Canon can not believe that after all the law suits & deaths that have occurred because of Catto Mills negligence you would think of shipping this waste here.

All the people here are opposed to Fremont County becoming a national toxic waste disposal site the only people in favor of this are the small amount of employees & city officials whose only interest is money.

The health of future generation is at stake here, this site is too close to a heavily populated area.

Please take a closer look at this situation and also the past record of Catto Mills many violations.

Thank you
Mr & Mrs John Reed

John & Marie Reed



Allen Ross FKSRAP project
U.S. Army Corp of Engineers manager
CENAN-PP
26 Federal Plaza Room 2108
New York N.Y.

1027870622 7118

GREG AND NANCY REES

September 23, 2002

Allen Roos, FUSRAP Project Manager
US Army Corps of Engineers, CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Allen, I will keep this short. I am committee volunteer for the Fremont County Independent Outreach Committee (FCIOC) in Canón City Colorado. My interest in this issue is one of a concerned citizen for two fundamental reasons. One I live and work here and want to understand the operation of Cotter and the issues at hand in the safe operation of the facility. Secondly I am appalled at the statements and tactics of the CCAT organization who claim to represent the citizens of Fremont County. They have made threats against employees and their families and have attempted to pursue closing of Fremont County open space to public use. This group does not reflect the sentiments of the majority of Canón City residents. It is also funded by monies coming from outside of our county. Enough said.

My goal is to objectively understand the issues and communicate "facts" to the community at large. I can only do this by understanding the facts. I have spent time researching the past issues at Cotter and the more recent findings and will use this knowledge to ask the question that needs to be answered. Regardless of whether Cotter continues to operate this facility or chooses to close it, it will never become a quote "acceptable industry" to the follower of CCAT. I tend to believe that facilities such as Cotter better serve our national community by responsibly managing resources.

Allen thanks for listening and looking after our safety and wellbeing. I can only ask that you review this situation and make decisions based on facts and your knowledge of the issues.

Sincerely,



Greg A Rees
VP, Portec Flomaster



Rees



AUEN ROOS, FUSRAP Proj Mgr.
US Army Corps of Eng. CENAN-PP
26 Federal Plaza, Room 2108
New York, NY. 10278-0090

102780004 A vertical barcode consisting of vertical bars of varying heights.

STEVEN R. ROTHMAN
9TH DISTRICT, NEW JERSEY

1807 LONGWORTH HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225-5061
FAX (202) 225-5851

DISTRICT OFFICES:
25 MAIN STREET
COURT PLAZA
HACKENSACK, NJ 07601-7089
(201) 848-0808
FAX (201) 848-1944

130 CENTRAL AVENUE
JERSEY CITY, NJ 07308-2118
(201) 798-1366
FAX (201) 798-1725

Congress of the United States
House of Representatives
Washington, DC 20515

October 2, 2002

COMMITTEE ON APPROPRIATIONS
SUBCOMMITTEE ON
FOREIGN OPERATIONS, EXPORT
FINANCING AND RELATED PROGRAMS
SUBCOMMITTEE ON TREASURY,
POSTAL SERVICE AND
GENERAL GOVERNMENT

E-MAIL:
steven.rothman@mail.house.gov

WEB SITE:
<http://www.house.gov/rothman>

Mr. Allen Roos
U.S. Army Corps of Engineers
New York District
26 Federal Plaza, Room 2108
New York, New York 10278-0090

FILE INDEX NO. E02 0256-1
ENTERED IN DOCUMENTUM

Dear Mr. Roos:

I am writing to submit comments for the public record regarding the Proposed Plan for Soils and Buildings at the FUSRAP Maywood Superfund Site.

My obligation to my constituents of the 9th Congressional District of New Jersey, in which Maywood is located, is to ensure that the principal threat to the health of humans and to the environment -- the radiological contamination in the soil -- is eliminated in the most expeditious and cost-effective manner possible, while ensuring both short-term and long-term viability. I believe that at this time, with the level of information currently available to the public, the best course of action for the U.S. Army Corps of Engineers to pursue is Alternative #3, which utilizes excavation and offsite disposal.

Alternative #1, which recommends no action on the remaining 24 sites, was developed as a baseline for comparison, and thus is not a viable option for the people of Maywood, Lodi, and Rochelle Park. Alternative #2, which recommends monitoring and institutional controls and no excavation, is not effective as a long-term solution, as it does not deal with the root of the problem.


Reportedly, Alternative #4 is the preferred method by the U.S. Army Corps of Engineers (USACE) to complete the remediation at the FUSRAP Maywood Superfund Site. Alternative #4 involves excavation, treatment of contaminated soil requiring disposal as radioactive waste, and offsite disposal. In this instance, a treatment demonstration would occur at the Maywood Interim Storage Site (MISS). As proposed, the radioactive portion of the soil would, theoretically, be separated from the uncontaminated portion, which would require less soil to be disposed of as radiological waste. It is my understanding that the fieldwork for the treatment demonstration is complete, but the USACE continues to evaluate the results. There is, however, a lack of convincing evidence that Alternative #4 will work as designed and also a risk that this plan will slow remediation of the final 24 sites by drawing resources away from the project. The residents of Maywood want to ensure all contaminated soil, at any level, is removed. I share that goal. Therefore, because I am not convinced of the effectiveness or viability of this soil treatment plan in terms of human health or environmental health, I do not believe that it is in the best interests of my constituents to support Alternative #4.

Page 2
October 2, 2002

As a result, I support Alternative #3, which involves removing the contaminated soils above the appropriate cleanup criteria, and disposing of the contaminated soil offsite. Alternative #3 provides the best short-term and long-term effectiveness with limited risk for the protection of human health and the environment. While Alternative #3 is slightly more expensive than Alternative #4, the effectiveness of excavation and disposal has been demonstrated.

I appreciate the opportunity to submit my comments for the record on the Proposed Plan for the FUSRAP Maywood Superfund Site, and I look forward to continuing to work with the local municipalities and the U.S. Army Corps of Engineers towards completion of remediation of the site.

Sincerely,

A handwritten signature in black ink, appearing to read "Steve Rothman". The signature is fluid and cursive, with a long horizontal stroke at the end.

Steven R. Rothman
Member of Congress

SRR:kd

DEAN E. SANDOVAL, D.D.S.

General Dentistry



September 14, 2002

Allen Roos, Project Manager
U.S. Army Corps of Engineers, CENAN-PP
26 Federal Plaza, Rm. 2108
New York, NY 10278-0090

Re: Cotter Uranium Mill in Canon City, Colorado

Dear Mr. Roos,

I writing you about my concern regarding the Cotter Corporation's plan to accept treated soil from the Maywood Superfund site in New Jersey.

I am a dentist who has been in practice in Canon City for 20 years. During this time I have seen the Cotter Corporation experience becoming a Superfund site. Currently, the Cotter Corporation has been cited by governmental agencies for various violations, some of which have not been corrected. Given its history I, and many others in our community, do not feel that the Cotter Corporation is qualified to be a waste disposal site.

The negative effect that Cotter has imposed upon our community far outweighs any economic gain it may provide to our region. Their only concern is for their own economic gain and they continue to be insensitive to the well-being of our community.

Please consider Cotter's history and questionable qualifications in your assessment in determining their request to be a site for the Maywood soil.

A handwritten signature in cursive script that reads "Dean E. Sandoval".

Dean E. Sandoval, D.D.S.

2119



Allen Roos, Project Manager
U.S. Army Corps of Engineers, CENAN-PP
26 Federal Plaza, Rm. 2108
New York, NY 10278-0090

DEAN E. SANDOVAL, D.D.S.



10278/0090

SAIBER SCHLESINGER SATZ & GOLDSTEIN, LLC

ATTORNEYS AT LAW

ONE GATEWAY CENTER
13TH FLOOR
NEWARK, NEW JERSEY 07102-5311
TELEPHONE (973) 622-3333
TELECOPIER (973) 622-3349
WWW.SAIBER.COM

DAVID M. SATZ, JR.
BRUCE I. GOLDSTEIN*
WILLIAM F. MADERER*
DAVID J. D'ALOIA*
SEAN R. KELLY*
JEFFREY W. LORELL*
ARNOLD B. CALMANN*
DAVID J. SATZ
STEPHEN H. KNEE*
JOAN M. SCHWAB
JENNINE DISOMMA*
JAMES H. FORTE
VINCENT F. PAPALIA*
RANDI SCHILLINGER*
MICHAEL J. GERAGHTY*
NINO A. COVIELLO*
MICHELLE V. FLEISHMAN*

* MEMBER OF NJ & NY BARS
* CERTIFIED BY THE SUPREME COURT
OF NEW JERSEY AS A CIVIL AND
CRIMINAL TRIAL ATTORNEY
* CERTIFIED BY THE SUPREME COURT
OF NEW JERSEY AS A CIVIL TRIAL
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JOHN V. DANNER, JR.
JENNIFER S. MANHEIM*
NICOLE H. CHASE*
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JENNIFER R. GREENBAUM
MICHELLE L. SPEYER*
PAOLA CIAPPINA*
ANTHONY DEL GUERCIO*
DANIELLE PANTALEO*
LAUREN TALAN*

September 10, 2002

VIA FEDERAL EXPRESS

Mr. Allen Roos
U.S. Army Corps of Engineers
New York District
26 Federal Plaza, Room 2108
New York, NY 10278

**Re: 80 Industrial Road
Lodi Boro, Bergen County**

Dear Mr. Roos:

We are writing on behalf of our client, Windows Technologies, LLC ("Window Technologies"), is the owner of 80 Industrial Road, Boro of Lodi, County of Bergen, State of New Jersey (the "Property"). Please accept this letter as Window Technologies' comments to the Proposed Plan for Soils and Buildings at the FUSRAP Maywood Superfund Site (the "PP").

Windows Technologies is requesting that the PP clarify the scope of the institutional control that will be required for the inaccessible soils on properties that are listed in the PP to be cleaned up to the unrestricted standard. The PP recommends the application of the unrestricted use criterion for 17 of the 24 commercial properties. The Property is included in the listing of these 17 properties.

The PP provides that as to areas of properties to be cleaned up to the unrestricted standard that contain inaccessible soils that cannot be cleaned up to the unrestricted standard, they will be cleaned up when those areas become accessible. In the

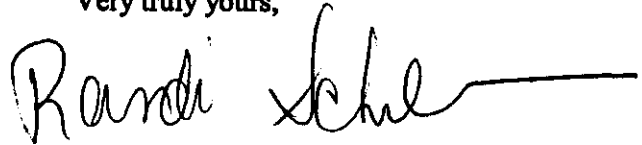
Mr. Allen Roos
September 10, 2002
Page 2

SAIBER SCHLESINGER SATZ & GOLDSTEIN, LLC

interim, the PP provides that "institutional controls (e.g., deed notices, easements, covenants, zoning controls, etc.) [will be] implemented as necessary for those properties where radioactivity remains above an average of 5 pCi/g of radium and thorium-232 combined above background concentrations and/or due to the presence of inaccessible soil." PP at page 33. It is not clear from the foregoing statement that these institutional controls will be limited solely to those specific areas of a property where inaccessible contaminated soils are present. Window Technologies believes that, with respect to the properties that are the subject of an unrestricted cleanup, the PP should clearly state any institutional control that is placed on such a property due to inaccessible soil, the institutional control will be limited solely to those areas within such property where the soil has not been remediated to the unrestricted standard and the institutional control will not apply to the entire property.

Thank you for your attention to this matter.

Very truly yours,

A handwritten signature in black ink that reads "Randi Schillinger". The signature is written in a cursive style and is followed by a horizontal line extending to the right.

Randi Schillinger

RS/mt

cc: Window Technologies, Inc.
Joel Cuccio, President
David W. Reger, Esq.



Public Comment Form on the

PROPOSED PLAN FOR SOIL AND BUILDINGS AT THE FUSRAP MAYWOOD SUPERFUND SITE

PLEASE RETURN THIS FORM BY MAIL TO:

Allen Roos
US Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Date: October 9, 2002
Name (optional): Elmer Smaller Jr
Affiliation (if any): _____
Address (optional): _____
Telephone (optional): _____

Enter comments in the space below. Use the other side or additional sheets as needed. If comments are on specific sections or pages in the document, please note that information in the blank below. Please be specific so that comments can be clearly understood. Thanks.
Section or page #: _____

Cotter is too close to town. Our golf course adjoins Cotter property. Homes are within 1/4 mile of Cotter. Cotter has stated they plan to stockpile Maywood materials for years allowing dust to blow.

Canon City has a water shortage which would preclude Cotter from keeping their material wet.

Cotter is in the wrong business and in the wrong location.

Elmer Smaller Jr.

Elmer Smaller Jr
(Sonny)

Comment forms can be submitted by mail in the pre-addressed envelope provided. Mail returns must be postmarked no later than October 12, 2002.

Mr. Allen Roos, Project Manager
U.S. Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

RE: Approving Cotter Corp. to Process and Store Maywood Waste

Dear Mr. Roos,

It has come to my attention that the Army Corp. of Engineers is seeking public comment on your plan to clean-up contamination in Maywood. As you know, the Cotter Corporation, here in Canon City, is attempting to ship, store or dispose of Maywood Superfund Waste. It is with great concern and fear for the health and safety of my community that I respectfully request that you deny this request and give no further consideration to the Cotter Corporation for their site. As you know, the Cotter Corp. has an incredibly irresponsible, abysmal record of addressing and resolving issues related to the health and safety of its workers and our community.

As you well know, the Cotter Corp. and their disregard for safety and responsible mining practices and procedures turned the Lincoln Park area, as well as their facility, into a Superfund Site while under the oversight of CDPHE. Now they are attempting to turn their mill operation into a toxic and radioactive national dump site. They are attempting to manipulate their license renewal application to ensure this change without regard for the health and safety of our community, their workers, and our environment. **Changes this drastic demand an Environmental Impact Study.** Yet, they are attempting to deceive the public about their revised mission as they deliberately lied to the public about this issue at the public hearings and the House and Senate hearings on HB 1408. They should not even be considered as part of your clean-up process.

As you well know, they were cited in April for 14 different violations by CDPH&E, many of which were repeat violations as far back as 1999 and 2000. They still have not met the requirements of the July 2002 suspension notice. They still haven't provided CDPH&E with documented data regarding the accuracy of calculations of worker exposure data. Again, this was data requested in both 2001 and 2002. These repeat violations and the lack of requested data clearly shows their disregard for CDPHE requests, their disregard for worker safety issues, and their blatant disregard for the rules and regulations that monitor and supposedly oversee their operation. They are too irresponsible to undertake this contamination clean-up process. Please do not even consider them to meet your needs. They can't and won't deliver.

As you know, numerous spills and accidents, both reported and unreported, have happened in the three years that Cotter decided to operate again. Many of these spills and accidents released contaminants into the air and liquids into the ground, with a potential to migrate outside Cotter's facility. Inspections by CDPHE have noted the poor condition of the CCD tanks, that have leaked radioactive contents onto the cracked and eroded cement pads, again allowing contaminants to be released into soils, with a potential to migrate outside Cotter's facility. Employees noted the toxic pond nearest to the facility leaking and running downhill for a period of days, and this happened several times. Inspections and the ALARA Audits also noted numerous items of poor housekeeping, where Cotter was repeatedly told to clean yellowcake from walls and floors. One team of inspectors visited several times, each time noting a wheelbarrow sitting neglected and needing yellowcake cleaned out of it. These worker safety repeat violation issues clearly demonstrated their lack of commitment to ensure worker safety and a blatant disregard for CDPHE rules and regulations. The Cotter facility is not the type of facility you need to clean-up contaminated Maywood waste.

They can't even clean up their own mess.

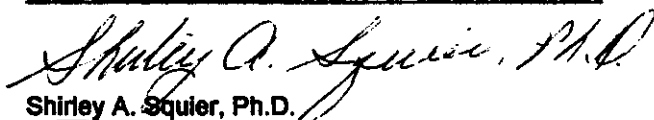
In addition, Cotter received and processed alternate feed materials and overexposed their workers, leaked radioactive material into surrounding environment through cracked cement pads when they received highly radioactive materials from Sequoyah Fuels Corp. OK. Experts in the industry documented that the radioactive waste materials definitely overexposed those workers and leaked

contaminants into the ground and into the air as well, when dumped. How can you even consider shipping to Cotter when they consciously chose to ignore CDPHE license conditions 16.1 & 16.2 as they willfully deceived, received and processed material they knew would endanger their employees and our community? Please do not consider them as a toxic waste disposal site. This request is based on their deceitful and dangerous practices. Your mission is to facilitate the clean-up of Maywood waste in a safe and responsible manner, not facilitate their greed and disregard for the health and safety issues related to their employees and our community. Please do not consider them now or in the future for clean-up activities and storage or disposal of toxic waste.

As you may know, there are no regulations in place that deal with storage, disposal and processing of CERCLA Superfund mixed waste and alternate feed materials in the state of Colorado. I have requested that those procedures be developed by CDPHE, or the EPA, along with conducting a thorough EIS, before Cotter's request is considered, by the EPA, to process and store CERCLA Superfund Waste. This would at least give the EPA and CDPHE the means to adequately investigate the ramifications of their request to the workers and our community. It would also allow the EPA and CDPHE the ability to oversee the Cotter operation and enforce the regulations. As of this writing Cotter is basically dictating to the CDPHE and overseeing themselves. They have, after the fact, determined what they have imported, processed or stored, without adequate rules and oversight, and permission of the EPA. They have repeatedly demonstrated to CDPHE, their unprotected workers, and this community a blatant disregard for any authority, regulations, and the health and safety of this community. By you not considering Cotter for the clean-up contamination, it might provide them with the motivation to clean up their act and demonstrate to you and our community that they could become a responsible and conscientious member of our community. As you know, they are not, and have no intention to be unless the almighty dollar is withheld until they conform and reform.

As you might guess, I could go on and on about their violations, lack of regard for worker and community health and safety, but I will close again requesting that you do not consider the Cotter Corp. for any of your plans to clean-up the contaminated Maywood soil. Until a thorough EIS has been completed, until they have addressed and corrected all of the violations, and rules and regulations are in place to monitor and oversee their changing role and mission, they should not be considered a responsible site for Maywood or any other FUSRAP or CERCLA contaminated waste. **Again, it is obvious that an Environmental Impact Study is needed** before anything is done or even considered.

Again, in conclusion, I urge you to delete the Cotter Corporation from any consideration for the storage or disposal of contaminated Maywood waste. Thank you for any consideration that you give to my request. **Over 4,000 people in Fremont County have signed petitions and believe the way that I do. We do not want to become a national or international toxic waste disposal site, now or ever. Please understand, recognize, and respect our position necessitated by the health, safety, socio-economic needs and desires of our community.**


Shirley A. Squier, Ph.D.



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Project Manager
Mr. Arthur Rose, Project Manager
U.S. Army Corps of Engineers
CENRAN-PP, Room 2108
76 Federal Plaza, Room 2108
New York NY 10278-0090

**U.S. Army Corps of Engineers
August 28, 2002 Public Meeting
Maywood Public Library (Trinka Hall), Maywood, NJ
Public Comment Form on the**

**PROPOSED PLAN FOR SOIL AND BUILDINGS
AT THE FUSRAP MAYWOOD SUPERFUND SITE**

PLEASE RETURN THIS FORM TO:

Allen Roos
US Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Date: September 11th 02
Name (optional): _____
Affiliation (if any): _____
Address (optional): _____
Telephone (optional): _____

Enter comments in the space below. Use the other side or additional sheets as needed. If comments are on specific sections or pages in the document, please note that information in the blank below. Please be specific so that comments can be clearly understood. Thanks.
Section or page #: _____

I am glad that the contamination is being cleaned up. There should be more Administrative jobs, federal jobs, not private contractors.

Comment forms can be submitted here or by mail in the pre-addressed envelope provided.
Mail returns must be postmarked no later than October 12, 2002.

Oct. 7, 2002

C. L. Williams
Canon City, CO 81212

Dear Public Officials, Councilors, Commissioners, and Legislators at ALL Government Levels:

It appears from the lack of interest from our legal representatives, and legislators from all levels of government, that they are totally indifferent to what happens to themselves and their families, or, they are totally ignorant of the short term and long term deadly effects of toxic wastes. The reasons for their inactivity and indifference can be varied and many which may have to be investigated at a later date due to the dire urgency of the toxic radioactive waste being generated not only here under our very noses, but all across our country and parts of the rest of the world.

The **FACTS** are: Radioactive toxic wastes such as uranium tailings have a half-life of 7.4 BILLION years. The effects from exposure are breast cancer, lung cancer, and genetic mutations which are passed from one generation to another in family after family.

In addition to these concerns, **WE AND COTTER ARE RUNNING OUT OF WATER** in our local area as well as across the state of Colorado. What is Cotter going to do for water when "the river runs dry"? When the river freezes? The Arkansas River here in Canon City looks to be about 2 inches above its bed at this very moment. **IS COTTER PUMPING WATER OUT OF THE MINE TUNNELS HERE IN CANON CITY** on top of which a lot of homes and businesses are built in this area to leave us crashing down who knows how many feet possibly to our deaths? It also appears to us locals that if we are smart enough to think of this, then our elected officials should have been far ahead of us if they had given this situation any thought at all.

Fremont County is one of the poorest counties in the state of Colorado, if not the poorest. We **DO NOT HAVE THE WATER** to spare for Cotter on a daily basis for the containment ponds, much less will we have the water for more containment ponds for additional toxic wastes. We **DO NOT HAVE THE MONEY** as taxpayers to fulfill future obligations which will certainly be passed on to us for the next 14.8 BILLION YEARS after Cotter has "fulfilled" their obligations for a 30-year "clean-up" program after they shut down.

WHAT KIND OF LEGACY ARE WE PASSING ON TO OUR UNSUSPECTING CHILDREN, GRANDCHILDREN AND GREAT-GRANDCHILDREN? How on earth are generation after generation of mentally and physically mutated humans going to be able to handle these kinds of problems?

HELP US, PLEASE! Respectfully submitted for the safety of future generations,


C. L. WILLIAMS

Arguments Against Cotter's Approval To Process Superfund CERCLA Waste

- **The impoundments were built for milling waste, not chemical or mixed waste that would result in this processing.**
- Marcinowski of the EPA and Phil Egidi of the CDPHE have written that normal tallings ponds haven't been tested for this kind of waste with chemicals.
- **The Hypalon liner containing the toxic liquid in the ponds will be destroyed by certain chemicals that are present in industrial and radioactive fuel enhancing waste.**
- Canon City and Fremont County are already a contaminated Superfund NPL site where OU1 (the Mill facility) has not been cleaned up. Processing such high level waste will create more avenues for migration of contamination.
- **Cotter has many violations that have not been corrected for several years.**
- Cotter's license is suspended for not correcting worker safety violations.
- **Cotter's Uranium Mill and the surrounding community of Lincoln Park is a superfund site, and it would be precedent setting to process superfund CERCLA waste at another superfund site.**
- The contaminated water and more soil contamination putting us on the Superfund NPL list has not been completely cleaned up in Fremont County, Canon City, CO.
- **An important violation with the Colorado Dept. of Public Health and Environment by Cotter, that hasn't been addressed, is the inadequate amount of funds guaranteed for final clean-up and decommissioning.**
- Cotter has no current agreement with the Department of Energy for final custodianship after decommissioning.
- **If Cotter takes in the wrong types of materials, the Dept. of Energy will not take custodianship of this site.**
- 60% of the Mill facility is underlain with mining tunnels and shafts. The deepest mineshaft in Colorado is next to the main impoundment pond. On May 21st, 2002, the CDPHE noted their were high radioactive readings at a mineshaft entrance by the dam.
- **In 2001, Cotter received and processed high level radioactive waste from Sequoyah Fuels Facility at 499,000 pCi/g without requesting approval from the CDPHE.**
- There have been numerous accidents and spills, endangering the public and environment to radioactive exposure.

DID YOU KNOW.....

**THAT THERE ARE SEVERAL
PATHWAYS OF EXPOSURE**

**WIND BLOWING ACROSS THE
TAILING PONDS CARRY THE *Radioactive*
DUST TO OUR BACKYARDS.**

**VEHICLES THAT COME AND
GO CARRY DIRT FROM THE
SITE ON THE TIRES**

**THE CLEANER THAT CLEAN
THE UNIFORMS, ALSO CLEAN
CLOTHES FOR THE PUBLIC**

**THE UPS MAN THAT DELIVERED
AND WAS ALLOWED ON SITE,
HE THEN GOES ABOUT HIS
OTHER DELIVERIES**

FOOD FOR THOUGHT

Cotterhead of CA Dept of Health

MEMO

To: Cotter Files-License 369-01 File 3
From: Phil Stoffey
Subject: Review of the pH in the Primary Impoundment
Date: July 17, 2002

I have completed my review of the pH in the primary impoundment reported in the "Environmental and Occupational Performance Report and ALARA Review" for calendar year 2001. In section 7 of the report, Cotter discusses the pH in the primary impoundment and also gives monitoring data and shows a graph. From December 1999 to October 2001, Cotter maintained the pH above the average TQEM objective of over 4.0 standard units (S.U.) The monitoring strata are checked monthly. In October 2001, Cotter began Solvent Extraction Operations and started monitoring weekly. When the pH dropped below 4.0, Cotter ceased operations and the pH rose above 4.0. This also happened for a week in December.

During an inspection on July 12, 2002, I talked to Pat Mutz (Cotter's site manager) about this. He was aware of the few weeks when the pH was below 4.0. Cotter has modified its disposal method and has increased the amount of lime to maintain the pH above 4.0.

The liquid level in the impoundment is several feet lower than what it has been in the past (Figure 7-38) of the "Environmental and Occupational Performance Report and ALARA Review" for calendar year 2001. Any addition of materials can quickly change the pH in this lowered water volume in the impoundment. Cotter was aware of the impact the low pH solvent extraction material could have on the pH in the impoundment. Cotter increased their monitoring frequency and ceased operations immediately and took measures to restore the pH above 4.0, when it did not meet the objective. Because of what they learned during this operation, Cotter modified their placement methods into the impoundment in order to meet the pH objectives. Cotter's efforts to maintain the pH in the impoundment shows awareness and attempts at improvement, even though they did not meet the license objective for a few weeks during the past two years. It is not unusual that when procedures or conditions change to operations, modifications need to be made. Cotter monitored the impact that operations had on the impoundment pH and made changes to operations to remain in compliance.

Is the hazardous waste from Maywood, NJ Safe?

Why is over \$100 million being spent to remove the hazardous waste soil from underneath homes and commercial sites, transport it across the U.S. and dispose of it in CO?

Why are there only 4 sites in the U.S. qualified to take this hazardous waste material?

Why would Cotter speculate that some of the waste may have enough uranium to be extracted for processing?

Is it safe to place 470,000 tons of hazardous waste over mine shafts? Those mineshafts "honeycomb" through the community underground. What would happen if the waste falls into the shaft?

Will it require over 9400 railroad cars over 7 years to bring the hazardous waste to our community? The residential subdivisions do not have lighted crossing guards? What would be the environmental/ health impact if a railroad car derailed, especially near the Arkansas River?

The 1/2 life of the hazardous material is more than a 1000 years - will the technology for containment be effective in 25 years, let alone 1000's of years?

As the hazardous waste is removed from railroad cars & put on a dump truck what will prevent this hazardous waste from blowing into our neighborhoods? During storage what prevents the soil from blowing?

Is clean topsoil not required to cover this hazardous waste until the plant closes? Where will the money come from for the topsoil since shutdown would likely be due to financial issues?

If Cotter does not plan on becoming a hazardous waste dump site, why is the toxic waste in Long Island, NY superfund site also being considered?

Cotter has recent history of creating a Superfund Site in our community. Why as citizens should we be comfortable with disposing of other states' Superfund sites in our community?

Cotter Corp has been designated to receive 470,000 tons of hazardous waste soil from a Superfund site in NJ. It will be transported by railroad. Types of contamination in the Maywood site materials include uranium (radioactive), thorium (radioactive) and radium (radioactive).

History

Superfund Program was established by Congress in 1980 to locate, investigate and clean up the WORST sites of abandoned hazardous waste nationwide.

National Priorities List(NPL)

At least 1 reason needs to be met to qualify a superfund site for NPL

1. Qualifies through the Environmental Protection Agency's Hazard Ranking System
2. A state can designate 1 top-priority site regardless of score.
(NJ has 115 Superfund Sites)
3. If the site meets all 3 of the following requirements:
 - a. The Agency for Toxic Substances and Disease Registry of the U.S. Public Health Service has issued a healthy advisory that recommends removing people from the site
 - b. EPA determines the site poses a significant threat to public health; and
 - c. EPA anticipates it will be more cost effective to use its remedial authority than to use its emergency removal authority to respond to that site.

The Maywood site is a Superfund Site and is listed by the EPA on the National Priorities List!

Did you know...

- On September 21, 1984, Lincoln Park and Cotter's Canon City mill site were placed on the EPA's Superfund (National Priority List). Groundwater and soil were severely contaminated. Almost 20 years later, the groundwater is still contaminated, and the EPA has stated, "The preferred alternative was for no further action" (EPA, *Record of Decision*, 1-3-2002).
- The deepest coal mine shaft in Colorado is 1,084 feet deep, beneath Cotter's facility. In 1985 water in Wolf Park shaft had risen to 135' of the surface and was rising yearly, a major pathway for contaminant migration off Cotter's site (Remedial Investigation Feasibility Study, 1986).
- The second deepest shaft in Colorado is the Royal Gorge shaft at 1078 feet, underlying Wolf Park Subdivision, from the King Coal Mine. The Royal Gorge shaft was closed by flooding from the Wolf Park shaft, according to reports.
- Cotter can release nearly 23.5 tons of sulphuric acid, and 660 lbs. of radionuclides into the air each year. (CDPHE records).

www.ccatoxicwaste.org
(719) 275-3432



Did you know...

- The number of cases of brain/CNS cancer in women who lived near the Maywood Superfund site was double the expected number. (*Cancer Incidence in Three Communities Near the Maywood Area Superfund Site*, March 1998, Dept. of Health and Human Services, Agency for Toxic Substances, Atlanta, GA.).
- Cotter claimed in their *Materials Acceptance Report, Maywood Chemical Works (March 9, 2002)* that there was no evidence that hazardous wastes had ever been produced, treated, stored or disposed on the sites, and that chemical contaminants are not considered contaminants of concern". *But*, the EPA states in their *Site History* that the principal products manufactured by MCW were chemicals used in the production of pharmaceuticals. The wastes from these processes were buried on site throughout its history. A mysterious "blue material" buried on the site turned out to be leather containing Chromium VI, a highly-carcinogenic water-soluble chemical. Rare earths were also processed.

www.ccatoxicwaste.org
(719) 275-3432





C.C.A.T. says Did you know...

- Cotter is allowed to emit 20 pci/m³s of Radon annually. The EPA has evaluated 4 pci/m³s as an action with a risk level of 7 in 100 for cancer. (CDPHE records).
- Cotter expects to use 394,200,000 gallons of water a year, more water than 1/3 of all residents in Canon City will use in a year. (According to Cotter Corporation's Zirconium plan application to CDPHE).
- Molybdenum and Uranium are in a contamination water plume less than a mile, and upgradient, from the Arkansas River (CDPHE website). Over 300,000 commercial rafters go through this section of river yearly, and the area from Buena Vista to Canon City is the most commercially rafted river in the world.
- Nuclear Regulatory Commission (10 CFR 40, Appendix A,I) states that an existing tailings pond chosen for disposal of waste should be remote from a populated area. Cotter's tailings pond impoundment is less than a mile from a large housing development, and only 2 ½ miles from the city limits of Canon City.



C.C.A.T. says Did you know...

- *Cotter's Material's Acceptance Report, March 9, 2002*, states they will control dust carrying contaminants by spraying railcars with water during unloading. We have to trust they will not unload on a windy day. *But*, Stone and Webster has stated in their *Master Construction Work Plan (Nov. 2001)*, for digging and loading in New Jersey, that they will keep all dirt wet to a depth of 6 inches.
- *Background Information (March 2002)* on Maywood from the Colorado Department of Public Health and Environment at the VFW said Cotter could accept material from clean-up sites for mineral recovery as well as disposal. *But*, a letter from the EPA (8-31-2000) states that Cotter may only receive Superfund clean-up material for disposal in the impoundments, and that they may not store or process this waste. CCAT confirmed with Terry Brown of EPA Region 8 in Denver on 4-19-2002 that this condition is still the same.
- Colorado is an agreement state. This means that CDPHE agrees to enforce laws that are at least as strict as the Federal Agencies would require.



Public Comment Form on the

PROPOSED PLAN FOR SOIL AND BUILDINGS AT THE FUSRAP MAYWOOD SUPERFUND SITE

PLEASE RETURN THIS FORM BY MAIL TO:

Allen Roos
US Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Date: Sept. 10, 2002
Name (optional): Dona Woodward
Affiliation (if any): _____
Address (optional): _____
Telephone (optional): _____

Enter comments in the space below. Use the other side or additional sheets as needed. If comments are on specific sections or pages in the document, please note that information in the blank below. Please be specific so that comments can be clearly understood. Thanks.
Section or page #: _____

We have been residents of Lincoln Park in Canyon City for 40 years. We (along with 4000 other people) signed the petition that states we don't want the dirt from Maywood coming to Cotter Corp. If its clean dirt, let Maywood keep it, but we all know it isn't.

Cotter knew the holding ponds would seep a certain amount of contamination in years past and they continued their operation and then our once beautiful agricultural area became classified as a Superfund site.

This is not fair or responsible on your part to allow more new chemicals to be introduced into an already contaminated area.

We will not sit back and allow this to happen again! We will take every legal, political & media avenue to stop this dirt from coming here.

Comment forms can be submitted by mail in the pre-addressed envelope provided. Mail returns must be postmarked no later than October 12, 2002.

Our family already had to sell one piece of property as we didn't want to live that close to the Superfund site. From what we have read Utah wants this dirt, let them have it and avoid a long struggle of trying to bring it here! Our health & welfare are too important to let this issue drop.

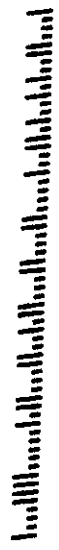
Thank-you, Dona Woodward

Mrs. Woodward



Allen Roos, Project Manager
U.S. Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

10278-0004 03



**Public Comment Form on the
PROPOSED PLAN FOR SOIL AND BUILDINGS
AT THE FUSRAP MAYWOOD SUPERFUND SITE**

PLEASE RETURN THIS FORM BY MAIL TO:

Allen Roos
US Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Date: 9-10-02
Name (optional): Larry Woodward
Affiliation (if any): _____
Address (optional): _____
Telephone (optional): _____

Enter comments in the space below. Use the other side or additional sheets as needed. If comments are on specific sections or pages in the document, please note that information in the blank below. Please be specific so that comments can be clearly understood. Thanks.

Section or page #: _____

I have been a resident of Canon City, in particular the Lincoln Park area for many years. This area has already been declared a superfund site, because of the contamination from the Cotter Corporation.

There are close to 20,000 people living less than 3 miles below the Cotter's tailings ponds "which are already the largest tailings ponds in the world"

We do not need to add more contaminated material to this already existing problem.

There are more suitable areas to dispose of this material.

Thank You
Larry
Woodward

Comment forms can be submitted by mail in the pre-addressed envelope provided. Mail returns must be postmarked no later than September 12, 2002.

Larry Woodward



Allen Roos, Project manager
U.S. Army Corps of Engineers
U.S. Army pp
CENAN Plaza, Room 2108
26 Federal NY 10278-0090
New York NY



10278+0090

CONCERNED CITIZENS OF MAYWOOD



November 11, 2002

To: United States Army Corps of Engineers
West Pleasant Avenue
Maywood, New Jersey 07607

From: Michael J. Nolan, Environmental Chairman
Concerned Citizens of Maywood

Re: September 7th, 2002 Petition, (sidewalk sale) following Public Hearing on
Soil/Buildings Radioactive Feasibility Study/Proposed Plan.

Please include the enclosed September 7th petition of (78) seventy-eight signers as their comments on the above Feasibility Study/Proposed Plan and include in the Administrative Record.

Thank you.

Michael J. Nolan

Received by

William Kollar

Date

11/11/02

Sept. 7th, 2002

MAYWOOD (U A O) PETITION

UP AND OUT!

TO: WHOM IT MAY CONCERN

WE, THE UNDERSIGNED, STRONGLY ENDORSE AN EXCAVATE - UP AND OUT - CLEAN UP PLAN OF ALL THORIUM AND CHEMICAL CONTAMINATION IN MAYWOOD TO ALLOW UNRESTRICTED RESIDENTIAL USE.

NAME (PRINT) / SIGNATURE	ADDRESS
MAP VELLOW HUNIKALE	[REDACTED]
JEANETTE MORA	[REDACTED]
MARIE C. STRAUSS	[REDACTED]
ALEXIA CROMPTON	[REDACTED]
JOE CROMPTON	[REDACTED]
JEAN C. GIPSON	[REDACTED]
JANIS GIPSON	[REDACTED]
DOROTHY GEMMINS	[REDACTED]
ROSEMARY BAY	[REDACTED]
[Signature]	[REDACTED]
CAROL KRUG	[REDACTED]
MICHAEL HITTORD	[REDACTED]
BERT NEANEY	[REDACTED]
[Signature]	[REDACTED]
ANN SCHMIDT	[REDACTED]

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NAME (PRINT) / SIGNATURE	ADDRESS
GRACE WILSON	[REDACTED]
LOA TAYLOR [Signature]	[REDACTED]
Reg McDowell	[REDACTED]
with [Signature]	[REDACTED]
Fameli [Signature]	[REDACTED]
*Albert & Beeline Fink *Call for meeting days	[REDACTED]
John D. Knapp [Signature]	[REDACTED]
Theresa Kabe [Signature]	[REDACTED]
Michael [Signature]	[REDACTED]
Dohen [Signature]	[REDACTED]
R Kaminsky	[REDACTED]
T. O'Connell	[REDACTED]
John [Signature]	[REDACTED]
M. [Signature]	[REDACTED]

SEP 17th 2002

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NAME (PRINT) / SIGNATURE	ADDRESS
SUSAN CHAN <i>Susan Chan</i>	[REDACTED]
Claire Skelley <i>Claire Skelley</i>	[REDACTED]
-14 Uelusa <i>17</i>	[REDACTED]
Linda G. Gorstmann <i>Linda Gorstmann</i>	[REDACTED]
<i>Richard Kuhn</i>	[REDACTED]
<i>Ruth Stewart</i>	[REDACTED]
Jaimie Garcia <i>Jaimie Garcia</i>	[REDACTED]
Comille Hoenes <i>Comille Hoenes</i>	[REDACTED]
T. Desmond <i>T. Desmond</i>	[REDACTED]
Michelle Gonzalez <i>Michelle Gonzalez</i>	[REDACTED]
<i>Dee Ann</i>	[REDACTED]
<i>Hugo Han</i>	[REDACTED]
Robyn Rohn <i>Robyn Rohn</i>	[REDACTED]
Susana Rubio <i>Susana Rubio</i>	[REDACTED]
Nancy Priera <i>Nancy Priera</i>	[REDACTED]
Emily Rivera <i>Emily Rivera</i>	[REDACTED]

Sept. 7th 2002

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NAME (PRINT) / SIGNATURE

ADDRESS

V. Ann Bissell

Marion Baragona

Alberto Baragona

Lorraine Schmitt

Luella Bontas

Lenore Titus

Greg W. Vito

Bernie Row

J. Nina Ortiz

B. Cromwell

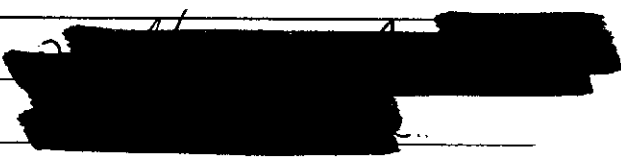
Rahul a. Yang

W. V.

GILDA J. SCHROEDER

Theresa Ventura

John J. Rykowski John J. Rykowski



59, H. 7th 2002

MAYWOOD (U A O) PETITION

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NAME (PRINT) / SIGNATURE	ADDRESS
J Muskivitch <i>Christine Muskivitch</i>	[REDACTED]
D Smith <i>D. Smith</i>	[REDACTED]
n Hugen, C. <i>C. n. Hugen</i>	[REDACTED]
Kelly Felber <i>Kelly Felber</i>	[REDACTED]
John THOMAS <i>John Thomas</i>	[REDACTED]
ALISON KEENAN <i>Alison Keenan</i>	[REDACTED]
CHRISTINE SANTOS <i>Christine Santos</i>	[REDACTED]
EFRAIM MORALES <i>Efrain Morales</i>	[REDACTED]
Tamara Grove <i>Tamara Grove</i>	[REDACTED]
Mahelle Panissidi <i>M. Panissidi</i>	[REDACTED]
Willemina LePre <i>Willemina LePre</i>	[REDACTED]
Beryl Anderson	[REDACTED]
Bob Hogan <i>Bob Hogan</i>	[REDACTED]
J. Saw	[REDACTED]
<i>[Signature]</i>	[REDACTED]

Sept. 7th 2002

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NAME (PRINT) / SIGNATURE ADDRESS

Michael J. Nolan SR	[REDACTED]
Mary Beth Nolan	[REDACTED]
Michael Nolan SR	[REDACTED]
Barbara Moul	[REDACTED]

C.C.A.T. Colorado Citizens Against ToxicWaste
City, CO 81215

PO Box 964 - Canon

November 11, 2002

FILE INDEX NO. E02-56-1
ENTERED IN DOCUMENTUM

Allen Roos, FUSRAP Project Manager
U.S. Army Corps of Engineers, CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Via E-mail: allen.d.roos@usace.army.mil

Re: Public Comment on Proposed Plan for Clean-up at Maywood

Dear Mr. Roos:

When our community first heard that the Maywood FUSRAP clean-up soils were coming to the Cotter Uranium Mill 2 ½ miles south of Canon City, many of us were shocked and dismayed. Our organization was formed 2 days after Cotter's meeting at the VFW. Since then, our mission has been to research all aspects of radioactive waste disposal and processing at the Cotter Mill, and to disseminate that information to our community. Accurate information regarding Cotter's 54-year relationship with our community has been as sparse and difficult to come by as the information offered about their present and future business plans. You must know that it was unacceptable behavior for a neighbor like Cotter, one who has done irreparable harm in the community, to announce their intention to become a national radioactive waste dump just 3 weeks before the arrival of the first shipments. We have learned a great deal in the past 8 months. This knowledge has confirmed our original opinion that Canon City is entirely too close to a radioactive mill handling toxic materials that find pathways into our homes through the air we breath and the water we use. The intention of this Public Comment period is to hear opinions about the plan for

Our Goal: to inform and educate the public regarding hazardous waste

cleaning Maywood, and we will address a few of those issues. But - we will first address the overwhelming evidence that the Cotter Uranium Mill and superfund site is not the appropriate final resting place for Maywood's contaminated soils.

I. The Superfund Site

The Cotter Uranium Mill, now owned by General Atomics, and the surrounding community of Lincoln Park have been a Superfund Site since 1984, eerily similar to Maywood. We feel great sympathy for the people of Maywood because of our research on the area, and our similar experiences with illness, birth defects, cancer, and property damage. We differ, however, in the fact that over \$600 million dollars will be spent cleaning Maywood, while only a few million have been spent cleaning our community. We differ in the fact that no one, until a recent newspaper editorial, has ever suggested that our contamination be hauled away to a more isolated site remote from groundwater. To the best of our knowledge, as no one from the EPA has provided an instance, we believe bringing Superfund contamination from one site to another Superfund Site is in fact precedent setting.

In fact, the most contaminated area of our Superfund Site, the 1,900 acre Cotter Mill and source of the contaminants, has not been cleaned by even 20%. And - it will not be cleaned until decommissioning, which has now been moved forward from 2002, some 25 or 30 years into the future, if Cotter is allowed to become a national radioactive dumpsite. The old tailings area that held radioactive waste and liquids for 20 years still has 12-15 feet of contaminated radioactive soil that has not been moved, soil that continues to pollute our groundwater, because Cotter sits up-gradient from Lincoln Park and Canon City. The Remedial Action Plan of 1988 called for vegetation over this area, but it is as bare as the high desert we live in. The ore stockpiles that were of such concern during the Remedial Investigation in 1986 still sit without cover, and we must rely on the least expensive alternative of Cotter spraying them with fixatant to prevent wind-blown contamination. The Colorado Department of Public Health and Environment (CDPHE) has not done regular split sampling of Cotter's air monitors for approximately 10 years. Though the Colorado Bureau of Investigation found that Cotter had falsified records in the early 1980s, and

Cotter has recently been given violations and had their license suspended, the CDPHE continues to allow Cotter to self-monitor the vast majority of the time.

II. The Impoundment Ponds

A main argument for bringing Maywood soils to Cotter has been that the mill will use the soil to cover higher radioactive material, and that it is a "safer" resting place for these soils than Maywood, with an impoundment pond lined with Hypalon built in 1979. Appearances are not what they seem. Liquid and tailings cover many sins, as noted in the 1986 Remedial Investigation:

"Since October 1980...(there is) memoranda documenting over 70 breaches of the Hypalon liner...six instances were caused by 'stretching' or 'excess tension', four had causes attributed to 'tailings line' damage, three were described as 'equipment damage'... This history was compiled from observations where the Hypalon is exposed and observable; most of the Hypalon is submerged beneath raffinate and is neither observable nor repairable. While many of the breaches are due to operation and maintenance of the impoundment, others are related to poor construction practices, affecting all areas of the impoundment. ...photographs taken by Cotter Corporation during the period of impoundment construction show...large earth moving equipment spreading cover material on the Hypalon liner. ...Close inspection of these photos...show large rocks and cobbles in the material," (3-26 to 3-28).

To further complicate the issue, since 1979 Cotter was to maintain a PH 4 level to protect the clay and Hypalon liner from acids. They failed to accomplish this, with PH levels well below 4 from 1979 until 1998 when the PH was finally at or above 4. A recent letter from CDPHE noted that the PH was low again this year, and Cotter has allowed the primary 91-acre impoundment pond to dewater to an extreme low, exposing the beaches and Hypalon to damaging UV rays.

We now know that Cotter wants to cover these beaches with the Maywood soil, not the high radioactive tailings, but the beaches, where the soils will be exposed to

wind and the elements, and we will again have to trust that Cotter will use enough of the expensive fixatant to keep the ponds from dusting. Our concern now is just exactly how much it costs yearly to spray 660 acres of the ponds and mill facility to keep dust down? Will Cotter do an adequate job? If the dust from the soil is dangerous to Maywood, it is equally dangerous to the neighbors who live within ¼ mile of Cotter. It is Cotter's monitoring that assures the CDPHE there is no leakage from the impoundment ponds or radionuclides in the air, and that is not assuring to the surrounding community.

III. An Inferior Environmental Assessment for the Maywood Soils

The CDPHE recently rejected Cotter's application for the Maywood soils based on inadequacies in the Environmental Assessment (EA), inadequacies we would characterize as gross. Cotter was also recently informed that if they want to resubmit for Maywood, they will have to do the entire process again, with public meetings.

Cotter's Environmental Assessment didn't evaluate the conditions of the rail road tracks in Canon City and to the mill, nor did it adequately assess the impact of train accidents within Colorado and Fremont County, nor the impact to houses in close proximity to the tracks. The EA especially failed to properly research or provide data on the social and economic impact of Canon City becoming a radioactive waste dumpsite. There was no data regarding impact to our tourism industry, or on the effect of a radioactive dump on real estate values. It lacked behavioral science data on social stigma, perception, and psychological stress. The EA lacked research on environmental scenarios such as drought and how receiving the Maywood waste would impact water usage in the area, and it didn't address a broad scenario of possible emergency situations. It also failed to provide adequate alternatives to receipt of Maywood waste, such as the alternative of "no action." It only compared the alternative site of Envirocare in relationship to train travel distance, rather than comparing the physical differences, which would have noted the facility in Utah as isolated from a population and from groundwater.

IV. Repeated Violations and License Suspension

Cotter's track record in regard to regulatory compliance has been atrocious since the 1970s. Violations from 20 years ago are repeated in 2002. Cotter's Notice of Violation (April 2002) noted a failure to take urine analyses every 7 days, to adequately test a pregnant woman and her fetus, a failure to follow up with employees showing high exposure, a failure to prevent a UPS driver from entering restricted areas, a failure to properly test packages and equipment leaving the mill for beta and gamma levels, and numerous problems with respirator use and record keeping. There were a record number of 16 violations and 18 Items of Concern.

Most notable in the Items of Concern was the fact that Cotter has failed to provide financial assurance for decommissioning and closure, and the EPA in a letter of Sept. 13, 2002, wondered why this non-compliance with a regulation was only an "Item of Concern." The EPA was also concerned about the failure of Cotter to have an inventory and tracking system of all materials that have been processed and disposed of in the impoundment ponds. The EPA's greatest concern was that the Department of Energy (DOE) might refuse responsibility for the site if improper materials have been disposed of in the ponds, and that Cotter has no agreement with the DOE for closure and decommissioning. Bringing Maywood's 470,000 tons of contaminated soil (or 300,000 tons that it may now be) is foolhardy under these conditions, especially to the people who will have to live with them into perpetuity.

V. Proposed Plan for Clean-up at Maywood

Reading the plan, it appears quite obvious that alternatives #3 and #4 are the only ones given any real credibility, and that is probably because they both include removal to an off-site facility. In alternative #4 there are two methods explored, "capping of the soil" on the MISS if it meets a certain criteria, and "treatment of the soil," which reduces the volume to be removed. It seems that USACE didn't consider another option, which might be a 5th alternative, to treat the soil, create a lined impoundment such as we have at Cotter, and then cap the soil instead of removing it to an off-site facility. Though I'm sure this alternative will not be acceptable to Maywood, it would eliminate the necessity of transport half way across the U.S., would reduce possible exposure and eliminate statistical certainty of accidents, and it would

eliminate exposure that is sure to happen during the unloading and trucking to Cotter's impoundment. It's possible that this alternative would save \$100 million or more in transport costs and payment to dispose in an off-site facility like Cotter.

Conclusion

The only plan for clean-up at Maywood that is acceptable to both the people of New Jersey and the people of Fremont County, Colorado, is removal of the contaminated soils to a location that is remote from a population, and that will not impact ground water.

Attached is a Resolution from CCAT, requesting that the CDPHE, EPA, and NRC begin immediate steps toward clean-up and decommissioning of the Cotter Uranium Mill, for all the reasons stated above and in the Resolution. Thank you for including our community in your request for public comment, and thank you for the visits that you have made to Canon City. Maywood and our community have suffered and endured enough, and we hope that you will make the wise and fair decision to place this material far from a populated area.

Sincerely,

Colorado Citizens Against ToxicWaste

Sharyn Cunningham
Co-Chair

C.C.A.T. Colorado Citizens Against ToxicWaste
City, CO 81215

PO Box 964 - Canon

Cc: Cole Finegan
Mark Mathews

COLORADO CITIZENS AGAINST TOXICWASTE, INC. RESOLUTION 2002-01

A resolution of Colorado Citizens Against ToxicWaste Inc. (CCAT) establishing our position on the issue of the Cotter Corporation, based on extensive research and pursuant to CCAT's primary purpose of education for the public welfare, does now state the following:

WHEREAS, CCAT is the largest non-profit corporation in Fremont County investigating and researching the matter of radioactive waste disposal in our community and dedicated to organizing and educating citizens about the import of toxic and radioactive waste into Fremont County Colorado; and

WHEREAS, the publication on October 18, 2002, by the Canon City Daily entitled "The Cotter Files" was the first time facts were made available to the citizens in an understandable form and reveals documented past, present, and potential future incidents of contamination to Fremont County; and

WHEREAS, based on these revealed facts, the Canon City Daily Record arrived at conclusions published October 17, 2002 in an editorial entitled "Cotter's time has come and gone," calling for the Colorado Department of Public Health and Environment to initiate actions to bring about decommissioning of the Cotter facility; and

WHEREAS, this editorial reminds us that decommissioning would establish that the people of our community have a value greater than an industry that has polluted the environment, and that Fremont County would benefit from the increase in highly technical and entry level jobs that would be required during decommissioning and clean-up activities; and

WHEREAS, Cotter has been making substantial changes to their business; on a license that expired in 2000, while publicly stating radioactive waste is not their main business, when in fact Cotter's December 2000 License Renewal Application and 5-year proposed business plan show their intent for some time has been to change their mission so that approximately 80% of their business would be the handling of radioactive waste (also referred to as "alternative feed material") for profit; and

WHEREAS, the Nuclear Regulatory Commission (10 CFR 40, Appendix A,I) and Colorado Radiation Control Regulations (Part 18, Appendix A, Criterion 1A) state existing tailings ponds designated for disposal of waste should be remote from a populated area and Cotter's tailings pond impoundment is within ¼ mile from a large Canon City residential area; and

WHEREAS, clean-up alternatives for the mill and Superfund site, as well as Cotter's surety bond, were based on closure and decommissioning by the year 2000, according to the 1986 Feasibility Study prepared for the State of Colorado, Remedial Action Plan (RAP), pursuant to Colorado District Court Case 83-C-2389; and

WHEREAS, the Cotter Uranium Mill has allowed their impoundment ponds to evaporate, posing a clear and present danger of airborne radioactive particles, though the Remedial Action Plan governed by the Consent Decree requires complete coverage of the secondary impoundment pond by water; and

WHEREAS, Colorado is an "Agreement State" with regard to the nuclear industry and must enforce laws to the same level as defined by the Nuclear Regulatory Commission but retains the ability to enact stronger laws; and

WHEREAS, the Colorado Department of Public Health and Environment is the agency designated to uphold the laws of the state in these areas, and the mission of the CDPHE is to protect and improve the health and environment of the people of Colorado; and

WHEREAS, the Colorado Court of Appeals (No. 01CA1791, August 29, 2002) ruled that "Cotter had expected and intended a discharge of pollutants from the tailings ponds," and the Court will not require coverage of these deliberate acts by the seven companies insuring Cotter, raising the question of insurability of Cotter's operations; and Cotter has not posted an adequate financial assurance warranty, as legally required, to insure sufficient funds for site decommissioning.

THEREFORE, BE IT RESOLVED, based on our research and overwhelming evidence, and in the interest of the public health and welfare, the Board of Directors of Colorado Citizens Against ToxicWaste calls for the Colorado Department of Public Health and Environment to deny re-licensing of the mill, and requests the CDPHE, Environmental Protection Agency, and the Nuclear Regulatory Commission immediately begin decommissioning and clean-up of the Cotter Uranium Mill.

BE IT FURTHER RESOLVED, that CCAT, in the interest of the public health and welfare believes it urgent that these agencies continue on-going testing of the community to ensure the safety of all the residents of Fremont County in light of the existing Superfund site; and pledge the necessary financial resources required for decommissioning.

Adopted 7 November 2002

Board of Directors
Colorado Citizens Against ToxicWaste, Inc
Jeri L. Fry and Sharyn Cunningham
Co- Chairs

**SIERRA CLUB GLEN CANYON GROUP'S COMMENTS ON PROPOSED
PLAN FOR SOILS AND BUILDINGS AT THE FUSRAP MAYWOOD
SUPERFUND SITE, MAYWOOD, NEW JERSEY, AUGUST 2002**

I. COMMENTS ON SPECIFIC SECTIONS OF THE PROPOSED PLAN

1. Page 4.

The Proposed Plan states:

The Stepan burial pits, licensed and regulated by the Nuclear Regulatory Commission (NRC), are included in the proposed remedy.

COMMENT:

According to the public record, Source Material License No. STC-1333 for the Stepan burial pits, last issued in 1987, expired in 1992. There is no indication on the public record that the Stepan license was renewed or is in "timely" renewal. Therefore, it is unclear whether the Stepan pits are "licensed" by the Nuclear Regulatory Commission (NRC). It is also unclear as to what extent the NRC has "regulated" the burial pits.

This question should be resolved.

The Proposed Plan fails to discuss the Memorandum of Understanding between the NRC and the U.S. Army Corps of Engineers (USACE) that was published in the Federal Register on July 12, 2001 (66 Fed. Reg. 36606). The Proposed Plan fails to discuss the regulatory and administrative process that will take place so that the USACE will be able to remediate the Stepan burial pits.

The USACE should provide information on this process to the public.

2. Page 7. Summary of Preferred Alternative — Treatment

The Proposed Plan states:

If treatment were used, the contaminated stream from treatment would be disposed offsite at a licensed facility permitted to accept radiological waste. The remaining soil containing lower amounts of radiological materials below criteria (i.e., 15 pCi/g combined radium-226 and thorium-232) would be either backfilled at the MISS or disposed offsite at a suitable landfill.

COMMENT:

There seems to be a conflict between the Atomic Energy Act of 1954, as amended, (AEA) and the preferred alternative. The preferred alternative proposes to separate some of the Maywood tailings based upon size and radiological criteria and

dispose of some of that material at either the Maywood Interim Storage Site (MISS) or a "suitable landfill." The Proposed Plan does not explain how the separation process will work to create material that is no longer defined as 11e.(2) byproduct material and, thus, is suitable for disposal at a facility that is not licensed to accept 11e.(2) byproduct material.

On September 20, 2001, the NRC notified Envirocare, Inc., that the NRC had determined that the tailings in the entire Maywood site were 11e.(2) byproduct material. The NRC did not define or circumscribe what they considered to be the Maywood tailings. The NRC has reiterated their position with respect the application of the AEA definition of 11e.(2) byproduct material to the Maywood tailings on several occasions.

The AEA defines 11e.(2) byproduct material as:

The tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.

This definition is reiterated in NRC regulation at 10 C.F.R. § 40.4. The definition of 11e.(2) byproduct material is not based on radiological criteria, but is based upon the source of and processing history of the material.

The NRC, under the Atomic Energy Act, regulates 11e.(2) byproduct material under the provisions of 10 C.F.R. Part 40. 10 C.F.R. § 40.1 (Purpose) states:

(a) The regulations in this part establish procedures and criteria for the issuance of licenses to receive title to, receive, possess, use, transfer, or deliver source and byproduct materials, as defined in this part, and establish and provide for the terms and conditions upon which the Commission will issue such licenses. (Additional requirements applicable to natural and depleted uranium at enrichment facilities are set forth in Sec. 70.22 of this chapter.) These regulations also provide for the disposal of byproduct material and for the long-term care and custody of byproduct material and residual radioactive material. The regulations in this part also establish certain requirements for the physical protection of import, export, and transient shipments of natural uranium. (Additional requirements applicable to the import and export of natural uranium are set forth in part 110 of this chapter.)

Therefore, it is our understanding that, if the tailings at the Maywood site were all 11e.(2) byproduct material, then the NRC would regulate them. Neither the NRC, nor the USACE, has explained why the NRC did not take regulatory responsibility for the Maywood tailings once a determination was made that the tailings were all 11e.(2) byproduct material. The USACE should address this issue.

Part 40 sets forth the requirements for the issuance of licenses for the receipt, possession, use, transfer, delivery, long-term care and custody of 11e.(2) byproduct material. There appear to be no provisions in Part 40 for the receipt, possession, use, transfer, delivery, long-term care and custody of 11e.(2) byproduct material at facilities that are not licensed by the NRC or an NRC Agreement State.

Therefore, it would appear that all of the Maywood tailings would have to be disposed of at a site that is licensed to receive and possess 11e.(2) byproduct material.

How and why some of the Maywood tailings can be turned into non-11e.(2) byproduct material via a physical process is not explained in the Proposed Plan. The legal and regulatory implications of the proposed treatment alternative are not discussed in the Proposed Plan.

It is imperative that the USACE properly address the question of how and why the soils "containing lower amounts of radiological materials" would no longer be defined as 11e.(2) byproduct material.

3. Page 8.

The Proposed Plan states:

The public would be notified of both determinations—i.e., whether treatment at the MISS, and if so, the disposition of the treated soil. Public notification would occur prior to any physical activity associated with onsite treatment and any disposal of treated soil if treatment is found to be appropriate.

COMMENT:

There is no mention here of providing an opportunity for the public to comment on any decisions regarding the treatment of Maywood soils. If it is determined that treatment of Maywood soils is legal and appropriate, the public should have an opportunity to comment on the various determinations with respect the treatment of the material and its disposal. At this time there is not enough information available about the implementation of the treatment option for the public to properly comment on all aspects of the proposed treatment plan. Notification is not sufficient.

4. Page 9. Cleanup Criteria

The Proposed Plan states:

The offsite disposal option uses an existing disposal facility licensed by the NRC to accept "byproduct material" as defined by Section [11e.(2)] of the Atomic Energy Act, [of 1954] as amended.

COMMENT:

The proposal to use a disposal facility licensed by the NRC is contrary to provisions of the 1985 Cooperative Agreement between the U.S. Department of Energy (DOE) and the Stepan Company. To the best of our knowledge, this agreement is still in effect.

Cooperative Agreement, Article V (Responsibilities of DOE), at B. (Permanent Disposal of Radioactive Wastes at the Storage Site and the Participant's Site — Phase Two), states:

Phase Two begins with the initiation of permanent disposal of radioactive waste at the Storage site and the Participant's site. DOE shall permanently dispose of all radioactive waste on the Participant's site and the storage site by removal to a permanent DOE disposal facility within a reasonable time after such a facility becomes available. In the alternative, DOE may stabilize all such radioactive waste. Permanent disposal shall be at the Department's expense. DOE shall take title to and responsibility for all radioactive waste on the Participant's site at the beginning of Phase Two. [Emphasis added.]

Under Article II (Definitions), the following definitions are pertinent:

- D. The term "Maywood site" means the Participant's site and the storage site
- E. The term "Participant's site" means that portion of the Maywood site not conveyed to the DOE. . . .
- F. The term "permanent disposal" means the process by which radioactive wastes are brought into compliance with Federal radiation protection standards for permanent management of these materials. Permanent disposal may be performed by removal of the waste and placement in a specially designated disposal facility or by stabilization of the waste.

A facility that is licensed by the NRC to receive 11e.(2) byproduct material is not "a permanent DOE disposal facility." Neither the Envirocare 11e.(2) byproduct material impoundment, the White Mesa Uranium Mill, the Cotter Mill in Cañon City, nor any other site that is authorized by the NRC to receive and dispose of 11e.(2) byproduct material will ever become "a permanent DOE disposal facility."

The USACE and the EPA must address these conflicts.

5. Page 9. Cleanup Criteria

The Proposed Plan states:

Radiologically contaminated soil sent offsite for disposal will be treated as [11e.(2)] byproduct material.

COMMENT:

International Uranium (USA) Corporation (IUSA) is licensed to accept 11e.(2) byproduct material at their White Mesa Uranium Mill, near Blanding, Utah. However, IUSA has not requested an amendment to their license based on any license condition that permits them to accept 11e.(2) byproduct material.

IUSA has requested an amendment to receive, store for an indefinite period of time, and process the Maywood material as "ore."

The Proposed Plan does not discuss any proposal to receive Maywood materials as "ore" for processing as a disposal option. The Proposed Plan does not discuss how and, particularly, when Maywood materials sent to White Mesa for processing would change from 11e.(2) byproduct material into "ore," so that the wastes produced from that processing could be disposed of in a White Mesa tailings impoundment as 11e.(2) byproduct material. Under current NRC regulation, if 11e.(2) byproduct material is processed at a uranium or thorium mill, the resulting tailings or waste is not 11e.(2) byproduct material. Only tailings or waste from "ore" that is processed becomes 11e.(2) byproduct material.

At what point would the Maywood material become "ore?" This should be considered and clarified.

The Proposed Plan avoids any discussion of these regulatory niceties. The USACE should address these definitional convolutions.

IUSA's proposal to process the Maywood materials should be set forth for public discussion of the disposal alternatives.

The Proposed Plan does not discuss whether the chemical contaminants that are not associated with the processing of thorium at the Maywood Chemical Works and that are commingled with the radiological contamination are 11e.(2) byproduct material. This should be clarified.

6. Page 12. Costs and Time to Implement

The Proposed Plan states:

To be conservative, it was assumed that contaminated material in the retention ponds on MISS and NRC licensed burial on Stepan and additional waste located at 149-151 Maywood Avenue would not be amenable to treatment, in part due to the physical characteristics of the buried material.

COMMENT:

Here, the Proposed Plan should discuss just exactly why these materials are not "amenable to treatment." What exactly are the physical and other characteristics that would prevent these materials from being treated?

The Proposed Plan should discuss whether any of the materials in the retention ponds on MISS and NRC licensed burial on Stepan and additional waste located at 149-151 Maywood Avenue might be determined to be amenable to treatment and what criteria would be used to make such a determination.

7. Page 12. Costs and Time to Implement

COMMENT:

IUSA has proposed to receive Maywood materials that contain more than an average of 0.01% uranium, by weight. The Proposed Plan does not discuss any plan (e.g., a gamma radiation survey plan) that would be used at Maywood to determine whether materials meet IUSA's uranium content criteria. The Proposed Plan does not include any cost estimate related to the implementation of such a plan, the feasibility of such a plan, the ability of such a plan to actually separate materials based on their average uranium content, the amount of material that would be averaged, etc.

The Proposed Plan does not include a discussion as to how and why the proposed treatment process, which would separate the treated soils based on their thorium-232 and radium-226 content, would also separate the materials based their uranium-238 content (i.e., above or below 0.01 % uranium by weight). Please remedy this oversight.

8. Page 13. FUSRAP Maywood Superfund Site History & Remedial Investigation Summary

The Proposed Plan states:

Processing operations created wastes containing thorium and lesser amounts of radium and uranium as well as rare earths.

COMMENT:

As discussed above, IUSA has proposed to process some of the wastes from the processing of monazite sands for their thorium content at the Maywood Chemical works. IUSA proposes to process these thorium wastes for their uranium content.

Before the USACE sends these materials off for processing for their uranium content, the USACE should determine whether the Maywood waste is amenable to the extraction of uranium. The USACE should provide the public with information regarding when, where, and how uranium has been successfully extracted from the wastes from the processing of monazite sands for their thorium content.

The USACE should make a determination whether recovery of uranium from the Maywood wastes that would be shipped to White Mesa is actually possible. We are not

referring to the uranium content of the material. We are referring to whether IUSA will actually be able to extract uranium from the wastes using their current mineral extraction processes. The USACE should require test processing at White Mesa in order to ascertain the amenability of the waste to processing for its uranium content and to determine the percentage of uranium that will be extracted from the Maywood wastes.

There is a precedent for such a determination. The Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA) contains a provision permitting mineral recovery from the tailings as part of the remedial action program. Before such processing, UMTRCA requires that the DOE determine whether recovery of minerals by remilling is practicable.

Section 108(b) of UMTRCA (42 U.S.C. 7918(b)) states:

Prior to undertaking any remedial action at a designated site pursuant to this subchapter, the Secretary shall request expressions of interest from private parties regarding the remilling of the residual radioactive materials at the site and, upon receipt of any expression of interest, the Secretary shall evaluate among other things the mineral concentration of the residual radioactive materials at each designated processing site to determine whether, as a part of any remedial action program, recovery of such minerals is practicable. [Emphasis added.]

The USACE should not transfer materials to a uranium mill for processing for its uranium content if there is little or no possibility that uranium will be extracted from the material. The USACE should address this question.

9. Page 15. FUSRAP Maywood Superfund Site History & Remedial Investigation Summary

The Proposed Plan states:

Stepan currently holds an NRC license for the storage of thorium-bearing materials in Burial Pits 1, 2, and 3.

COMMENT:

As discussed above, there is a question as to whether "Stepan currently holds an NRC license" or Stepan currently holds an expired NRC license for the storage of thorium-bearing materials in Burial Pits 1, 2, and 3.

10. Page 15. FUSRAP Maywood Superfund Site History & Remedial Investigation Summary

COMMENT:

The Site History fails to mention the 1985 Cooperative Agreement between the DOE and the Stepan Company. It appears that the USACE is choosing to ignore that agreement. The USACE should determine whether that agreement is legally binding.

11. Page 26. Alternative 4: Excavation, Treatment, and Offsite Disposal

COMMENT:

The Proposed Plan does not discuss what types and levels of chemical contaminants that are—or may be found to be—commingled with the radiological contamination will be permitted to be shipped offsite as 11e.(2) byproduct material, rather than mixed waste.

The treatment plan does not mention how and when the USACE will determine which chemical contaminants are present in material to be treated. The treatment plan does not mention how various chemical contaminants will be handled prior to or during the treatment process. The USACE should address how chemical contaminants in the material to be treated will be dealt with.

12. Page 31. Alternative Comparison Summary

The Proposed Plan states:

Potential Short-term impacts to the community from the transport of the waste and potential short-term impacts to the area of the disposal facility will be evaluated.

COMMENT:

When exactly will the short-term impacts to the area of the disposal facility, or facilities, be evaluated? How will the USACE determine what these potential short-term impacts will be? When and how will members of the public who might be impacted by the transportation and disposal of the Maywood materials have an opportunity to evaluate and comment upon the transportation and short-term impacts that the USACE determines are relevant?

When will the public have an opportunity to evaluate and comment upon the various offsite disposal alternatives?

When will the USACE address the long-term impacts to the areas of the disposal facility, or facilities? When will the public have an opportunity to evaluate and comment upon the long-term impacts to the area of the disposal facility, or facilities?

The USACE should establish a formal opportunity for the public to discuss and comment upon the transportation and short-term impacts associated with each disposal facility option.

There are numerous transportation and short-term impacts that are associated with the transportation of materials from New Jersey to Colorado or Utah. There are numerous short-term impacts related to the disposal of Maywood materials in Colorado or Utah. For example, if Maywood materials are sent to the White Mesa Uranium Mill, they will be stored there for an indefinite period of time prior to being processed. How these materials will be handled and stored at White Mesa has not been determined. See discussion at II. below.

13. Page 31. Alternative Comparison Summary

The Proposed Plan states:

A community relations program and a community relations plan for the FUSRAP Maywood Superfund Site have been established and are maintained for the Site.

COMMENT:

Unfortunately, the USACE has a community relations program that does not in any manner include the members of the public who will be impacted by the transportation (outside of New Jersey) and offsite disposal of the various Maywood materials. The USACE has not gone to Grand County or San Juan County, Utah, in order to provide information, discuss, or get comments on a plan to transport and dispose of the Maywood materials in that area. The USACE failed to inform the community in Cañon City, Colorado, of the USACE's plans to dispose of Maywood materials at the Cotter Mill.

The USACE has improperly separated the cleanup of the Maywood Site portion of the remedial action from the offsite disposal portion of the remedial action. The USACE has failed to create a community relations program and plan that would include all communities that will be significantly affected by the offsite disposal of the Maywood materials. These failures should be promptly remedied.

14. Page 33. Preferred Alternative for the Soils/Buildings OU

The Proposed Plan states:

The selection of the disposal facility(s) will be made after the ROD is signed selecting the remedial action during "remedial design" and prior to implementation of the remedial action based upon what facilities have been authorized or permitted to receive such materials, and other factors such as proximity to the site, accessibility, and cost.

COMMENT:

Here the Proposed Plan fails to discuss factors related to health, safety, and the environment that will be evaluated by the USACE in the offsite selection process. It

appears that the USACE does not believe that health, safety, and environmental factors are relevant to the offsite-disposal-facility selection process.

The Proposed Plan does not indicate if the public will have an opportunity to comment during the remedial design phase of the remedial action project.

The Proposed Plan does not refer to 40 C.F.R. § 300.440 and the requirements in that regulation relating to offsite response actions. A reference to and discussion of this regulation should be included.

The USACE and the EPA should provide a formal opportunity for the communities that will be affected by offsite disposal to comment on the "factors" that should be considered in offsite disposal determinations.

15. Page 33.

COMMENT:

The Proposed Plan discusses institutional controls, such as deed notices, easements, and covenants that would be used to ensure long-term effectiveness of the remedial action.

There are problems with deed notices, easements, and covenants that should be considered and addressed by the USACE, the EPA, and the State of New Jersey. It sometimes happens that information contained in a deed notice, easement, or covenant, does not always become incorporated in a new deed upon transfer of the property to a new owner.

A real life example: Covenants were incorporated into the deed for a property owned by property owner A. At another time, a new deed for the same property and the same owner withdrew an easement to a right-of-way that property owner A had previously been granted.

Property owner A sells the property to owner B. Owner B's deed includes a list of the covenants as part of the new deed, but there is no reference in B's new deed to the previous deed withdrawing the easement on the right-of-way.

Property owner B sells to property owner C. Owner C's deed references the covenants, but the new deed does not include the list of covenants. Again, there is no mention in C's deed of the withdrawal of the easement on the right-of-way. So, owner C is unaware of the covenants and the fact that there is no easement on the right-of-way. Over a period of time owner C builds structures contrary to the provisions of the covenants and improperly encroaches on the right-of-way. This is finally brought to owner C's attention and, rather than negotiate the removal of the structures and gain access to the right-of-way, owner C sells the property. This happened in New York State, not far from Maywood

In conclusion: Pertinent information drops out during the deeding process. New deeds are drawn up by lawyers, but the lawyers fail to include all relevant information (notices, covenants, easements) in the new deeds, so the relevant information is not passed on to the new owners. Over time, the deeds get shorter and shorter. Sellers and real estate agents fail to mention deed restrictions or provisions and do not make sure that

the new deed that the buyer receives contains all pertinent information. Buyers do not pursue title searches, read their deeds, or obtain copies of the older deeds to get a history of the property. These failures on the part of lawyers, sellers, real estate agents, and buyers can be purposeful or inadvertent. Also, title searchers might miss a pertinent deed record or a local government electronic database might not include a pertinent deed record.

The USACE, the EPA, and New Jersey, must take any steps necessary to avoid the problems described above and to make sure that deed notices, covenants, and easements are actually effective methods of institution controls.

16. Page 34. Community Role in the Selection Process

The Proposed Plan states:

Public input is encouraged by the USACE, EPA, and the NJDEP to ensure that the remedy selected for the FUSRAP Maywood Superfund Site meets the needs of the local community in addition to being an effective solution to the problem.

There appears to be no process whereby the USACE, the EPA, and the NJDEP will actually ascertain the needs of the local communities in the vicinity of the transportation routes and disposal sites. It appears that these communities are not part of the "effective solution to the problem" process.

To the best of our knowledge, the USACE has not notified city and county governments in Grand or San Juan Counties in Utah, affected state agencies, and federal agencies in Utah, such as the National Park Service, regarding plans for transportation and disposal of the Maywood materials in Southeastern Utah.

To the best of our knowledge, the USACE has not complied with Executive Order #13175, Consultation and Correlation with Indian Tribal Governments, by consulting with the Ute Mountain Ute Tribe and the Navajo Tribe. The transportation and disposal of Maywood materials at the White Mesa Uranium Mill will affect both Ute and Navajo communities. White Mesa is the site of the White Mesa Ute tribal land and community. To the best of our knowledge, the EPA and the USACE have not initiated consultation with the appropriate tribal entities regarding the Proposed Plan.

To the best of our knowledge, the USACE and the EPA have not addressed the requirements of Section 4-4 of Executive Order #12898, entitled "Subsistence Consumption of Fish and Wildlife," which ensures protection of populations who subsist in whole or in part on local wildlife.

To the best of our knowledge, the USACE and the EPA have not addressed any Environmental Justice issues (Executive Order #12898) related to the transportation, storage, and disposal of the Maywood materials at White Mesa.

The USACE and the EPA should develop a public relations program that includes the communities that will be impacted by the offsite disposal of the Maywood materials. The USACE and EPA should hold hearings in the communities of Utah and Colorado that have a potential to be affected by the disposal of the Maywood materials—prior to choosing an offsite disposal facility.

The USACE and the EPA should consult with the Ute and Navajo tribal governments. The USACE and the EPA should properly address all Environmental Justice and all Consultation and Correlation with Indian Government issues with respect to the disposal of the Maywood materials at White Mesa.

II. ADDITIONAL COMMENTS

1. Laws, Regulations, Policies, Orders, etc.

COMMENT:

The Proposed Plan should have, but did not, include a specific list of all State and Federal laws and regulations, policies, Executive and Agency Orders, etc., that must be complied with during the remediation of the Maywood Site.

2. Potential Transportation Impacts

COMMENT:

A. The Proposed Plan should have, but did not, provide detailed information related to the transportation of the various Maywood materials. As discussed above, the public should have an opportunity to more fully address transportation issues.

B. There are numerous potential impacts from transportation of the Maywood materials from the East Coast. These impacts and appropriate mitigative measures should be identified, considered, and implemented.

C. The Proposed Plan should have included a description of the proposed transportation routes from Maywood to any offsite disposal site. There should have been a discussion of alternate transportation routes and an evaluation of the health and safety risks and potential environmental effects associated with the transportation alternatives.

The Proposed Plan does not address the transfer of intermodals from rail to trucks at Cisco, Utah. The number of intermodals to be shipped from Maywood within 7 years is to be from 8 to 14 times the number of intermodals that have arrived by rail at Cisco, Utah, in the previous 7 years. The trucks leaving Cisco will travel down (for the most part) a narrow dirt road for a number of miles to Interstate 70, west on Interstate 70 for about 20 miles to Highway 191, south on Highway 191 through the towns of Moab,

Monticello, and Blanding to White Mesa. Empty trucks will return to Cisco on the same route.

The amount of truck traffic that is to be generated by the shipment of Maywood materials to White Mesa would, in sum, be 8 to 14 times greater than all the truck traffic generated from all of the shipments of so called "alternate feed material" to the White Mesa Uranium Mill. That amounts to a huge increase in the amount of truck traffic in Cisco, for a period of years. There is currently very little other truck traffic (if any) in Cisco. There has already been a spill due to an intermodal truck accident at Cisco.

The USACE should consider the effects of the transportation of many trucks over a bridge in Cisco that is not designed to receive the weight of the trucks. The USACE should evaluate the transportation and intermodal storage situation in the very small, isolated community of Cisco. The USACE should evaluate the impacts during the summer of the greatly increased truck traffic on the people who use the narrow, dirt road through Cisco for recreational access to the Colorado River.

D. The USACE should consider the increase in truck traffic through the Highway 191 corridor during the various seasons of the year. During the winter, there is very little truck traffic on Highway 191, so that the amount of traffic from the Maywood intermodals would present a considerable increase in large, heavy truck traffic. During the summer, Highway 191 is already extremely busy; additional trucks carrying hazardous, radioactive waste will endanger tourists headed for Moab and nearby Arches and Canyonlands National Parks.

E. The USACE should consider the fact that just to the north of Moab is a uranium mill site that will be undergoing remediation that may entail the trucking of many thousands of truckloads of uranium mill tailings (over 11 million tons worth). The truck loads of tailings would be entering from a side road onto the very same route (Highway 191) that would be used for the trucks traveling to and from Cisco and White Mesa. This would happen close to a down hill grade, a curve, and near where the highway will narrow.

The USACE should evaluate the possible interface of the Maywood truck traffic on Highway 191 just north of Moab and the Utah Department of Transportation (DOT) plans for major construction on that route in the near future.

F. The USACE should evaluate and take into consideration the transportation issues related to rail car transportation of intermodals that are not sealed in the narrow, twisting canyon that parallels the edge of the Colorado River west of Denver, Colorado. If there were a derailment in this long, narrow section of the rail route, the intermodals would probably drop straight down into the Colorado River. There is no where else for them to go because the rail bed is very narrow and runs very close to the edge that drops straight down to the river. There is no highway for many miles where the Colorado River and the railroad share a narrow canyon. There has been no transportation risk assessment for the transportation of intermodals on this route.

The USACE should evaluate the timeliness and effectiveness of any emergency response in the event that a rail car or intermodal drops into the River and there is a spill of materials into the Colorado River.

The USACE should also assess and address all the transportation issues related to the transportation of Maywood materials to the Cotter Mill in Colorado.

3. Potential Short-term Impacts

There are short-term impacts related to the receipt of the Maywood materials at White Mesa. These have not been addressed by the USACE. One of these impacts, would be the impact of the storage of Maywood wastes at White Mesa. There appears to be no definite time limit on the storage of material at White Mesa. Most recently, material was stockpiled for over two years.

IUSA has developed Standard Operating Procedures (SOPs) for High Thorium Content Ore Material (HTC) which would limit the size of the piles of material and require that the piles be covered. (Attachment 1.) These procedures have previously been used for a much smaller amount (2,910 tons) of high thorium content material. The average thorium-232 content of that material was 559 pCi/g.

Unfortunately, there is currently no way to determine the average thorium content of any of the Maywood wastes that would be shipped to White Mesa. However, IUSA estimated that the average thorium-232 content for the whole Maywood Site is 970 pCi/g. The treatment of about one third of the Maywood materials would increase the average thorium-232 content.

Clearly, much of the Maywood radioactive wastes will have a high average thorium-232 content. But, it is unclear whether the HTC SOPs will be used for the storage of those materials prior to processing.

There is no data available to be able to determine how many truckloads of Maywood materials would have an average high thorium content.

The Proposed Plan does not discuss how determinations would be made with respect the average thorium-232 content of any particular area at Maywood or any particular truckload that might be shipped to White Mesa.

It is especially important that the high thorium content materials, and maybe even low thorium content materials, be placed in small piles that are covered, because there is no way of determining at this time how long the material will be stored at White Mesa. There have been numerous reports of dust swirling from the ore storage area. Often high wind events occur at night, and it is not clear how, in the middle of the night, dust from the storage piles, the tailings impoundments, and the site is controlled.

Thorium decay products are shorter lived and hotter than the decay products of thorium, therefore, extra precautions are needed. Here thoron (Radon-220) is of great concern.

IUSA's HTC SOPs also require special handling procedures during the dumping, processing, and tailing management phases. These special handling procedures—in

addition to placing the material in small, covered piles—include the use of special personnel protective equipment and special monitoring procedures. Again, there is no information regarding whether the HTC SOPs would be used for any of the Maywood wastes at White Mesa.

The USACE should require the use of SOPs equivalent to the HTC SOP handling procedures at White Mesa or any other offsite disposal facility receiving Maywood materials.

4. Tailings Management

If the Maywood tailings are transferred to White Mesa they will first be stored for an unknown period of time, probably for a few years at the very least. Then, after being processed only for the uranium content, the material will be disposed of in a tailings impoundment.

The tailings in the impoundments will not be immediately covered with a temporary or permanent cover. There is no way of knowing when decommissioning and capping of the impoundments will occur.

The HTC SOP, at 4.4, for Tailings Management at White Mesa states, in part:

Tailings resulting from processing HC alternate feed material will be deposited in an area of the tailings system that will ensure that the material is fully submerged beneath pond liquid and/or tailings slurry from non-HTC alternate feed materials until such time as the first layer of interim cover or random fill is placed on the tailings system. This will minimize the potential for thoron gas [radon-220] to escape to the atmosphere.

If the Maywood wastes are disposed of offsite, the USACE should assure that any of the tailings from the processing or direct disposal of the Maywood wastes will be immediately submerged or covered with a temporary or permanent clean cover in conformance with accepted practice for HTC materials.

If the Maywood materials are disposed of offsite, the USACE should assure SOPs equivalent to the HTC SOPs are used in order to mitigate both short and long-term health, safety, and environmental impacts at any facility that receives the radiologically contaminated Maywood materials for processing or direct disposal. The USACE has an ongoing responsibility to assure that whatever happens to the Maywood wastes is protective of the health and safety of the workers, as well as protective of the public and the environment.

4. Long-term Impacts

A. USACE proposes a long-term solution to the Maywood Site problem by disposing of various materials offsite. Yet, there is no information provided in the

Proposed Plan regarding how the USACE will determine whether an offsite facility will actually provide a long-term solution. There is certainly a question as to whether the disposal of the Maywood tailings will only result in another radioactive waste problem that will need to be remedied sometime in the future. This is true for both the Cotter Mill and the White Mesa Uranium Mill.

If the Maywood tailings are transferred to White Mesa, they will first be stored, then processed for only the uranium content. The resulting tailings will be disposed of in a tailings impoundment. There appears to be no information available on how the processing of the Maywood materials for their uranium content will affect the solubility and mobility of the thorium. There is no information regarding how the addition of waste from the processing of monazite sand for its thorium content would affect the overall radiological and chemical composition of the White Mesa tailings impoundments over time. IUSA and the NRC have not addressed this question.

The USACE should address these questions in order to determine whether processing the Maywood thorium wastes is an appropriate long-term solution.

B. There is another long-term consideration with respect to the disposal of Maywood materials at White Mesa. There are questions regarding the long-term viability of the tailings cells at White Mesa. These tailings cells were constructed about twenty years ago. These are not newly constructed cells, using the latest state of the art construction materials and methods.

There is a probable cause to believe that tailings water will discharge to the perched water zone during the long-term. The tailings cells were improperly constructed, may be leaking now, and will certainly leak in the future. The cells were only required to be designed for the lifetime of the operation of the White Mesa Uranium Mill, or a period of twenty years.

IUSA's Tailings Cell 3 has significant defects in its construction, as documented in a November 28, 2001, letter from the State of Utah Department of Environmental Quality (DEQ), Division of Radiation Control, to IUSA. (Attachment 2.). In that detailed letter the DEQ requested specific information from IUSA regarding the Cell 3 liner and the permeability of the material under Cell 3. As of June, IUSA had not responded to that DEQ request for information.

Ivan Weber, an environmental consultant with nine years of experience managing the construction of repositories for mining/smelting-contaminated soils for the Kennecott Utah Copper Corporation, has found significant flaws in the construction of, and monitoring of leaks from, Cells 1, 2 and 3. Attachment 3.

A properly constructed tailings cell would have a thick liner underlain by clay and overlain by sand. Instead, IUSA's Cells 1, 2 and 3 have a relatively thin liner that is underlain and overlain by crushed native rock. Crushed rock does not provide the low permeability barrier under the liner that clay would provide. The absence of a clay layer means the liner is the only mechanism for preventing leakage of fluids from Cells 1, 2 and 3.

The crushed rock was not sifted, so sharp rock edges will penetrate the liners of Cells 1, 2 and 3 from both above and below. The crushed rock was spread onto the liner by small bulldozers. The weight and turning forces of the bulldozers undoubtedly damaged the liner. The February 11, 1982 "Construction Report: Initial Phase – Tailings Management System" says "areas damaged by the cover placement operation were immediately repaired." However, as Mr. Weber points out, "If any attention whatsoever was paid to detection of liner punctures and tears *below the soil cover*, where inspectors/observers could not possibly see, such attention is not communicated in any of the reports reviewed."

The type of liner used in IUSA's tailings Cells 1, 2 and 3 was a 30-mil PVC membrane. PVC liners have a long history of problems, and only recently have many of the problems been corrected. IUSA's tailings cells were prepared in the early 1980's with materials that were inadequate then and are even more inadequate now. PVC continues to age throughout its life. PVC was and is particularly susceptible to loss of plasticizer compounds and, consequently, losses of elasticity, elongation capacity, flexibility, seam strength and mechanical strength. PVC has been vulnerable to attack by bacteria. The reaction of the PVC industry to these problems has been to use PVC of double or greater thickness than that used in IUSA's tailings cells (i.e., 60-mil or more).

PVC is susceptible to acid degradation. Acid degradation causes plasticizer loss, which renders PVC brittle and prone to physical loss of strength. The tailing cells are extremely acidic, with a pH of 1.8-2.0.

PVC membranes decompose from exposure to hydrocarbons. Historically, significant amounts of kerosene/diesel fuel and small quantities of chlorinated solvent have been discharged to the White Mesa tailings cells. Mr. Weber concluded that the liner used in Cells 1, 2 and 3 "was not stable, was weak, and was too soft to resist rocky soils below and above."

Mr. Weber also expressed concern that the leak detection system below Cells 1, 2, and 3 is completely inadequate. It consists of no more than a perforated pipe at the toe of the retaining dike. There is no barrier under the cells to move any leakage to the pipe for detection. Due to the use of highly permeable crushed rock for bedding material under the cells, leakage will move down vertically and never contact the detection pipe. Thus, if the middle of a 70-acre cell is leaking 1,000 feet from the perforated pipe, or even 100 feet from the pipe, the leak cannot be detected.

Based on his review of eleven documents and fifteen construction drawings, Mr. Weber concluded that IUSA's tailings cells may have been leaking since the White Mesa Mill started operations. Their assumption that there is no probable cause for Cells 1, 2 and 3 to leak needs to be re-evaluated using relevant and new information that is available to the PVC industry. Their studies do not take into account the extremely probable degradation of their PVC liners by high acid solutions.

If the extremely acidic solution in the tailings ponds is leaking into the underlying sandstone, acid degradation of the underlying strata could lead to changes in the strata's porosity, resulting in preferential flow pathways downward to groundwater.

The USACE should thoroughly investigate the ability of the White Mesa tailings cells to properly contain any Maywood wastes and their associated radiological and chemical contaminants over the long-long-term. The USACE should not make any final decision regarding using White Mesa as a processing/disposal site until the State of Utah has received the information that it requested on the construction of the disposal cells as part of the Ground Water Discharge Permit process.

C. There is also a threat of long-term impacts from the contamination of the groundwater at White Mesa. There is no information in the Proposed Plan regarding the potential mobility of the various chemical constituents that are commingled with the radiological contamination in the Maywood materials. This information should be included.

The perched groundwater table occurs at shallow depths in the Dakota Sandstone and Burro Canyon Formation at the White Mesa Mill site.

This perched groundwater table is an aquifer per 10 CFR 40, Appendix A, and is fully protected by the all regulations in 10 CFR 40. An aquifer is defined in 10 CFR 40, Appendix A:

"Aquifer means a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of ground water to wells or springs. Any saturated zone created by uranium or thorium recovery operations would not be considered an aquifer unless the zone is or potentially is (1) hydraulically interconnected to a natural aquifer, (2) capable of discharge to surface water, or (3) reasonably accessible because of migration beyond the vertical projection of the boundary of the land transferred for long-term government ownership and care in accordance with Criterion 11 of this appendix."

The perched groundwater table below the White Mesa Uranium Mill delivers significant water to springs located approximately 2.5 miles south of the mill. Ruin Spring is designated on the U.S. Geological Survey (USGS) 7.5 minute topographic map of the Black Mesa Butte Quadrangle, Utah (1985). This spring is accessible to people, cattle and wildlife. The groundwater is also accessible through springs and seeps in the canyons of Westwater, Cottonwood, and Corral Creeks. There are several small ephemeral springs adjacent to the project site.

The perched groundwater table extends outside the boundaries of IUSA property that will be transferred for long-term government ownership. The Corral Creek drainage area is completely outside the White Mesa project area, and the majority of both Westwater Creek and Cottonwood Creek are outside the White Mesa project area.

In August 1999 the State of Utah issued a Groundwater Corrective Action Order to IUSA regarding chloroform and other contaminants found in the perched aquifer under

the White Mesa Mill. The source(s), extent of, and the dispersal rate of the plume have not yet been established. IUSA believes the chloroform escaped from a leach field used by an on-site laboratory from 1979-80. The chloroform reached the perched aquifer within twenty years. IUSA is still in the process of providing the DEQ with additional information regarding the plume and is pursuing a Ground Water Discharge Permit.

The USACE should not make any final decision regarding using White Mesa as a processing/disposal site until all issues regarding the onsite groundwater contamination has been thoroughly evaluated and the State of Utah has issued a Ground Water Discharge Permit.

5. The Proposed Plan does not discuss the long-term legal responsibility of the USACE for any Maywood materials disposed of offsite. The Proposed Plan does not discuss what responsibility the USACE would have if Maywood materials were stockpiled at White Mesa, but not processed or disposed of in a tailings impoundment for one reason or another.

The USACE should address these questions of USACE's ongoing responsibility for the Maywood wastes after they have been removed from Maywood.

6. In general, the Proposed Plan lacks pertinent information and fails to address numerous issues, such as the ones discussed above. The USACE is leaving too many decisions and issues for future consideration outside of public comment process.

7. The Proposed Plan did not mention the Federal Facilities Agreement (FFA) between the DOE and the EPA. The Proposed Plan did not discuss when, or if, the USACE and the EPA will sign a renegotiated FFA. The FFA question should be addressed.

8. The Glen Canyon Group of the Sierra Club opposes the use of the White Mesa tailings impoundments as a long-term disposal site for the FUSRAP Maywood Superfund Site wastes. Some of the reasons for this position are outlined above.

We request an opportunity for further comment once the specific remediation option is chosen, when more information is available regarding the proposed treatment plan, when some of the issues outlined above have been resolved, and before a decision is made regarding where materials would be disposed of offsite.

The decision of where to dispose of the Maywood wastes should be a decision based upon an environmental assessment, with public input. It should be a decision that is part of the Remedial Action/Feasibility Study/Record of Decision public process. The decision should not be just a contract award decision outside the public decision making process.

9. The Sierra Club opposes the use of the Cotter Mill in Cañon City, Colorado, as a long-term disposal site for the FUSRAP Maywood Superfund Site wastes. There are numerous health, safety, and environmental violations at the Cotter Mill. The USACE should completely review all records related to the Cotter Mill's violations.

No decision regarding the appropriateness of the Cotter Mill as a long-term disposal site should be made until the Cotter Mill has been re-licensed. There are too

many unanswered questions and unresolved health, safety, and environmental issues that have been brought forth in the Notices of Violations and the State of Colorado partial response to Cotter's license renewal application. All health, safety, and environmental issues must be completely resolved, if, in fact, that is possible.

The Cotter Mill is not a "facility in compliance" in accordance with the requirements of 40 C.F.R. § 300.440.

The Glen Canyon Group supports the efforts of the Rocky Mountain Chapter of the Sierra Club, the Colorado Citizens Against Toxic Waste, and other individuals and community groups who question the advisability of disposing of the Maywood wastes at the Cotter Mill.

Thank you for the opportunity to present these comments.

Sarah M. Fields
Nuclear Waste Committee
Sierra Club Glen Canyon Group



Enclosure: As stated

US Army Corps
of Engineers
New York District

Public Comment Form on the

PROPOSED PLAN FOR SOIL AND BUILDINGS AT THE FUSRAP MAYWOOD SUPERFUND SITE

PLEASE RETURN THIS FORM BY MAIL TO:

Allen Roos
US Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Date: November 11, 2002

Name (optional): Sarah M. Fields

Affiliation (if any):

Address (optional):

Telephone (optional):



INTERNATIONAL
URANIUM (USA)
CORPORATION

Independence Plaza, Suite 950 • 1050 Seventeenth Street • Denver, CO 80265 • 303 628 7798 (main) • 303 389 4125 (fax)

December 18, 2000

VIA FACSIMILE AND OVERNIGHT MAIL

Mr. Philip Ting, Branch Chief
Fuel Cycle and Safety and Safeguards Branch
Division of Fuel Cycle Licensing
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
2 White Flint North
11545 Rockville Pike, Mail Stop T-7J9
Rockville, MD 20852

Re: Supplemental Information Regarding April 12, 2000 Amendment Request to Process an
Alternate Feed Material from W.R. Grace at the White Mesa Uranium Mill
Source Material License SUA-1358

Dear Mr. Ting:

International Uranium (USA) Corporation ("IUSA") hereby submits the enclosed final procedure, following IUSA discussions with NRC staff regarding the subject license amendment request. As indicated in our transmittal of the draft procedure on December 15, 2000, this procedure is submitted in response to the NRC's request that IUSA provide specific practices that would be applied to management of the material from the W.R. Grace facility; however, this procedure is intended to be applied to acceptance of any alternate feed material(s) which IUSA determines to potentially contain levels of thorium that require that special procedures, over and above those required for conventional ores or other alternate feed materials, be applied.

Based on our discussion today with Mr. von Till of NRC Staff, IUSA understands that the proposed draft procedure was acceptable to NRC; therefore, IUSA is transmitting the final version of the SOP at this time. IUSA looks forward to your staff's completion of reviewing the W.R. Grace amendment request. As always, I can be reached at 303.389.4131.

Sincerely,

Michelle R. Rehmann
Environmental Manager

NOT FOR PUBLIC

Mr. Philip Ting
December 18, 2000
Page 2 of 2

Attachment

cc: Ronald E. Berg
William N. Deal
David C. Frydenlund
Ron F. Hochstein
William Sinclair/UDEQ
William von Till/NRC

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1.0 **Purpose**

The following procedure applies to acceptance of alternate feed material(s) which International Uranium (USA) Corporation (IUSA) determines to potentially contain levels of thorium that require that special procedures be followed, which are over and above those required for conventional ores or other alternate feed materials. Potential alternate feed materials undergo pre-acceptance evaluation by the IUSA ALARA Committee. Material(s) which the ALARA Committee determines require such special procedures will be designated as "High Thorium-Content" (or, "HTC") materials. This procedure may be amended, subject to approval by IUSA's Safety and Environmental Review Panel (SERP) from time to time, as appropriate to incorporate information and results obtained from the evaluation of health physics surveys, monitoring and controls implemented pursuant to keeping radiological exposures to employees, the public and the environment As Low As Reasonably Achievable (ALARA).

The methods set forth in this Standard Operating Procedure (SOP) are based on the assumption that the HTC material(s) will be delivered to the White Mesa Mill in 20-ton intermodal containers (IMCs). Should the delivery method be modified, IUSA will revise this SOP to address the selected mode of delivery.

2.0 **Ore Receiving**

For material receiving procedures, see Section 2.0 of White Mesa Mill SOP PBL-1, rev. No. R-1, *Intermodal Container Acceptance, Handling and Release*.

3.0 **Ore Dumping**

1. After the IMC has been dropped off in the Restricted Area, connect the Bartlett tipper to the chassis with a loaded IMC and transport across the truck scales. After weighing the IMC, move the tipper and chassis onto the ore storage pad.
2. Enter the loaded weight of the IMC on the IMC SWT.
3. Remove the tarp on the back of the IMC and open the tailgate.
4. Dump the material in the IMC onto the ore storage pad.
5. After all material has been removed from the IMC, transport the empty IMC back across the scales for an empty weight.
6. Record the empty weight on the appropriate IMC SWT.
7. At the end of each day, turn in outbound SWT to Mill Records Manager.

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8. The Mill Records Manager will fill out a Daily Materials Receipts form to obtain the net weight of the material in each IMC.
9. After weighing the IMC, the Bartlett tipper will deposit the IMC in a designated area, within the Restricted Area, for decontamination.
10. Use a front-end loader or similar equipment to push material into the designated ore lot pile.
11. Stockpile size will not exceed 200 tons or 10 containers.
12. Once an ore lot pile is complete, label the pile with the appropriate ore lot number, and cover with reinforced plastic.
13. Gross alpha air sampling will be performed continuously, as indicated in Section 7.1(6) of this SOP, during initial phases of material receipt in order to determine the exact frequency of monitoring and the required PPE to be used. A Radiation Work Permit (RWP) will be issued during the initial receipt of HTC feed material(s). The RWP will list the health physics controls, required personal protective equipment, monitoring, and survey requirements necessary to assess the radiological exposure potential to employees operating under the RWP. The air sampling data collected, as described in Section 7.1 of this SOP, will also be among the data used to ensure that the stabilization methods listed below are adequate.
14. Dust suppression measures will include the following:
 - a. Application of stabilizing agent(s) to the piles (for example magnesium chloride or similar material), either prior to or in addition to being covered.
 - b. All piles will be wet down at least once per day until such time that they are covered.
 - c. All completed stockpiles will be covered with reinforced plastic.
 - d. All stockpiles will be inspected at least once per day to ensure the integrity of the covering.
 - e. In the event of wind speeds in excess of 20 MPH, all dumping activities will cease immediately.

4.0 Radiation Monitoring during Ore Processing

Due to the likelihood of higher concentrations of thoron and other radiological dangers during HTC ore processing, the following monitoring methodologies will be followed

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while processing HTC mill feed. Based upon results of monitoring and dose calculations, recognizing that there may be a potential for higher than normal radiological exposures, the Mill Radiation Safety Officer (RSO) may recommend that personnel be rotated from area to area periodically in order to reduce potential exposure.

As soon as the results of the monitoring activity, conducted in accordance with the conditions indicated by the RWP, have been evaluated, the added radiological surveys applicable to the particular HTC mill feed will be established, communicated to the Radiation Safety Technicians (RSTs), conducted, and documented. Irrespective of the added surveys selected for the particular HTC feed, the following radiological surveys will be performed routinely for the duration of the processing of HTC materials.

4.1 Area Airborne Sampling

During initial receipt of HTC materials, weekly area airborne sampling will be conducted in the areas of the Mill listed below. A twenty-four hour air sample will be collected at a flow rate of 40 liters per minute, or greater. After sufficient data has been collected and reviewed by the RSO and ALARA Committee, area airborne sampling frequency may be reduced to once every two weeks during the processing of HTC mill feed.

1. Ore feed area.
2. Leaching area.
3. Central Control Room.
4. Solvent Extraction Building.
5. Precipitation area.
6. Yellowcake drying area.
7. Yellowcake packaging area.

The above samples will be analyzed for gross alpha.

4.1.4 DAC Determination

A composite feed sample will be analyzed for radioscopic composition for U-Nat and Th-Nat. A composite of two air samples from each of the above locations will also be analyzed for U-Nat and Th-Nat. The composite air sample results will be compared to the feed material results. These data comparisons will be used by the RSO to establish the appropriate derived air concentration (DAC) for each location listed above, and the U-Nat to Th-Nat ratio for analysis using gross alpha counting. If gross alpha counting of air samples using the U-Nat to Th-Nat ratios indicate an airborne radioactive dust concentration of 25% of the thorium DAC or Uranium DAC, or the geometric mean of the mixture, in any of the areas listed above, then the air sample frequency will be increased to weekly in those areas only.

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4.2 Breathing Zone Sampling

- a. Breathing zone air samples will be collected once per month on select individuals who perform routine work tasks associated with processing operations.
- b. Breathing zone air samples will be collected from individuals who perform work tasks under an RWP.
- c. In addition to the above sampling under (a) and (b), further breathing zone samples will be collected from individuals at the discretion of the RSO.

4.3 Environmental Sampling

- a. Continuous air samples will be collected on a weekly basis in the following areas during processing of HTC feed material.
 1. Ore pad area.
 2. Tailings area.

4.4 Tailings Management

Tailings resulting from processing HTC alternate feed material will be deposited in an area of the tailings system that will ensure that the material is fully submerged beneath pond liquid and/or tailings slurry from non-HTC alternate feed materials until such time as the first layer of interim cover or random fill is placed on the tailings system. This will minimize the potential for thoron gas to escape to the atmosphere. Mill Management and the RSO will coordinate efforts to ensure that operations personnel are provided direction regarding placement of HTC tailings. In addition, the weekly tailings inspections reports will document the placement of HTC tailings during the preceding week.

4.5 Surveys For External Radiation

- a. All employees working with HTC material will wear a personal TLD badge. The badges will be collected quarterly and the results entered on individual exposure forms.
- b. Beta/gamma dose rate measurements will be performed weekly in all areas of the mill operations. These data will be used to perform monthly dose rate calculations.
- c. Monthly TLD badges will be worn by individuals who perform work tasks that are anticipated to exhibit the highest potential dose

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rate exposures, such as those assigned to RWP tasks and workers performing initial receipt and handling of the HTC material, prior to establishment of material-specific DAC values.

4.6 Surveys for Radon-222, Radon-220 and Their Daughters

Monthly measurements of radon daughter concentrations for both Ra-222 and Ra-220 will be conducted in those areas of the Mill listed above in Section 4.1 of this SOP. If radon daughter concentrations from either the uranium or thorium parent is greater than 25% of the limit (0.08 working level for Ra-222 or 0.25 working level for Ra-220) the sampling frequency will be increased to weekly in areas where these levels are routinely encountered. All ventilation systems in the Mill will be checked daily by the radiation safety staff.

5.0 Decontamination and Release of IMCs

For intermodal release procedures, see White Mesa Mill Standard Operating Procedure PBL-1, rev. No. R-1, *Intermodal Container Acceptance, Handling and Release*.

6.0 Hazard Identification and Safety

In addition to the usual safety procedures required for work at the Mill, the following safety procedures are to be followed for projects involving HTC materials.

6.1 Required Personnel Protective Equipment (PPE)

In all areas of the Mill covered by this procedure, hard hats, safety glasses and steel-toed shoes are required as a minimum. These must be worn in all areas of the Mill with the exception of the Administration Building.

The following are **required** while handling HTC material.

1. Coveralls. **Coveralls must be laundered on a daily basis!**
2. Leather or rubber gloves.
3. Rubber Boots or Booties.
4. Respiratory protection as directed by the RSO or specified in an RWP. Respiratory protection will be used during initial receipt and handling of HTC feed material (s) and until material-specific DAC values are set. In addition, all individuals who work in areas where there is a likelihood that the airborne concentration DAC

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limits for either uranium, radon, thoron or thorium will exceed 25% of the DAC will be required to wear respiratory protection, as directed by the RSO (See section 7.1.2), below.

6.2 Industrial Hazards and Safety

1. Use caution when chassis are backing onto the Ore Pad.
2. Ensure that all personnel within 50 feet of the area where the IMC is hooked up to the Bartlett tipper are aware that dumping is about to commence.
3. Bartlett tipper operators must use caution during the dumping process. Move at least 25 feet away from the rear of the IMC during the initial dumping operation.
4. Do not place any part of your body inside the IMC when the chassis is being tipped and the tailgate is open. The IMC could be lowered or accidentally fall at any time, which would cause the tailgate to close rapidly and result in injury. Only work under the tailgate after it has been properly blocked open.
5. Be aware of high-pressure wash water.
6. When the crane is in operation, make sure all personnel, except the persons in charge of the tag lines, are 50 feet away from the IMC being moved. The persons in charge of the tag lines should **never** be underneath the IMC that is being moved.
7. Be aware of slippery conditions on the ore pad during periods of inclement weather.
8. Be aware of the potential for ice build-up on and around the decontamination pad during periods of cold weather.
9. Use caution when entering or exiting equipment. Be sure to use the ladders and hand rails. **Do not jump off of the equipment.**

7.0 Radiological and Environmental Concerns

Environmental radiation monitoring is routinely performed at the White Mesa Mill at sufficient frequency (quarterly and semiannually) that any potential impact to the public and or the environment would be identified. In addition to the environmental air monitoring samples collected continuously at the Mill and analyzed for radioisotopes U-

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Nat, Ra-226, Th-230 and Pb-210, the air samples collected during receipt, handling, processing, and disposal of HTC materials will also be analyzed for Th-232, Ra-228 and Th-228. The RSO will evaluate the resulting data and compare the results to their respective effluent concentration limits contained in 10 CFR Part 20, Appendix B, and will retain records of these evaluations at the Mill for NRC inspection.

7.1 Airborne Radiation Protection

1. Until otherwise indicated by air sampling results, and agreed upon by the Mill RSO and the ALARA Committee, the areas of the ore storage pad used for HTC material will be posted as either a "Radiation Area" and/or "Airborne Radioactivity Area". These areas will be posted with caution signs in accordance with 20.1902.
2. Subsequent to approvals by the RSO and ALARA Committee for reduced posting, if, based on air sampling, an area exhibits 25% of the DAC limits for either uranium or thorium, it will be posted "Respiratory Protection Required".

All personnel involved with material handling during a project involving HTC material will be required to wear a **full face respirator**, until such time that review of the air samples by the RSO and ALARA committee indicate that this level of protection is not needed. Employees will be notified of any changes to the respiratory protection requirements during an HTC project by memorandum.

- a. All individuals who work in areas where there is a likelihood that the airborne concentration DAC limits for either uranium, radon, thoron or thorium will exceed 25% of the DAC will be required to wear respiratory protection. As directed by written memorandum from the RSO, one of the following respirators will be selected:
 - i. Full Face Respirator
 - ii. Powered Air Purifying Respirator
 - iii. Self Contained Breathing Apparatus (SCBA)
3. Personal air monitoring will be conducted as per Section 1 of the White Mesa Mill Radiation Protection Manual and Section 4.2 above.
4. Continuous air sampling will be conducted around the perimeter of the ore pad. At the onset of an HTC project, sample filters from the continuous air samplers will be collected and analyzed for gross alpha, Ra-222 and Ra-220 on a weekly basis. This frequency

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may be relaxed upon approval of the site RSO and the ALARA Committee.

5. Real time thoron monitors will be placed around the periphery of the ore pad for the duration of the HTC project. These monitors will be changed out according to the frequency recommended by the manufacturer and analyzed for Ra-220.

7.2 Urinalysis

1. All personnel involved with the dumping, stockpiling or processing of HTC content material and RST's involved in monitoring described in this SOP will submit a urine sample every two weeks at a minimum, or at a greater frequency if so directed by the provisions of an RWP. These samples will be analyzed for uranium and thorium content. Evaluation and corrective actions will be conducted pursuant to guideline provisions contained in Regulatory Guide 8.22 *Bioassay at Uranium Mills*. In vivo lung counting may be implemented if circumstances suggest an overexposure or uptake of either isotope has occurred. In vivo counting will be conducted at the discretion of the RSO and ALARA Committee.

7.3 Personal Hygiene

1. All personnel involved with the dumping, stockpiling or processing of HTC material will be required to wear designated coveralls. These coveralls will be changed and laundered on a daily basis.
2. All personnel involved with the dumping stockpiling or processing of HTC material will be required to shower before leaving the restricted area at the end of their shift.
3. All personnel will survey their hands, boots and clothing for surface contamination prior to eating or leaving the restricted area.



Michael O. Leavitt
Governor
Dianne R. Nielson, Ph.D.
Executive Director
William J. Sinclair
Director

State of Utah

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF RADIATION CONTROL

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November 28, 2001

Mr. Harold Roberts
Vice President, Corporate Development
International Uranium (USA) Corporation
Independence Plaza, Suite 950
1050 17th Street
Denver, CO 80265

Re: December 31, 1998 Knight Piesold Report on Seepage Flux from Tailings Cell 3 Liner,
White Mesa Uranium Mill: **Request for Additional Information.**

Dear Mr. Roberts:

Pursuant to your request during our November 14, 2001 telephone call, I am providing this written request to relay several questions that arose during my review of the December 31, 1998 Knight-Piesold (KP) report entitled "Methodology for Calculation of Flux Through the Cell 3 Liner, White Mesa Mill". As we discussed previously, review of the KP report was undertaken, because predictions from it were used as model inputs in the September 25, 2001 Hydro Geo Chem (HGC) Report on monitoring well effectiveness. Please provide the additional information requested below.

December 31, 1998 KP Report

1. Composite Liner - a claim is made in the KP report that the liner geometry under Cell 3 constitutes a "composite liner", as defined by Giroud and Bonaparte (12/31/98 KP Report, p. 1). Review of the technical literature shows that a composite liner is defined as a Flexible Membrane Liner (FML) that is immediately underlain by a clay with a permeability of less than 1.0E-4 cm/sec, but usually in the range of 1.0E-6 to 1.0E-8 cm/sec (Bonaparte, et. al., 1989, p. 18). Review of the March, 1983 Energy Fuels Nuclear (EFN) Cell 3 As-Built Report shows that the FML bedding layer was constructed of material with the consistency of "coarse sand" (ibid., p. 3-4). In some cases, the EFN construction used "washed concrete sand to fill voids crated during rock removal operations" (ibid., p. 3-5). The permeability of these liner bedding sands would likely fall into a range that is higher than 1.0E-4 cm/sec. Consequently, DRC staff see no support for the KP claim that a composite liner exists under Cell 3.

NMSSo1P622c

2. Liner Bedding Permeability: North, East, West Sideslopes and Cell Floor - the KP Report assumed that the liner bedding material under the North, East, and West sideslopes, and the Cell 3 floor had a permeability of $1.0E-6$ cm/sec. Concern about this low permeability assumption was raised previously (1/21/99 DRC letter, p. 2). In response to this DRC concern, IUC responded that there was no documentation available to justify the $1.0E-6$ cm/sec liner bedding assumption and that this value was based solely on "engineering judgment" (2/12/99 KP Response, p. 2). However, after review of the March, 1983 EFN Cell 3 As-Built Report, described above, it is very unlikely that the permeability of the liner bedding material is this low. Available technical literature suggests the permeability of "coarse" sand should be greater than $1.0E-4$ cm/sec, as follows:

- A. Clean Coarse Sand - on the order of $1.0E-1$ to $1.0E+0$ cm/sec (Freeze & Cherry, p. 29);
- B. Coarse Sand Filter - about $3.5E-2$ cm/sec (100 ft/day, Moulton, p. 52),
- C. Well Graded (SW) Sand - between $4.9E-4$ to $4.8E-2$ cm/sec (1.4 to 137 ft/day, Moulton, p. 48).
- D. Coarse Sand (repacked) - average of $5.19E-2$ cm/sec ($1,100$ gpd/ft², as determined from 158 samples, Morris and Johnson, p. D20).

Please revise the FML bedding permeability assumption to include a value greater than $1.0E-4$ cm/sec, or provide additional justification for $1.0E-6$ cm/sec value used.

3. Liner Design Case and Equations - previously the DRC asked for additional justification of the liner design case used by KP in selection of the equations that govern seepage flux thru defects in FMLs (1/21/99 DRC letter, p. 2). In response to this request, KP explained that (2/12/99 KP letter, pp. 2 and 3):
- A. The spreadsheet model used in the KP report was based on Geomembrane Liner Design Case 3a, as found in Schroeder et. al.
 - B. The KP model ignored the low permeability tailings above the FML.
 - C. The appropriate design case is determined by the "controlling" soil layer in the profile,
 - D. The equations KP used apply equally well regardless of whether the controlling soil layer ($1.0E-6$ cm/sec) is a tailings layer immediately above the FML, or a bedding layer immediately below the FML.

Regarding this IUC response, DRC staff have made the following findings:

- E. The referenced Geomembrane Liner Design Case 3a is defined as follows, descending order (Schroeder, et. al., pp. 79 and 95):
 - 1) A high permeability soil layer ($K \geq 1.0E-1$ cm/sec),
 - 2) The FML, and

- 3) A low permeability soil layer ($K < 1.0E-4$ cm/sec).

We agree that the Giroud and Bonaparte equations still apply when the controlling soil layer is immediately above the FML. However, the tailings layer referred to is NOT in direct contact with the FML.

- F. Other HELP model Geomembrane Liner Design Cases appear to better represent the field conditions under Cell 3. The February 12, 1999 KP response did not account for the presence of the slimes drain layer and associated piping network constructed immediately above the Cell 3 FML to de-water the overlying tailings. As a result, the tailings cannot be used as the "controlling" soil layer for purposes of assigning a liner design case, or determining governing equations to predict FML leakage. Depending on the field permeability of the slimes drain layer, a hydraulic discontinuity, or head break could exist in the profile below the tailings; especially if this layer is pumped to remove tailings leachate from the system. Based on DRC review of the Schroeder et. al. document, it appears that Geomembrane Liner Design Cases 2a, 2b, or 2c would be more applicable to Cell 3, as summarized below (with layers described in descending order):

Design Case 2a: (1) a medium permeability soil layer ($1.0E-4$ to $1.0E-1$ cm/sec),
(2) the FML, and
(3) a high permeability soil layer ($\geq 1.0E-1$ cm/sec)

Design Case 2b: (1) a high permeability soil layer ($\geq 1.0E-1$ cm/sec)
(2) the FML, and
(3) a medium permeability soil layer ($1.0E-4$ to $1.0E-1$ cm/sec)

Design Case 2c: (1) a medium permeability soil layer ($1.0E-4$ to $1.0E-1$ cm/sec)
(2) the FML, and
(3) a medium permeability soil layer ($1.0E-4$ to $1.0E-1$ cm/sec)

Please revise the equations used in the December 31, 1998 KP report to incorporate equations from Liner Design Case 2, as defined by Schroeder, et. al.

- G. A relatively high permeability is suggested for the slimes drain layer by the May, 1981 D'Appolonia Consulting Engineers (DCE) Cell 3 design report, which shows this layer was to be constructed of "coarse" tailings, 1.5 feet thick over the sideslope areas, and 1.0 foot thick over the Cell 3 floor area (ibid., Sheet 4 of 5). Later, the March, 1983 EFN Cell 3 As-Built Report explained that (ibid., pp. 3-7 and 8):

- 1) At the time of construction the "coarse" tailings available were only enough to cover about 30% of the cell floor.
- 2) EFN covered the remaining 70% of the Cell 3 liner area with excavated soil from stockpiles located East and West of Cell 3, and

- 3) These cover materials were placed on the FML using front end loaders and 769 CAT haul trucks after construction of a haul ramp in the Southwest corner of the cell.

No information was provided in the March, 1983 EFN Cell 3 As-Built Report to document the gradation or permeability of the cover materials used from the nearby soil stockpiles. However, because the layer was designed to de-water the overlying tailings, it is plausible that the permeability of this material is rather high, perhaps greater than 1.0E-3 cm/sec. Please increase and justify the permeability assigned to the FML bedding layer and recalculate the seepage flux from the Cell 3 disposal facility.

4. Recommendation for Use of EPA HELP Model - because the tailings layer in the Cell 3 profile will continue to limit the amount of leachate flux made available to the slimes drain layer, which in turn accumulates on the FML, the spreadsheet equations in the December 31, 1998 KP Report need to be modified to: 1) add predictions of seepage flux from the tailings layer, and 2) provide predictions of resulting head on the FML to be used in calculation of FML leakage rates. To simplify this effort, DRC staff recommend IUC consider use of the EPA HELP model for this purpose. We also recommend that a meeting be held to discuss the construction of a conceptual model and other input values for this simulation.
5. Vapor Diffusion: Equivalent PVC FML Permeability - the December 31, 1998 KP Report lists an equivalent permeability for the PVC membrane, 4.42E-8 inch/day or 1.3E-12 cm/sec (ibid., Table 1 and Appendix B). Unfortunately, this equivalent permeability value is unjustified. Information provided by Giroud and Bonaparte (1985) and Schroeder, et. al. (Table 8, p. 77) demonstrates that the equivalent permeability of PVC is 2.0E-11 cm/sec, which is about 15 times more permeable than the December 31, 1998 KP Report value. Please correct this permeability value and revise the seepage flux calculations for Cell 3.
6. Assumed Flaw Rate: Pinholes and Installation Defects - the December 12, 1998 KP Report cited research by Giroud and Bonaparte (1989) and assumed the following FML flaw areas and rates of occurrence (ibid., pp. 2, 4, and Table 1):

<u>Flaw Type</u>	<u>Radius</u>	<u>Circular Area</u>	<u>Defect Rate</u>
Pinholes	0.02 in (0.05 cm)	0.0013 in ² (0.008 cm ²)	1 flaw/acre
Installation defects	0.22 in (0.55 cm)	0.15 in ² (1 cm ²)	2 flaws/acre

However, careful review of the Giroud and Bonaparte reference shows that installation defects of 10 flaws/acre or more are warranted when FML construction quality assurance is limited to an engineer spot-checking the work of a geomembrane installer (ibid., pp. 64-65). Schroeder and others (1994b) also reinforce this recommendation and add that the 1 flaw/acre rate is only applicable with "intensive quality control/quality assurance monitoring" (ibid., p. 78). After review of the May, 1981 DCE Cell 3 Design and the March, 1983 EFN Cell 3 As-Built Reports, DRC staff have concluded that a installation defect flaw rate of 10 flaws/acre or more is appropriate, based on the following findings:

- A. Limited FML COA: Destructive Testing - FML construction quality assurance was limited to destructive testing of the FML membrane on infrequent intervals. A suite of peel, elongation, tensile strength, tear, and other destructive tests were performed once for every 250,000 ft² of factory fabricated FML liner (5/81 DCE Report, Appendix B, Table 1 and p. 3-7). In addition, single tear strength tests were conducted on field seam samples on a basis of 1 for every 100,000 ft². Based on an approximate 3.5 million square feet of FML surface under Cell 3, this would suggest that 14 suites of tests would have been conducted on the factory fabricated liner material and 35 tear strength tests on the field seams constructed. For a disposal cell of such large size, it appears that low number of destructive tests qualifies as spot-checking.
- B. Limitations of Air-Lancing - non-destructive testing of field-constructed seams was limited to air lancing (3/83 EFN Report, p. 3-6). Unfortunately, this technique can only find a seam defect if it is exposed at the front edge of a seam and is described as "strictly a contractor/installer's tool to be used in a construction quality control (CQC) manner." It is not recommended for construction quality assurance purposes (Koerner, pp. 499-500). In addition, air lancing has the potential to provide a false negative response, where a pocket or channel-shaped defect in the seam adhesive could easily occur behind the front edge of the seam. Such a defect could run along the seam for a considerable distance and never be detected by the air lance. In turn, if the upper surface of the seam above this pocket or channel were to be punctured or encounter another defect, an avenue would be created for leakage to pass thru the FML. Such areas of incomplete or poor seam adhesion pose points of weakness where defects could form later, particularly after the FML is loaded. On this basis, DRC staff have concluded that air lancing does NOT qualify as "intensive quality assurance monitoring", and therefore the KP assumed defect rate of 2 installation flaws/acre is currently unsupported.
- C. Puncture Potential During Installation - a significant potential exists for FML puncture during installation. The original engineering design called for the slimes drain layer to be made from coarse sand-sized tailings discharge from the mill and segregated by a cyclone separator (5/81 DCE Report, Appendix B, p. 3-7). However, the March, 1983 EFN As-built Report stated that there was only enough coarse tailings available at the time of construction to cover about 30% of the Cell 3 floor area. Instead, EFN constructed the remaining 70% of the slimes drain layer with soils derived from the Cell 3 excavation (ibid., pp. 3-7 and 8). Unfortunately, no information is provided in the March, 1983 EFN As-built Report regarding several critical FML construction issues, including:
- 1) Soils excavated from the foundation of Cell 3 could easily contain angular rock fragments that could puncture the FML during placement. Although the May, 1981 DCE design report stipulated that the slimes drain layer not contain any sharp, angular pieces (ibid., Appendix B, p. 3-7), no description was included in the March, 1983 EFN As-Built Report to document how the excavation soil stockpiles were screened or otherwise treated to remove or eliminate angular rock fragments. These types of defects, caused by FML cover soil placement, cannot

be observed by construction quality assurance personnel (Giroud & Bonaparte, 1989, p. 64).

- 2) No effort was made in either the May, 1981 DCE design report or the March, 1983 EFN as-built report to determine the maximum pressure or load that could be applied to the FML without damage or puncture. Consequently, the thickness of the slimes drain layer needed to protect the FML from static and dynamic loads from haul trucks, front-end loaders, or bull dozers appears to have never been quantified. Determination of the thickness of this "protective cushion" is essential to avoiding punctures during construction, and is especially important for PVC membranes that are much more prone to point source puncture than other FML materials (EPA, p. 31). Again, FML damage caused by such equipment traffic cannot be observed by construction quality assurance personnel (Giroud & Bonaparte, 1989, p. 64).
 - 3) Potential for impact damage from apparent dumping of slimes drain cover soils. Little description was provided in the March, 1983 EFN as-built report to explain how slimes drain soil was supplied to the low ground pressure bulldozer used to spread a progressive pad of soil. Apparently, front-end loaders and haul trucks were employed to bring the excavated soil or coarse tailings to where they were needed by accessing the Southwest corner of Cell 3. Apparently, no liner was built in this area at the time of the haulage to avoid FML damage by repetitive truck traffic (ibid., p. 3-8). However, from the photographs provided in the As-Built Report (Appendix E), it is apparent in at least 1 photo that windrows of slimes drain cover soils have been end dumped on the FML, either by truck or front-end loader. Such dumping has the potential to create large dynamic stress and punctures thru the PVC liner material; especially if angular rock fragments are found in the excavated soils for cover material. As before, FML damage caused by dropping loads of cover soil cannot be observed by construction quality assurance personnel (Giroud & Bonaparte, 1989, p. 64).
- D. Apparent Lack of COA/QC Controls for FML Wrinkles at Seams - no construction specifications were provided for FML Wrinkles. Review of both the May, 1981 DCE design report and the March, 1983 EFN as-built report show no mention made of preventing wrinkles in the FML during construction. This is especially important near field seams, where if a FML wrinkle were to impinge on a seam at angle and become incorporated into the seam, a bypass conduit could be created that would allow tailings leachate to be discharged.
- E. Effects of FML Aging - no consideration was given to the effects of FML aging on liner defect rate. The December 31, 1998 KP Report does not include any discussion of the effects of FML aging. Plasticizer compounds used in the manufacture of PVC liners are prone to leaching (Koerner, p. 510). The loss of the plasticizer in turn makes the FML more brittle and susceptible to damage. Under this scenario stress cracks can develop in

a FML. Add to this the increased loads on the liner as tailings are continuously disposed into Cell 3, and it is possible that additional FML flaws could develop.

- F. Poor Chemical Resistance Effects - no consideration is given in the December 31, 1998 KP Report to chemical resistance of PVC in the presence of the tailings contaminants. In general, PVC liners exhibit poor resistance to petroleum hydrocarbons and chlorinated solvents (Koerner, p. 389). Historically, significant amounts of kerosene/diesel fuel and small quantities of chlorinated solvent have been discharged to the IUC tailings cells. In addition, no information was provided in either the May, 1981 DCE design report or the March, 1983 EFN As-Built Report on the chemical resistance of the PVC adhesive to these same chemicals. Adverse reactions of these organic compounds with the PVC liner material or seam adhesive could easily cause the formation of additional liner defects.

After consideration of the above factors, it appears that the FML installation defect rate of 2 flaws/acre is grossly under-estimated, and should be increased to at least 10 flaws/acre, if not more. Please revise the December 31, 1998 KP Report accordingly and re-submit.

7. FML Bedding Thickness: North, East, and West Sideslopes - the December 31, 1998 KP Report cites a 6-inch thickness for the bedding layer under the FML for the North, East, and West sideslope areas of Cell 3. In contrast, the May, 1981 DCE design report called for a 1-foot thick bedding layer for these sideslopes (ibid., Sheet 4 of 5). Please revise your model to include the correct thickness.
8. Justification of Extrapolation to Cells 1 and 2 - the spreadsheet model presented in the December 31, 1998 KP Report focused specifically on the physical characteristics of Cell 3. Previously IUC has made claims that the Cell 3 seepage predictions are applicable to Tailings Cells 1 and 2 (11/23/98 KP letter, pp. 10-11). However, after consideration of the myriad of independent design and construction details, it appears that the extrapolation of the Cell 3 analysis to these other 2 disposal cells is unwarranted. Please provide a justification for why any Cell 3 analysis is applicable to the other 2 cells, after careful consideration of several key issues, including, but not limited to:
- A. Gradation and permeability of component layers, including but not limited to the FML bedding layer, slimes drain layer, etc.
 - B. Applicable geomembrane liner design case,
 - C. Cell geometry, including total depth, internal slopes, layer thickness, grade and shape of cell floor, etc.
 - D. Effects of differing cell geometry on average head on FML, different load on FML and resulting soil-liner contact, etc.

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- E. Construction techniques used to excavate and prepare final grades, prepare FML bedding layer, emplace FML cover layers or other overlying material or equipment without damage to underlying geomembranes, etc.
 - F. Techniques to measure and monitor construction progress and compliance with engineering specifications (e.g. gradation tests, soil permeability tests, etc.).
 - G. FML construction techniques, including but not limited to methods, equipment, and training for: FML transport, placement, wrinkle control, seam construction, and FML destructive and non-destructive quality assurance/quality control.
 - H. Effects of FML aging to leaching of plasticizers, or chemical interaction of the FML or seam adhesives with tailings leachate contaminants.
 - I. Pumping rates from the slimes drain layer (Cell 2), or leak detection layer from either Cells 1 or 2.
9. Need to Submit Sensitivity Testing Results – the December 31, 1998 KP Report described sensitivity testing conducted on the spreadsheet model and summarized the results thereof. Unfortunately, the report failed to include the results of this sensitivity testing. For future simulations, please provide the input values and output results for all sensitivity test work conducted.

Please resolve the above information request in order to allow completion of our review of the September 25, 2001 HGC Report. If you have any questions or comments, please call me at (801) 536-4262. I appreciate your assistance in this matter.

Respectfully,



Loren B. Morton

LBM:lm

Attachments (1)

cc: Stewart Smith, HGC
Bill von Till, NRC-Washington, D.C.

FA...Cell3Flux.doc
File: IUC Infiltration Modeling Reports

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Utah Division of Radiation Control, January 21, 1999, "Methodology Assumptions Used for Calculation of Flux Through the Cell 3 Liner, White Mesa Uranium Mill", agency request for additional information, 3 pp.

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11/13/02

UNITED STATES OF AMERICA
Before the
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Administrative Law Judge Alan S. Rosenthal, Chair
Administrative Law Judge Dr. Richard F. Cole

In the matter of)
International Uranium (USA) Corp.) Docket No.
White Mesa Uranium Mill) 40-8681-MLA-11
(Source Material License Amendment))

DECLARATION OF IVAN WEBER
ON BEHALF OF PETITIONER SIERRA CLUB GLEN CANYON GROUP

1. My name is Ivan Weber.
2. I reside at 953 1st Avenue, Salt Lake City, Utah.
3. I am an environmental construction and sustainability consultant doing business in the State of Utah. I have been practicing in that capacity for 1 year, after 9 years as environmental planner and contracts manager for Kennecott Utah Copper Environmental Engineering Projects Group, and twenty previous years as large-scale construction manager, building inspector, technology specifier, and design manager. A resume of my professional qualifications is attached hereto as Exhibit 'A'.
4. In order to form a professional opinion about the issues in this case, I have reviewed the following related documents:
 - a. Energy Fuels Nuclear / D'Appolonia Consulting Engineers, Inc., "Construction Report: Initial Phase - Tailings Management System" (1st Phase As-Built, Cells 1 & 2), Feb. 11, 1982.
 - b. Energy Fuels Nuclear, Inc., "Construction Report: Second Phase Tailings Management System" (2nd Phase As-Built Cell 3), March 1983.
 - c. International Uranium Corp., "Construction Report: Tailings Cell 4A," August 2000.
 - d. Drawings: "Construction Drawings Tailings Management System White Mesa Uranium Project, Blanding Utah" D'Appolonia Engineering, Inc., prepared for Energy Fuels Nuclear, Inc., March 30, 1979:
 - EFN/D'Appolonia Dwg. No. RM78-682-T1 Title Sheet (1 of 15)
 - EFN/D'Appolonia Dwg. No. RM78-682-E15 General Arrangement Tailings Management System (2 of 15)
 - EFN/D'Appolonia Dwg. No. RM78-682-E5 Approximate Top of Bedrock (3 of 15)
 - EFN/D'Appolonia Dwg. No. RM78-682-E4 Tailings Cell Sections A-A, B-B, and C-C (4 of 15)

- EFN/D'Appolonia Dwg. No. RM78-682-E3 Tailings Cell Sections D-D and E-E (5 of 15)
- EFN/D'Appolonia Dwg. No. RM78-682-E14 Cell Area - Capacity Curves (6 of 15)
- EFN/D'Appolonia Dwg. No. RM78-682-E16 System Schedule and Material Quantities (7 of 15)
- EFN/D'Appolonia Dwg. No. RM78-682-E6 Initial Construction Phase Detailed Plan (8 of 15)
- EFN/D'Appolonia Dwg. No. RM78-682-E9 Conceptual Layout System Expansion Cells 3,4, and 5 (9 of 15)
- EFN/D'Appolonia Dwg. No. RM78-682-E7 Conceptual Layout Cell 1 - Enlargement Cell 5 Safety Dike (10 of 15)
- EFN/D'Appolonia Dwg. No. RM78-682-E8 Tailings Disposal Operations (11 of 15)
- EFN/D'Appolonia Dwg. No. RM78-682-E10 Sump and Drain Access Details (12 of 15)
- EFN/D'Appolonia Dwg. No. RM78-682-E12 Cell Lining Installation Details (13 of 15)
- EFN/D'Appolonia Dwg. No. RM78-682-E11 Geotechnical Analysis (14 of 15)
- EFN/D'Appolonia Dwg. No. RM78-682-E13 Miscellaneous Details (15 of 15)
- e. Letter, William J. Sinclair, Dir. Utah State Div. of Radiation Control, to John. J. Surmeier, US NRC, Nov. 29, 1999, re: State comments on EA for White Mesa Mill Reclamation Plan.
- f. Letter, Harold R. Roberts, Exec. VP IU (USA) Corp., to T.H. Essig, US NRC, Dec. 7, 1999, re: Response to State comments Nov. 29, 99.
- g. Environmental Assessment for Amendment to White Mesa IUC Uranium Mill Site SUA-1358, for Approval of Proposed Reclamation Plan, prepared by US NRC, Dec. 23, 1999 (with transmittal memos).
- h. Operation Inspection Report for NRC for Aug. 18, 1998 - July 25, 2000, IU(USA)C White Mesa Mill, T. Yamashita, Inspector, 07/25/00.
- i. Letter and Report, William N. Deal, Manager IU(USA)C White Mesa Mill, to William Von Till, US NRC, 4-27-01, re: Cell 4-A Leak Detection Report.
- j. Letter and Report, William N. Deal, Manager IU(USA)C White Mesa Mill, to William Von Till, US NRC, 5-29-01, re: Cell 4-A Leak Detection System Follow-up Report.
- k. Letter, Loren B. Morton, Project Hydrogeologist, Utah State Div. Radiation Control, to Harold Roberts, VP IU(USA)C, 11-28-01, re: Request for Additional Information regarding 12-31-98 Knight Piesold Report on Seepage Flux from Tailings Cell 3 Liner, White Mesa Uranium Mill.
- l. Environmental Assessment and transmittal letters, Source Material License Amendment for Receipt and Processing of MolyCorp Alternate Feed, prepared by US NRC, 11-30-01.

5. After review of the materials listed above, I have formed the following opinions, based on my best professional judgment: The license amendment at issue in this case should not have been granted and should be withdrawn until a complete study of the tailings cells liner system has been completed and assessed. Moreover, a thorough study should be initiated immediately to investigate extremely probable ground water contamination at the site, along with its implications. The reasons for this opinion are as follows:

a. Cells 1, 2 and 3:

The lining system of cells 1, 2 and 3 is substandard in design, materials and construction for the purpose of permanent containment of "source material" tailings, constituents of which are likely to be hazardous as a consequence of acid-leach processing. Deficiencies rendering the lining system of these cells include the following observations, drawn from the Construction Reports for cells 1, 2 and 3 (documents a and b, listed above), and from comments and questions exchanged in letters and reports listed above:

1) Soil bedding deficiencies:

- Soil bedding under the liner was prepared with collapse prevention objectives under dikes, but no documented attention to quality control of bedding under synthetic liner on the floor of cells 1, 2 and 3 for creation of a barrier to permeability.
- The subgrade material was not clay, but rather was characterized in the construction report as pulverized, in-situ rock, compacted in place:

"The gravel/sand mixture from the rock excavation operation was used in the preparation of the liner bedding. Caterpillar 825 sheepsfoot compactors were used to crush the bedding material down to the consistency [sic] of a coarse sand... Final compaction of bedding material was performed with a smooth drum vibratory roller... This method was used for both the cell bottom and the excavated and fill slopes of the cell interior. Inspection of the bedding was performed by D'Appolonia, Energy Fuels and BF Goodrich representatives. Areas of protruding rock fragments were noted and recompactd or removed by hand. Approval of excavated areas were [sic] given prior to liner placement." (Source: Document a., Construction Report: Initial Phase, As-Built Cells 1 & 2, page 3-3.)

Liner bedding soil materials, according to documentation provided, may have been made up of a significant proportion of angular and sharp rock fragments, which present great potential to move as further loading occurred during and after construction, possibly puncturing or tearing the synthetic liner sheet.

- The bedding soil material certainly was not clay, nor was it tested in place, apparently, for permeability by use of a single-ring or double-ring infiltrometer. Compaction was tested by use of a Troxler nuclear density gauge (ASTM D2922) calibrated periodically by Washington (balloon) Densometer (ASTM D2167). Nuclear density gauges, while useful in conventional soils, are commonly regarded as questionable for rocky materials. This method may approximate compaction for load-bearing properties, but in no way will it adequately measure permeability. In construction documentation, (see document b, cited above), bedding preparation in cell 3 was described as a continuation of that used for cells 1 and 2, as follows:

"After the cell was excavated to the final contours, a gravel-sand mixture from the rock excavation operation was used in the preparation of the cell bottom for liner installation. A... self-propelled sheep's foot compactor was used to crush the loose sandstone material down to the consistency of coarse sand." (document b, p. 3-4).

No soil screening seems to have been done, so we must conclude that fragmented rock was left immediately below the surface. Appendix E of the construction report (document b) contains photographs clearly showing sizeable rocks, especially exposed in erosion lines on the dike face (see photo labeled "Underdrain installation and bottom preparation"). Where the prepared surface may have settled or been differentially compacted by subsequent operations (liner and soil cover installation, as well as significant fluid "head" in operational cells), rock fragments may have been given unimpeded opportunity to penetrate the FML.

- In no sense is this system either a "composite liner," as it has been characterized by IU(USA) Corp., "state of the art" or even remotely adequate to create initial containment system performance, much less decades of continued adequate leak-prevention. We concur with the similar challenge by UDRC's Mr. Morton (document k). Due to the complete lack of documentation that an adequate thickness of prequalified clay was placed to guarantee low permeability (not greater than $1.0E-4$) as verified by QA/QC appropriate for permeability determinations in suitable soils, we strenuously question previous contentions that the liner is functional. $1.0E-4$ is not considered to be an adequate standard for impermeability. Typically, clay barriers must be at least two to three orders of magnitude more stringent than $1.0E-4$ (i.e., 100 to 10,000 times more resistant to water flow), in the $1.0E-6$ to $1.0E-8$ range, as noted by Mr. Morton. For example, the minimum required for all systems placed at Kennecott in the past seven years is $1.0E-7$ in-place permeability of laboratory-prequalified clays of known plasticity and optimum moisture requirements, in layers not less than 12", verified at specified intervals by stringent, single-ring infiltrometer tests. Furthermore, these clay underliners have been placed with redundant, 80-mil and 100-mil HDPE liner systems with leak detection systems *between* double liner sheets, each more than double the thickness of those used in cells 1, 2 and 3 at White Mesa --- comparatively rigorous fluid barrier systems. The soil base of the White Mesa "liner system" is a flawed design, executed in a flawed manner, and documented in a flawed way.

- Quality control was not done by an impartial, objective inspector. All inspection was reported to have been done by owner or contractor personnel. Document a, cited above, states that D'Appolonia was only involved in Cell 2 inspection, which is not the crucial matter of this review, since Cell 2 is now filled with tailings (though it may prove to have been a major source of ground water contamination). Cell 1, as a consequence, may have only been inspected by EFN and/or BF Goodrich (FML manufacturer) personnel; either would be against standard practices of QA for soils placement. There is no impartial, objective, critical review and documentation of installation, as a consequence.

- The flexible membrane liner (FML) is left, as a further consequence, to be the sole mechanism preventing leakage of fluids from cells 1, 2 and 3.

2) Flexible membrane liner deficiencies:

The quality of membrane material for this particular installation renders it not only far short of best-practice level at the time of construction, but also completely unacceptable for such use compared to the liner technologies and regulatory requirements of the present. In other words, it was inadequate then, and it is even more inadequate now. This is the case because the particular liner material was not stable, was weak, and was too soft to resist rocky soils below and above the FML. It was identified in cells 1 and 2 to be a BF Goodrich 30-mil PVC sheet, factory seamed to specified widths, and then field-seamed into a continuous sheet (Document a, Appendices C and D); and in

Cell 3, a Dynamit Nobel Harte, Inc., 30-mil PVC membrane, also factory and field seamed to form a continuous sheet (Document b, Appendix B) (Inexplicably, Appendix C of the Cell 3 report presented BF Goodrich, instead of Dynamit Nobel Harte, reports for aging, but simulating only two years.)

PVC has had a number of problems in its history. Only recently have some of those problems been overcome. For the most part, PVC continues in widespread use by virtue of the construction industry's having learned how, where and under what precautions to use it (e.g., under ceramic tile mortar setting beds). Specific problems of PVC technology have included the following:

- PVC continues to age throughout its "life." PVC flexible membrane pond liners, landfill liners and roofing sheets produced up to the late 1980s-early 1990s were notorious for breaking down quickly under many circumstances. Only complete encapsulation seems to prevent plasticizer (solvent) loss. In architectural and engineering applications, PVC products had to be shown to have overcome disastrous performance problems in order to regain market acceptance approaching EPDM, Hypalon, polymer-modified PVC and other flexible sheet membranes. One manufacturer of a high-quality, reinforced PVC membrane maintained a high-priced, specialized market niche throughout this period, and continues to do so today. It is perhaps no surprise that the PVC roofing market dominator was Dynamit Nobel (same as FML manufacturer for Cells 1, 2 and 3 at White Mesa), the company that had to weather the greatest turbulence of product failure and replacement.
- PVC was, and is, particularly susceptible to loss of plasticizer compounds, consequent loss of elasticity, elongation capacity, flexibility (becoming brittle), loss of seam strength and loss of mechanical (tensile) strength. Review of PVC manufacturing process options reminds us of the great variety of plasticizers that have been used in PVCs over the years. One extensive reference says, "Plasticizers, in general, reduce the modulus of a PVC compound, decrease hardness, decrease mechanical strength, but increase elongation, creep and friction...It is extremely important that the PVC compounder recognize the environment in which the final product will function...". (Source: "Rubber-Related Polymers - Part 1: Poly(vinyl chloride)" by C.A. Daniels and K.L. Gardner, BF Goodrich Co., in Maurice Morton, *Rubber Technology*, 3rd Ed., pp. 571-572.)
- PVC has been vulnerable to attack by bacteria (which destroyed millions of square feet of roofs in the 1980s, notably in the Denver area).
- Decomposition of PVC membranes by exposure to hydrocarbons has been common among roof and environmental liner applications. Oils and solvents associated with equipment on roofs have been a persistent problem, necessitating double and even triple membrane layers around mechanical equipment on roofs, where oils may fall on roofing, or around exhaust vents from commercial kitchens. Another approach was to place protective layers of oils-resistant hypalon over the PVC. Oil compounds and oil solvents dumped or leaked into landfills and ponds have been problematic for environmental liners and containment basins. Mr. Morton refers, in document k, to past waste oil disposal in the White Mesa cells, yet another cause for concern.
- Puncturing, due to relative softness compared to other liner materials, is also a common problem. Protection boards of various types are used over, and even under, most sheet membranes on roofs that are "ballasted" with rock to keep them in place.

Aged PVC liners of the vintage installed, in the thickness installed, have almost no chance of being competent barriers to fluid leakage, even if installed perfectly. There is no information presented in the reports reviewed which can lead us to assume that the liner sheets in cells 1, 2 or 3 may have been exempt, somehow, from these industry-wide problems. Even in the late 1970s and early 1980s, a precautionary design would have specified a PVC liner thickness to be much thicker, possibly double or greater (i.e., 60-mil or more), than used in Cells 1-3 to begin to compensate for the shortcomings of PVC materials. Currently, unmodified PVC is seldom used in simple, unprotected applications. When it is, stringent protective measures must be taken to assure that bedding and filling materials and procedures are followed.

3) FML QA/QC deficiencies:

As was done for the soil bedding, quality assurance and quality control (QA/QC) functions for the flexible membrane liner installation were performed by the installing contractor, according to the reports (page 3-2, Document b). Visual observation and air-lancing of field seams were the only QA methods reported. "Air-lancing" is described as follows by the applicable ASTM standard: "Inspect all field seams for unbonded areas using an air nozzle directed on the upper seam edge and surface to detect loose edges, ripples indicating unbonded areas within the seam, or other undesirable seam conditions. Check all bonded seams using a minimum 50 psi (345 kPa) (gage) air supply directed through a 3/16 in. (4.8 mm) (typical) nozzle, held not more than 2 in. (51 mm) from the seam edge and directed at the seam edge." (Source: ASTM D 4437, "Standard Practice for Determining the Integrity of Field Seams Used in Joining Flexible Polymeric Sheet Geomembranes" in *ASTM Standards and Other Specifications and Test Methods on the Quality Assurance of Landfill Liner Systems*, American Society for Testing and Materials, 1994.) Other methods are also described by ASTM, both destructive ("peel" and "shear") and non-destructive ("air lance," "vacuum box," "ultrasonic (high frequency) pulse echo," and "mechanical point" testing). The ASTM standard requires that a field quality assurance program produce a report:

"The report shall include the following:

- 8.1.1 Complete identification of geomembrane system, including type of polymer, source, thickness, reinforced or nonreinforced sheeting,
- 8.1.2 Complete identification of field seaming system used, including material, method, temperatures, seam width, cure time, and date of fabrication of field seams,
- 8.1.3 Quality control test or tests used as outlined in this practice,
- 8.1.4 Complete description of field sampling procedure, number of test specimens, and size of test specimens,
- 8.1.5 Conditioning procedure prior to destructive seam testing,
- 8.1.6 Type of tensile machine used, grip separation, crosshead speed, grip surface texture, grip dimensions, and grip pressure,
- 8.1.7 Method of recording loading and determining average load for destructive test methods,
- 8.1.8 Average, maximum, and minimum peel and shear load values in pounds per inch (kilograms per millimetre) of width for individual specimens,

- 8.1.9 Type of failure in the peel and shear tests, that is, within the adhesive system, within the sheet material, clamp edge, or seam edge, for each individual specimen, and
- 8.1.10 For nondestructive testing, the type of nondestructive test and number of apparent failures and repairs per 100 ft (30.5 m) of seam.”

Air lancing appears, in the White Mesa cells, to have been the only method used to determine competent seaming, and no comprehensive QA report was referenced. It is our contention that, while air pressure might reveal “fish-mouths” in field seams whose edges are not fully adhered by the fluid glue/solvent-and-pressure seaming used on PVC sheets, it would routinely fail to identify inadequate adhesion immediately behind an edge that is glued only at the margin, and would fail to find a variety of seaming flaws that are symptoms of varying work conditions (wind, rapid solvent evaporation, precipitation, cold, blown dust or dirt, etc.) and seaming techniques (too much or too little solvent, inadequate primer or cleaner use, etc.). No independent QA/QC was reported or otherwise documented, so we can only assume that none was done. Construction documents failed to communicate what the actual condition and competence of installed membranes was on completion, much less what it is now.

4) Susceptibility to acid degradation:

PVC, along with other FML materials, are generally rated to be resistant to weak acids. It is important to note that PVC is not exempt from degradation by strong, aggressively oxidizing acids. We suspect that conditions fitting the latter condition more than the former are often present in Cells 1,2 and 3. Like plasticizer loss, acid attack would render the sheet brittle, inelastic and prone to physical loss of strength.

5) Leak-detection system (LDS) deficiencies:

The “leak detection system” in cells 1, 2 and 3 consists of no more than a perforated pipe at the toe of the retaining dike. In areas as large as these huge cells, this is by no means an adequate LDS network. Considering the granular, highly-permeable nature of the soil bedding (crushed rock, sand and some clay mixed with sand, with essentially no potential for permeability sufficiently low to qualify as a “clay” layer in a “composite liner” assemblage). Any fluid leaking through the FML even a few feet away from the pipe will be very unlikely to report to the pipe, There is no barrier under cells 1, 2 or 3 to downward escape of any leaked fluid, so the LDS cannot have functioned correctly, nor will it do so in the future. This assemblage would be substandard under any environmental containment system imaginable, either at the time it was built or at the present.

6) Soil cover deficiencies:

The soil cover, which appears to have been intended both as membrane protection and as a high-permeability drainage layer to conduct “slimes” to collection pipes for return to process, seems to have been of physical nature similar to that placed beneath the flexible membrane liner (but there designated a “barrier”). Document a (p. 3-6) describes the soil cover, stating that cell 1-I was used as the borrow source for the cell 2 cover. It then describes the construction process as follows:

“The cover material was spread onto the liner by small bulldozers with a progressing pad of soil to protect the liner from damage. Energy Fuels provided personnel to inspect cover

placement and to identify any damage to the liner. Areas damaged by the cover placement operation were immediately repaired. Upon completion of the cover, selected areas were checked for proper depth. Depths varying from 12 inches were observed.”

We could find no separate descriptive statement of the nature of these cover soils, but we know from descriptions of the method of soils bedding preparation below the liner that they were likely to contain crushed rock. In document b Appendix E, photographs of cell 3, one shows “Liner Installation and Cover Operations.” Rocks are plainly visible in the cover material. This choice of materials and method of application was almost certain to cause perforations, or even tears, in the already-inadequate and vulnerable flexible membrane liner. Heavy, motorized equipment, whether tracked bulldozers or large, rubber-tired vehicles, exert shear and turning forces as equipment moves up, down and across slopes, especially in turns. It is considered minimal in industry “best practice” applications to apply two feet of clean sand over FMLs, even those of much greater thickness and strength in today’s applications.

By comparison, a recent application in a repository cap assemblage at Kennecott (Arthur Stepback Repository), for which I prepared technical specifications and contract documents, devoted great attention to choice of application machines, direction of travel, minimum thickness of sand, and contractor and owner observation to assure avoidance of shear forces. This was on a 60-mil HDPE composite liner with an HDPE “drainage net” factory-bonded to the liner to minimize slippage and to protect the membrane. It was, furthermore, a cap system, not a basin liner. Two years before, the Arthur Repository bottom liner was constructed with two 80-mil HDPE layers separated by a layer of HDPE drainage net, placed over one foot minimum of field-verified $1.0E-7$ clay, rigorously tested in place. The drainage net created a continuous leak-detection layer with hydraulic connection to the leak-detection sumps. The upper membrane was manufactured with an electrically-conductive underlayer to assist in location of any perforations or near-microscopic “holidays” during installation. Three feet of sand was carefully applied over this lower liner as protective cover, prior to placement of contaminated soil materials.

The soil cover in White Mesa cells 1, 2 and 3 appears to have been put there not for membrane protection, but rather to filter chemical compounds precipitation would have clogged the return piping without the soil layer. If any attention whatsoever was paid to detection of liner punctures and tears *below the soil cover*, where inspectors/observers could not possibly see, such attention is not communicated in any of the reports reviewed. Observation and any QA/QC performed, moreover, seems to have been done strictly by EFN personnel, without independent corroboration --- a situation we could consider to be a conflict of interest, seriously compromising the assurance and control of installation quality.

b. Cell 4A:

The cell 4A system is acknowledged by IU(USA) Corp. and the State DRC to have failed as a fluid barrier. As a consequence, the cell is presently not a candidate for use in processing the proposed “alternate feed.” It is useful, however, to review Cell 4A for differences from, and similarities with, the earlier cells. The 4A system, installed in May through November, 1989, is described in document c (IUC “Construction Report: Tailings Cell 4A, Aug. 2000 --- with no explanation for the

11 years required to file the report). The cell basin was shaped and covered with a layer of "native clay" 12" thick. Unlike the piping under the liner in cells 1, 2 and 3, a more extensive network of collection piping was installed to conduct leakage to a detection sump or sumps, though we were not able to ascertain collection pipe spacing. No sand, gravel or drainage layer was used between LDS pipes, so it is unclear how water leaking through an intermediate opening was supposed to travel to the LDS pipes, rather than downward through the clay. The LDS pipes were installed in trenches lined with FML (unclear what material, presumably HDPE) covered with gravel, and the primary HDPE FML was installed directly over the gravel. From all indications, the clay layer was put down uniformly first, then the trenches were excavated *through the clay layer*, a strip of liner sheet was placed; the LDS collection or transmission pipe was placed and covered with gravel; and the primary liner was installed. The liner below the gravel apparently was not seamed or attached to the upper liner in such a way as to prevent leakage, in the event that a given LDS pipe/gravel assemblage might become clogged.

The primary, 40-mil HDPE liner was installed over the clay layer and LDS, and a soil cover layer was placed over the slimes drain, up to some operational pond fill elevation, leaving the HDPE sheet exposed in the "freeboard" margin area. Despite this change of liner strategy by IU(USA) Corp. and its engineers in the 8-9 years since design and construction of the first three cells, the Cell 4A system is no less flawed. Evidence of this is presented in reports and correspondence, which speak of known leaks (documents i and j). It is our understanding that the Utah State DRC has notified IUC that cell 4A may not be used until it is satisfactorily repaired. Except for our comments on PVC's intrinsic susceptibility to chemical and physical instability and degradation in Cells 1-3, and except for the earlier cells' lack of a clay underliner, all our previous comments concerning subgrade preparation apply also to the Cell 4A HDPE system. We summarize those that are applicable, and address the vulnerabilities of the HDPE FML, as follows:

- Soil subgrade, despite documented use of a clay material, is still substantially unknown in properties and in quality of installation. Laboratory analysis showing least attainable permeability (hydraulic conductivity) were not presented in any documents we could obtain for review, therefore the appropriate minimum clay installation standards are not known. Document c does not mention any laboratory clay analysis, nor does it mention any permeability testing by single-ring infiltrometer. Compaction testing, we emphasize, does not accomplish the same thing, however useful it may be in fine, rock-free soils for construction coordination and field verification. The FML-lined, gravel-filled trenches for leak-detection piping appear to have been *excavated through* the clay layer, creating flow connections between the leak collection piping and underlying soils. Since the trench liner sheet is not seamed to the primary liner, there is little to prevent major leakage to ground water in circumstances where liner leaks may communicate by the simplest route into the ground. There also seems to be no evidence that the installed clay layer was not allowed to dry out before liner installation, thereby potentially losing whatever resistance to permeability that may have been created. Document c refers to Landmark Reclamation's "certification" that each given area of clay was ready for liner installation, but we are not told according to what criteria, or how quickly the FML was placed over prepared clay. Moisture and permeability tests are not presented. We simply have little, if any, idea of what standards were followed.

- The high-density polyethylene (HDPE) liner was 40 mils in thickness. Conventional liners today may be purchased that thin, but liners usually are much thicker: 60, 80 or even 100 mils,

to take advantage of HDPE's dramatically increased strength with greater thickness. Despite tensile strength superior to PVC, the greatest vulnerability of HDPE sheet materials lies in three properties: Very high coefficient of expansion-contraction, lack of elasticity, and a tendency to tear once a perforation is started or a seam starts to fail. Unlike solvent-welded (glued) PVC seams, HDPE is a "thermosetting plastic," which must be heat-welded. HDPE possesses very little elasticity, unlike other rubber sheets, and is much less elastic than PVC. Because of great dimensional change, a consequence of the high expansion-contraction coefficient, careful HDPE sheet installation must allow adequate extra material in the form of wrinkles to permit relatively dramatic shrinkage as the liner cools seasonally, as well as in daily cycles. Sharp folds must be avoided, however, since they create lines of possible FML weakness. If insufficient material is placed, tension stresses result, tearing HDPE membranes apart. Rapid changes from cloudiness to sun on a cold, winter day can cause powerful, differential dimensional stresses to develop cyclically in an HDPE FML, as a part of the liner under cover remains warmer or colder than that part exposed. Wind can magnify stress catastrophically, as exposed membranes may "flutter" at several cycles per second and rip apart. Heat, especially on black HDPE membranes exposed to sun, also generates great differences between freeboard membrane areas and the FML that is below cover or inundated. Again, stresses have a tendency to tear the membrane apart, especially at seams, at fixed penetrations for monitoring pipes, etc., at corners, and at anchor trenches.

- Cover soils in cell 4A are stated in the construction report to have consisted of dewatered sand from the mill process for a portion of the cell, but there is also reference to a change back to the cover soils used in previous cells when sand was depleted. As stated previously, the cover soils used in earlier cells were unacceptable, due to the rockiness and the heavy equipment activity on the liner used in cover soils placement.

6. These concerns with liner system inadequacy are rendered urgent, not only by the proposed "alternate feed" processing implications, but also by the extreme low-pH (high acidity) of process waters routinely stored in, circulated through and evaporated from the tailings cells. The water's severe contamination loading makes complete, assured containment nothing short of imperative. According to analyses reported by Titan, Umetco and D'Appolonia, pH has been measured as low as 0.7 in Cell 1, 1.1 in Cell 2, 0.82 in Cell 3, and 1.8 in tailings liquid. This is to be expected from a process that leaches metals from granulated rock and tailings to extract uranium. Leaching is commonplace. Kennecott has used acid leaching for decades to extract copper, and a small operation adjacent to Kennecott's precipitation plant applied a slight variation of this process to retrieve uranium during the 1980s. The Lisbon Valley copper mine, proposed on BLM land near LaSal, Utah, would operate by sulfuric acid leaching. "Solvent-extraction" may use organic solvents such as diethyl ether, tributyl phosphate to separate metals, such as uranium, from aqueous solution (e.g., sulfuric acid). We have not yet ascertained the exact nature of uranium solvent recovery in the White Mesa process. In all processes using acid leaching or any other fluid industrial process, liner systems must function impeccably in order for "zero emissions" standards to be met.

The result of uncertainties about the liner system is grave concern. The water in White Mesa's tailings and evaporation impoundments is characterized by extremely low pH, and consequent, formidable concentrations of dissolved aluminum, arsenic, copper, mercury, molybdenum, lead, vanadium, thorium, uranium and radioisotopes of lead and polonium are, literally, multiple orders of magnitude in excess of State ground water quality standards (i.e., worse by a range from hundreds to

thousands of times). All of these metals are outright toxins, serious threats to human health, and are of severe ecological effects, if, when and where ground water emerges to surface or is drawn into wells. Several other constituents of inorganic, organic and radiologic nature exceed those standards very seriously. To convey the contamination severity of this water, we would like to call attention to the following quantities, from the water quality information obtained from the State sampling/analysis information:

- Acidity averaged pH 1.11 among the samples, nearly 1,000 times as acidic as necessary to dissolve lead, based on the logarithmic pH scale.
- Sulfate (SO₄) was 180,000 ppm in Cell 3, 190,000 in Cell 4, 18% and 19%, respectively.
- Total dissolved solids (TDS) was found to be 67,710 in the slimes drain, 148,510 in the tailings liquid, and to average 91,440 among the samples.
- Conductivity was found to be 87,000 umhos in Cell 2, when measured in the early '80s.
- Radiation levels were thousands of times allowable levels.

To speak plainly, these are among the most contaminated of waters we have ever encountered, or of which we have ever heard, considering its blend of inorganic and radioactive constituents and the highly elevated contamination levels. Documentation, furthermore, is so sparse that the resulting level of uncertainty argues heavily in favor of an administrative approach that is precautionary and protective of human and ecological health. When faced with the possibility that this water, or any variation on it, may have been escaping into ground water for the decades of White Mesa Mill operation, I can only urge that thoroughgoing ground water investigations be commenced at once in order to assure prevention of exposure of down-gradient wells, springs, streams, peoples and wildlife to these aggressively polluted waters. I would be remiss if I fail to express my shock that this condition has been allowed to go on for as long as it has.

7. In summary, it is my professional opinion that no license should be issued, or insofar as one has been issued, it should be suspended, until this site has been properly evaluated in light of these comments on the liner system's profound inadequacy and extreme lack of state-of-practice, not to mention state-of-the-art, standards of engineering, installation, quality assurance/quality control, and subsequent monitoring and protection.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 9th day of April, 2002.



Ivan Weber, Principal/ Owner
Weber Sustainability Consulting



ATTACHMENT A – Declaration of Ivan Weber

CURRICULUM VITAE

2002

Ivan Weber



Experience Summary

Current work: **Principal/Consultant, Weber Sustainability Consulting.** Specializing in building and engineering technology evaluation and documentation; specifications, bid and construction documents preparation and administration; construction quality assurance; sustainability planning of the built environment; certified “green” design and construction under USGBC ‘LEED’ and other, custom evaluation systems; environmental remediation strategies, wetlands restoration and construction; historic building restoration; facilities feasibility analysis and planning; and other construction planning/management services in support of environmentally responsible design and construction. Presently beginning work on water resource planning and green design/construction standards in large eco-industrial park in major city in northeastern China, with multi-disciplinary, integrated planning team based in Oakland, CA. Continuing environmental planning and sustainability consulting for Kennecott Utah Copper Corporation.

Most recent position: **Kennecott Utah Copper Corp.** (contract employee) **Environmental Planner / Contracts Manager, KUCC Strategic Resources Group and Environmental Engineering Projects Group and predecessor Plant Projects Group (shared, 1992-2002).**

Environmental planning and contracts management tasks have included:

- Technical specifications, bid and contract documents preparation and administration for a series of large environmental remediation, soils repository, groundwater cleanup and surface-water storage facilities, and industrial projects (cost > \$200 million). State-of-the-art liner systems in 1,700 acre-feet, three-chamber reservoir; and liner, cap and vegetated cover systems in two large RCRA repositories for mining/smelting-contaminated soils (cost >\$20 million).
- Urban planning concept development, with a team led by Calthorpe-Fregonese Associates, of entire 100,000-acre KUCC properties in and around the Oquirrh Mountains.
- Urban planning for entitlements in South Jordan municipality, with team led by Glatting-Jackson, of 4,500-acre initial “Sunrise” development project, integrating New Urbanist principles into South Jordan, as well as conceptually into lower slope areas of unincorporated Salt Lake County, areas which will receive an ongoing series of “new town” developments over three to four decades.
- Sustainability studies, encompassing holistic vision of future land use, post-mining economic development based on “eco-industrial” models, large-scale recreational development of extensive trails and open space networks, and ecological restoration of KUCC properties.
- Reforestation plan, proposing development of large, on-site, native plant nursery to supply millions of specimens over several decades of open space/trails planting and montane-area replanting in a wide variety of microclimates and soils conditions.
- Renewable energy development analyses, integrating wind generation, hydropower and several types of solar generation into mine/process pre- and post-closure development plans, generating a growing revenue stream from “green” energy.
- Wetlands (redox manipulation in aquatic systems) for removal of metals and sulfates from mining-impacted waste waters, constructing approximately 10 acres of experimental ponds.
- Feasibility studies of phytoremediation of metals-contaminated soils.

Contracts management tasks have included originating many contracts for:

- Preparation and management of consulting services contracts to conduct scientific investigations into ground and surface water and soils contamination, process problems, water treatment technologies, ecological risks, human health risks, mine closure and major land use change potentials, to analyze alternative remediation and action pathways, and to prepare various stages of plans for both internal and regulatory purposes;
- Procurement of contractor services for remediation of contaminated soils, surface waters and ground water impacted by mining in the Oquirrh Mountains;
- Facility feasibility analyses, including comparative cost studies, for mine-support shops relocation, canyon dumping alternatives, warehousing alternatives and rail system phaseout and reuse post-mining.
- Design coordination, specifications preparation and contract preparation for construction of facilities, including new railroad locomotive maintenance facility and numerous smaller projects.
- Staffing contracts administration, including insurance, health coverage and ERISA issues.

Environmental Reporting tasks included preparation and submittal to EPA and State agencies the major reports on approximately \$200 million of soil remediation, reclamation and source control systems required for Kennecott South Facilities court-administered remediation agreements (AOCs, UAOs and others). Supervised environmental documents archive, 1992-present, and integration into electronically accessed database system.

Previous highlights, 1973-1992: Architectural design technical planner and specifier (CSI Certified CCS) for more than \$600 million of construction from coast to coast, including:

- Delta Center, Salt Lake City, \$65 million, as specifier, design process coordinator and building inspector, FFKR Architects.
- Joseph Smith Building (former Hotel Utah), \$45 million conversion to offices, as specifier, value engineering coordinator. Project ended \$5 million under budget and ahead of schedule, FFKR.
- Moran Eye Center, U. of U. Medical Center, \$12 million medical facility, as specifier, FFKR.
- American Stores Properties grocery and drug store chain and distribution centers across the US, more than 200 in number and \$400 million in value (>6 million sq.ft.) as specifier, design manager, architectural construction manager, FFKR.
- Randall Jones Theatre for Utah Shakespearean Festival, Cedar City, Utah, \$6.5 million Shakespeare theater, as construction manager and state building inspector, FFKR.
- University of Utah Student Services Building, \$12 million ductile/moment-resisting concrete-frame structure, as UBC Special Concrete Inspector and architectural on-site coordinator, Astle-Erickson Associates/State of Utah.
- Deer Valley Ski Lodges, Park City, Utah, \$10.5 million, early-delivery construction of two major lodges, as project manager, Cannon Construction (then ENR top 400).
- Park City Ski Resort Expansion, \$1 million lodge addition, as project manager, Cannon Construction.
- University of Utah Medical Center Expansion, \$65 million construction and remodeling project including five buildings, extensive infrastructure, site landscaping and Medical Center Master Plan building evaluation and planning, as project manager and chief building inspector, for State of Utah via Gustavson Associates Architects.
- General Contractor (self-employed for seven years) projects including:
 - Abravanel Symphony Hall and Capitol Theatre, \$17 million new construction and renovation (respectively), as specialty contractor performing layout, rough carpentry, door/hardware installation and specialties installation.
 - Residential, commercial and institutional projects, generally small size and specialized.
- Journeyman Carpenter (7 years) and Laborer (2 years): Member of union locals in Colorado, Wyoming and Utah. Projects included Bridger Power Plant Unit 2 for Bechtel Construction, Rock Springs, Wyoming; two schools in Vail, Colorado; variety of commercial, industrial, apartment and condominium projects in of Colorado, Wyoming and Utah.

Education:

> 300 credit hours at three universities, including:

- B.A. degree, University of Kansas, 4 majors (Earth Sciences, History, Anthropology, Asian Studies). Language study: Chinese Mandarin (5 years), Japanese, Korean, Spanish, French (each one-two years).
- Graduate study, U. of Kansas, Asian History/Geography (three years, interrupted by military service 1967-69 US Army, Korea); and U. of Utah, Architecture (one and one-half years).
- Honors: Several National Science Foundation undergraduate assistantships in geology, paleontology, paleobotany, archeology, anthropology, U. of Kansas. Teaching Assistant, Eastern Civilizations, U. of Kansas, 1969-1971.

Professional and Community Involvement: Numerous task forces, commissions, committees and non-profit organizations, including:

Professional Memberships and Societies:

- Construction Specifications Institute (Certified Construction Specifier (CCS) 1996-2000)
- US Green Building Council ('LEED' system certified, 2002-)
- US-China Business Council
- Former member, International Congress of Building Officials, ASTM, Construction Management Association.

Current Boards, organizations and task forces:

- Board, Construction Specifications Institute (CSI), Utah Chapter
- Chair, Utah Chapter Sierra Club
- FutureMoves Coalition (balanced transportation advocacy coalition), active member
- United Nations Association/Utah, active member
- Salt Lake City High Performance Building Initiative: Chair, Sustainable Sites group
- Salt Lake City Green Map working group

Previous voluntary activities:

- Friends of Great Salt Lake, Board
- Utah Society for Environmental Education, Board, Secretary
- Western Wildlife Conservancy, Board
- Utahns for an Energy Efficient Economy ("UE3"), founding Board
- Utah Water Conservation Forum, Board
- Rocky Mountain Working Group, Forest Stewardship Council
- Governor's Task Force on Economic Development and Environment (Bangerter administration)
- Salt Lake County Environmental Quality Advisory Commission (six years in 1990s)
- Salt Lake Olympic Organizing Committee Environmental Advisory Committee (founded Sustainable Design/Construction Subcommittee)
- Utah Chapter Sierra Club, holder of several offices and committee chairmanships, including Vice Chair, Chair of Energy, Environmental Health Committees and National Council Rep.
- ASSIST, Inc. Board (urban planning and affordable housing non-profit group; volunteered drafting plans and cost studies on affordable housing renovations, and participated in SLC downtown revitalization and alternative transportation initiatives)
- Repertory Dance Theatre Facilities Committee (analyzed >130 buildings for conversion to theater use over 15 years, resulting in founding of Performing Arts Coalition and construction of Rose Wagner Center for the Performing Arts, recently opened on West Broadway, SLC)
- Performing Arts Coalition, Board
- Utah Media Center, Board
- UN Association / Sierra Club Working Group on Global Environment, Co-Chair
- American Institute for Architects initiatives on environmentally responsible design and construction.

Special Skills:

- **“Green” architectural design and construction practices:** working on a guide for activists to sustainable built environment; assist in university level sustainable planning/design classes; assisting with early conceptualization of “green” natural history museum at Univ. of Utah and “green” science building at Westminster College; USGBC “LEED” certified
- **Historical building renovation and design:** including most crafts (stonework, masonry, plaster, concrete, carpentry, carving, cabinetwork, art glass, metalwork, plumbing, wiring, etc.)
- **Performing arts facility planning and design:** worked for 17 years to assist community in creation of new Wagner Center for the Performing Arts, West Broadway in Salt Lake City, surveying and analyzing >130 buildings and sites for suitability and feasibility of adaptation.
- **Pro-active approaches to environmental change:** including “green entrepreneurship,” industrial ecology and community-centered involvement.

Personal Information: Age 59, health generally excellent, married to Linda C. Smith (Executive Director, Repertory Dance Theatre), one son (by marriage) and two grandchildren. Own home and Avenues-area rental properties.

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November 11, 2002

FILE NO. 031529-0001

BY HAND DELIVERY

Allen Roos
U.S. Army Corps of Engineers
New York District
26 Federal Plaza, Room 2108
New York, NY 10278

FILE INDEX NO. E 02.56-1
ENTERED IN DOCUMENTUM

Re: FUSRAP Maywood Superfund Site

Dear Mr. Roos:

Enclosed for your consideration are comments on the Feasibility Study and Proposed Plan for Soils and Buildings at the FUSRAP Maywood Superfund Site submitted on behalf of Stepan Company.

Sincerely,


John McGahren
of LATHAM & WATKINS

Enclosure

**COMMENTS ON THE FEASIBILITY STUDY
AND PROPOSED PLAN**

**FUSRAP MAYWOOD SUPERFUND SITE
OU-1: SOILS AND BUILDINGS**

Prepared on behalf of Stepan Company

November 11, 2002

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1.0 INTRODUCTION

A Feasibility Study ("FS"), dated August 2002, was prepared by the United States Army Corps of Engineers ("USACE") for the remediation of radiologically-contaminated soils and buildings at the FUSRAP Maywood Superfund Site (the "Site" or "FUSRAP Site"), located in Maywood, Rochelle Park and Lodi, New Jersey. The FS includes a presentation of the results of the Remedial Investigation ("RI"), as well as an identification, screening, and evaluation of remedial alternatives. Based on the FS, the USACE issued a Proposed Plan for the FUSRAP Site in August 2002 ("Proposed Plan"). The Proposed Plan recommends preferred alternatives to address radiologically-contaminated soils and buildings/structures ("FUSRAP waste") at the Site. The proposed alternative for soil consists of excavating contaminated soil, treating the soil via physical separation after demonstration of the technology, disposing of the contaminated stream off-site, and use of the remaining soil as backfill at the MISS or disposal off-site. The proposed alternative for buildings/structures consists of decontamination and partial demolition, if necessary.

This document provides comments on behalf of Stepan Company on the FS and Proposed Plan. In accordance with the National Contingency Plan ("NCP") and principles of administrative law, the comments presented below support re-evaluation of certain components of the proposed remedies based on the failure to consider certain facts and the lack of key data and information. These considerations could significantly change the basic features of the remedy with respect to scope, performance and cost. Failure to re-evaluate these components of the remedy, therefore, would render the selection of these remedies in a subsequent ROD arbitrary and capricious.

According to the NCP, which governs the remedy selection process, the RI/FS is used to assess site conditions and evaluate alternatives to the extent necessary to select a remedy. 40 C.F.R. §300.430(a)(2). More particularly, the RI "provides information to assess the risks to human health and the environment and to support the development, evaluation, and selection of appropriate response alternatives." 40 C.F.R. §300.430(d)(1). "The primary objective of the [FS] is to ensure that appropriate remedial alternatives are developed and evaluated such that relevant information concerning the remedial action options can be presented to a decision-

maker and an appropriate remedy selected.” 40 C.F.R. § 300.430(e)(1). Similarly, principles of administrative law require the agency to “engage in ‘reasoned decisionmaking.’” *United States v. Garner*, 767 F.2d 104, 118 (5th Cir. 1985). To that end, when making a decision, an agency must consider all relevant facts, information and alternatives, *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 416, and adequately explain its decisions by providing a rational connection between the facts and the resultant decision, *Sierra Club v. United States Army Corps of Engineers*, 772, F.2d 1043, 1051 (2d Cir. 1985).

The FS satisfies neither the requirements of the NCP nor the dictates of administrative law. The information upon which the alternatives are developed and evaluated is deficient in many regards. Further, the USACE also fails to provide a “rational connection” between certain of its decisions and the facts. Because the administrative record “forms the basis for the selection of a response action,” 40 C.F.R. § 300.800(a), and the administrative record for the FUSRAP waste does not contain the “relevant information” required to make a defensible remedy selection, the USACE must reconsider certain of its decisions and delay remedy selection as the delay will not result in any undue risk to human health or the environment.

Specifically, the following aspects of the Proposed Plan fail to satisfy the requirements of the NCP:

- The FS and Proposed Plan adopt unnecessarily stringent cleanup standards, using criteria developed through agency negotiations in which the public had no opportunity to participate.
- The FS provides no explanation of the application of the balancing factors set forth to justify remediation to unrestricted use standards. Applying these factors dictates at least 8 (and possibly 9) of the 17 properties selected for remediation to unrestricted use standards should be remediated to restricted use.
- Soil contamination was delineated only to restricted use criteria. As a result, the consequences of remediating certain properties to unrestricted use criteria is unknown. Without such data, a true comparison of alternatives cannot be conducted since the cost and short-term effectiveness cannot be evaluated.

- On-site containment remedies were improperly eliminated from consideration, contrary to the requirements of the NCP.
- The use of treatment, as preferred by CERCLA, is limited for soils because the treatability study is not yet complete and full implementation of treatment has not been evaluated. All indications are that treatment via physical separation would be viable across practically all areas of the Site. Remedy selection should be delayed pending a better understanding of the applicability of treatment or treatment should be aggressively pursued during remedial design. Limiting treatment and use of treated backfill to the MISS has no technical basis.
- The classification of all soils as “byproduct material” by the Nuclear Regulatory Commission (“NRC”) is indefensible and should be challenged.
- The extent of radiological contamination in buildings is unknown and, correspondingly, a remedial plan cannot be developed. Demolition should not be a fallback, particularly since the affected buildings are part of an operating facility and conducting demolition would constitute a taking of Stepan’s property.
- Alternatives to partial demolition of buildings were not adequately evaluated. In particular, surface sealing and decontamination alone were summarily dismissed without explanation while conditions at the Site argue for their applicability.

In summary, the proposed remedy must be re-evaluated as the selection would not be based on all relevant facts, information, and alternatives. If necessary, the remedy selection must be delayed as the delay will not result in any undue risk to human health or the environment. While the residents near the Site clearly favor removal of contaminated soils as soon as possible, there is no risk-based reason to act urgently, and doing so by implementing the current plan would incur much higher costs than necessary, contrary to the NCP requirement that remedial actions be cost-effective. Moreover, whenever the final remedy is selected, the USACE must provide adequate justification for the application of its cleanup criteria and implementation of its remedy.

2.0 COMMENTS REGARDING CLEANUP CRITERIA

2.1 The Dispute Resolution cleanup standards are overly conservative, providing an unnecessarily high degree of protection, and were adopted without required participation by stakeholders.

2.1.1 Background

In 1994 the Department of Energy (“DOE”) and the United States Environmental Protection Agency (“EPA”) reached a site-specific agreement setting the cleanup criteria for unrestricted and restricted use at the FUSRAP Site (the “Dispute Resolution”). These criteria are:

- For restricted use areas, 15 pCi/g Ra-226 + Th-232 above background and
- For unrestricted use areas, 5 pCi/g Ra-226 + Th-232 above background.

In addition, the Proposed Plan adopts a 15 mrem/year dose limit, as specified by N.J.A.C. 7:28-12.8(a)1,¹ a 3 pCi/L above background radon exposure limit for exposures in buildings on the Site, as specified by N.J.A.C. 7:28-12.8(a)2, and 50 pCi/g above background for U-238, as derived by DOE. The Baseline Risk Assessment makes it clear that the driver for risk and remediation is radionuclide contamination; chemical concentrations are comparatively minor contributors to Site risks.

2.1.2 Necessity

EPA’s standards for management of thorium byproduct materials allow for unrestricted use provided the concentration of Ra-226 does not exceed background by more than 5 pCi/g averaged over the first 15 cm of soil below the surface and does not exceed background by 15 pCi/g averaged over a 15 cm layer of soil more than 15 cm below the surface. 40 C.F.R. § 192.41. The Proposed Plan unnecessarily exceeds these protective standards:

- At Site properties remediated to the unrestricted use criterion, surface and subsurface soils would be remediated to an average of 5 pCi/g combined radium-226 and thorium-

¹ The Proposed Plan does not indicate whether this is total or above background, but the comment and response document from the rule’s promulgation indicates that this refers to an increment above background. The comments on the New Jersey rule discuss the use of average national background levels based on National Council on Radiation Protection (“NCRP”) publications versus using local measurements of background.

232 above background, and clean backfill placed in excavation areas. The cleanup standard is lower than required for subsurface soils, and the addition of clean backfill would provide even more protection than necessary.

- At Site properties remediated to the restricted use criterion, subsurface soils would be remediated to an average of 15 pCi/g combined radium-226 and thorium-232 above background and covered by at least 30 cm of clean backfill. Soils remediated to the regulatory unrestricted standards can contain up to 5 pCi/g radium in the top 15 cm (1/2 foot) and 15 pCi/g below the top 15 cm. In contrast, the Proposed Plan calls for placement of twice the required amount of cover over subsurface soils with 15 pCi/g activity, the cover must be clean backfill, and the property must be subject to future use restrictions. These additional requirements are stricter than necessary to protect public health and the environment.
- In the case of the use of treated soil as backfill, the Proposed Plan indicates, "sorted materials that are below an average of 15 pCi/g of radium-226 and thorium-232 combined above background would either be backfilled at the MISS or disposed offsite at a suitable landfill. ...If the material is backfilled onsite, all affected areas would be covered by at least one foot of clean soil from a commercial supplier over all excavated areas to meet the criteria of 15 mrem/yr above background." Proposed Plan, p. 32. Again, the Proposed Plan calls for one foot of clean soil cover and restricted use of the property. As in the previous case, these additional requirements are unnecessary.

Additionally, a higher degree of protection would result at the Site compared to sites with soils containing uranium source or byproduct material because these materials are dominated by radon-222. The radon hazard from thorium processing is lower due to the very short half-life of radon-220 in comparison to that of radon-222.

Finally, the Dispute Resolution criteria were developed prior to the adoption of the applicable New Jersey regulations. The New Jersey criterion is the appropriate ARAR for the Site and alone should dictate what excavation limits are necessary to protect public health.

For exposures in buildings, measurements indicate that the New Jersey requirement to limit radon exposures to 3 pCi/L above background is met everywhere on the FUSRAP Site at the present time. This means that the indoor limit for radon does not affect any cleanup decisions.

2.1.3 Due Process

While the Dispute Resolution standards were adopted as long ago as 1994, this comment period represents the first opportunity for the public to address them, yet insufficient information was presented to understand their derivation. These overly protective standards are not ARARs, but were instead adopted during a process in which no stakeholders other than EPA and DOE were involved. USACE cannot now rely on that process and claim USACE is bound by it. Doing so, considering the failure of the EPA and DOE to provide an opportunity to comment on the evidence considered in reaching the decision, would violate due process.

2.1.4 Conclusion

In summary, remediation to the Dispute Resolution criteria in the manner set forth in the Proposed Plan would produce an unnecessary high level of protection, and USACE is not bound to use them. The criteria contained in 40 C.F.R. § 192.41 and the applicable N.J.A.C. regulations are protective of public health and the environment, and are the appropriate criteria for the FUSRAP Site.

2.2 The USACE recommendation to remediate 17 of the 24 Phase II properties to the radiological unrestricted use criterion is neither necessary nor consistent with the NCP.

2.2.1 Background

The process for selecting a remedial action for a Federal National Priority List (“NPL”) facility under CERCLA Section 120 requires agreement between the head of the relevant agency and EPA. This decision, in part, was reached during the dispute resolution process between the EPA and DOE. The Dispute Resolution requires all of the Phase II properties to be remediated to the

established restricted use criterion. Contamination accordingly has been delineated to the restricted use criterion. Nevertheless, the USACE changed the cleanup standard for 17 of the 24 Phase II properties to unrestricted use. This change reportedly was based on a consideration of the following factors:

- current land use
- reasonable future land use
- comprehensive community master plans
- population growth patterns and projections
- institutional controls already in place
- site location in relation to urban, residential, commercial, industrial, agricultural, and recreational areas
- federal/state/local land use designation
- historical development patterns

Although these considerations may support a change in the criteria for some of the 17 selected Phase II properties, their application does not reasonably support a change for others. The USACE has not provided a rational connection between the facts and the decision for these 17 properties and, therefore, the decision is contrary to the NCP and principles of administrative law.

2.2.2 Necessity

For the reasons described below, it is not necessary to apply the unrestricted use criterion under the FUSRAP Maywood remedy to certain of the properties.

- Properties Restricted to Commercial Use due to Chemical Contamination - On page 15 of the Proposed Plan, the Stepan RI/FS for chemical contamination is described as encompassing the current Stepan plant and the adjacent property at 149-151 Maywood Avenue. Actually, the subject RI/FS applies to these locations as well as six additional properties, all included within the Maywood and Vicinity Properties NPL Site. The eight properties considered under the chemical RI/FS are described as follows:

Table 1

Maywood and Vicinity Properties

<u>Identity</u>	<u>Location</u>
Stepan	Current Stepan Plant
Sears	149-151 Maywood Ave.
Gulf	239 Route 17
Sunoco	167 Route 17
AMP Realty	137 Route 17
SWS Realty	85, 87, 99-101 Route 17
Federal Express	29 Essex St.
DeSaussure Equip.	23 Howcroft

All of these properties are contiguous and are located in the triangular shaped commercial/industrial area west of Route 17. As determined through the applicable RI/FS process, chemical contamination on the Stepan, Sears and DeSaussure properties will require that they be restricted to industrial use under CERCLA requirements. Additionally, contamination by fuel releases at the Gulf, Sunoco and SWS Realty properties will require restricted use under New Jersey Underground Storage Tank ("UST") regulations. Consequently, the AMP Realty property, located between Sunoco and SWS, will in all probability remain in commercial use as well. These seven properties fall within an historical industrial park and, due to the conditions described above, will be restricted to future commercial/industrial use. Therefore, applying the factors used to determine the appropriate cleanup criterion, these properties should be remediated to the restricted use criterion. The current land use of these properties is industrial, the reasonable future use is industrial, institutional controls will be in place on these properties as a result of residual chemical and fuel contamination, the properties are located in an isolated industrial area surrounded by major transportation corridors, and historical development patterns indicate this area will remain industrial. Without information that indicates community master plans or land use designations would change these uses, all factors, and all practicality, dictate the application of the restricted use criterion.

- Properties Restricted Due to Significant Inaccessible Soils - Three contiguous commercial properties, 80 and 100 Hancock and 80 Industrial Road, contain large amounts of inaccessible soils beneath on-site buildings. For this reason, these properties will remain restricted under applicable institutional controls indefinitely. It is therefore inconsistent to remediate other portions of those same properties to the unrestricted use criterion. Also, although not identified in the Proposed Plan, the property located at Route 17 and Essex Street may fall within this category as indicated graphically on Figure 2-8. Similar to the properties discussed in the previous paragraph, the factors support application of the restricted use criterion for these four properties.

2.2.3 Consistency with the NCP

The remedy selection criteria of §300.430 of the NCP require that an acceptable remedial action "shall be cost-effective." This test is met where the costs of a remedy are proportional to the overall effectiveness as defined by:

- its long term effectiveness and permanence;
- its reduction of toxicity, mobility or volume through treatment; and,
- its short term effectiveness.

Section 2.3.3.3 of the FS concludes that the volume of soils requiring removal to meet the unrestricted use criterion is about double that for restricted use, with the associated cost for remediating those properties also approximately double. The discussions of short term effectiveness in the Proposed Plan conclude that adverse impacts to the community and individual businesses would be significant if the unrestricted use criterion were applied, and the restricted use criterion would provide benefits by reducing adverse impacts such as business loss during remediation. Proposed Plan at 11, 23. Since the anticipated improvements in long term effectiveness and permanence as a result of unrestricted use would not be achieved due to chemical and/or fuel contaminants and there are important short-term effectiveness concerns, remediation of those properties to the unrestricted use criterion for radiological contaminants is not cost-effective and is inconsistent with the NCP.

Furthermore, the Proposed Plan indicates that the contamination has been delineated only to the restricted use criterion. Consequently, the actual volume of soil impacted by the change in cleanup criteria is in reality unknown. Without knowledge of the actual soil impacted, the proposed remedial alternative cannot, and was not, truly analyzed by the FS. Indeed, the handling of additional soils could be significant, in fact more than double the volume, resulting in increased costs and increased short-term risks resulting from a larger volume of soil for excavation which translates into proportionately higher truck traffic, increased potential for excavation-related air emissions, and greater short-term risks to Site workers. The actual alternative may be materially different than that considered by the FS and Proposed Plan and, accordingly, cannot be selected.

2.2.4 Conclusion

At a minimum, 8 (and possibly 9) of the 17 properties proposed by the USACE to be remediated to the unrestricted use criterion should rather be cleaned up for restricted use based on necessity and consistency with the NCP. Those properties are 239 Route 17; 167 Route 17; 137 Route 17; 85, 87, 99-101 Route 17; 23 Howcroft; 80 Hancock; 100 Hancock; 80 Industrial Road; and, possibly, Route 17 at Essex Street. Furthermore, increased costs and short-term risks must be better defined with respect to any properties to be remediated to the unrestricted cleanup criterion prior to selection of the remedy.

3.0 COMMENTS REGARDING SOIL REMEDY

3.1 **On-site containment options for FUSRAP Site soils and/or for concentrated contaminants from an on-site treatment process were inappropriately eliminated from consideration in the FS.**

3.1.1 **Background**

General Response Actions were identified and screened in the FS for media-specific applicability at the FUSRAP Site. Capping options for source materials were found to be potentially applicable and were retained through the technology screening process as suitable for long-term containment. During the technology screening process, various types of caps were found to be effective and implementable as a permanent measure, and were also found to require low capital and O&M costs. All containment options were removed from further consideration in the FS, however, primarily due to “community opposition to on-site disposal.”

3.1.2 **Consistency with the NCP**

The NCP provides nine criteria for evaluating individual alternatives and establishes their relative significance in the review process. The criteria are categorized into three groups, threshold criteria (protection of human health and the environment and compliance with ARARs), balancing criteria (long term effectiveness and permanence; reduction of toxicity mobility or volume; short-term effectiveness; implementability; and cost) and modifying criteria (State and community acceptance). Containment options for source materials passed the first two sets of criteria, but were eliminated in the FS process based on community acceptance. The NCP states, however, that community acceptance of remedy components “may not be completed until comments on the proposed plan are received.” 40 C.F.R. § 300.430(e)(9)(iii)(I). It is, therefore, inconsistent with the NCP to eliminate containment options (*i.e.*, on-site capping for source materials) prior to receiving comment on the Proposed Plan. Furthermore, given the relative significance of the alternative evaluation criteria, prior to elimination, containment must be further evaluated and properly presented to the public.

3.1.3 Conclusion

Consideration of one or more capping options for soils is necessary to properly evaluate the full range of acceptable remedial alternatives applicable to the FUSRAP Site. To eliminate all containment options from the evaluation leading to the Proposed Plan is inconsistent with the NCP.

3.2 Treatment of all FUSRAP Site soils and the on-site backfill (on MISS and Stepan properties) of soils exhibiting radiation levels below 15 pCi/gm above background is necessary to satisfy CERCLA and the NCP because it will reduce the adverse short term impacts of the remedy's implementation; provide reduction of toxicity, mobility or volume through treatment; and render the remedy more cost-effective.

3.2.1 Background

The Proposed Plan describes a volume reduction technique for treating the FUSRAP soils based upon the concentration of radioactive components in the fine soil particles. Proposed Plan at 6. The anticipated 60% volume reduction in off-site disposal using this process may reasonably be applied to all the soils excavated during the remedial action. The "residual stream" of treated soils exhibiting an average of less than 15 pCi/gm above background would then be backfilled and covered by at least one foot of clean backfill, as called for in the Proposed Plan.

3.2.2 Process Effectiveness

Physical separation processes as described in the Proposed Plan are simple and effective in classifying contaminated soils at sites where the contaminants are concentrated in discrete particle size ranges. Oversize materials (boulders, gravel, metal objects, etc.) may first be removed and decontaminated, followed by sorting techniques to reduce the volume of soils exceeding the restricted use criteria.

Although the results of the technology demonstration conducted by the USACE have not yet been released, the reported 60% volume reduction of contaminated materials and unofficial reports of its success indicate that sorting of excavated soils is applicable to remediation of the FUSRAP Site. Without explanation or justification, however, the Proposed Plan limits application of the treatment process to soils excavated from the MISS property and limited areas of the Stepan property. This unsupported decision by the USACE will result in direct off-site

disposal of nearly 65% of the total accessible soils during remediation. Except possibly for the contents of the NRC licensed burial pits on the Stepan property and the MISS retention pond, all soils to be excavated would be treatable by a physical separation process. Even based upon the conservative volume reduction estimates in the Proposed Plan, processing all excavated soils would reduce off-site disposal requirements by about 45%. Also, during remedy implementation, the 34,130 cubic yards of materials excavated from the Stepan burial pits and the MISS retention pond should be evaluated for treatment, potentially resulting in a further reduction in off-site disposal requirements. These reductions in off-site disposal volume would produce a corresponding decrease in backfill soil requirements, significantly reducing the amount of materials transported out of and into the Maywood area.

3.2.3 Implementability

The ability to manage large amounts of contaminated soil at the MISS has been demonstrated during Phase I of the remedial program. Adequate space is available to accumulate excavated materials, conduct the sorting operations, ship concentrated materials off-site for disposal, and to distribute backfill to appropriate locations. Removal of the NRC licensed burial pit contents on the Stepan property will require significant backfill on an expedited basis to minimize interruption of plant activities. Since the Stepan property will be restricted to commercial/industrial use, the use of properly segregated and tested materials from a treatment process on the adjacent property is optimal. Therefore, backfill of treated materials on the Stepan property in addition to the MISS should be an integral element of the Proposed Plan.

3.2.4 Safety

For a large material handling project such as the FUSRAP Maywood remediation, significant elements of its short term effectiveness involve transportation safety and spill control. Volume reduction and residual backfill on adjacent properties with limited use of public transportation routes improves upon both of these critical elements of project implementation. Furthermore, as discussed above, the use of treated soil on the Site provides ample protection of public health and the environment.

3.2.5 Conclusion

Treatment of all FUSRAP soils at the Site should aggressively be pursued. If treatment of the soils cannot at this time be selected definitely because the treatability report is outstanding, the selection of a remedy should be delayed until all relevant information is available to allow for treatment to be evaluated appropriately. Should treatment be infeasible, which seems unlikely given its reported success and relative ease of implementability, alternative remedies may need to be developed to address short-term effectiveness, CERCLA's preference for treatment and cost-effectiveness issues. Regarding the urgency of these operations, it is important to note that (1) the wastes at issue are the result of operations that ceased 45 years ago, so that any especially mobile contaminants would have dispersed long ago, (2) interim actions taken in the past have addressed specific problems, and (3) ongoing monitoring assures that local residents and workers are not at significant risk from the Site.

If the USACE decides to proceed with its remedy selection, the results of the treatment demonstration should be evaluated and incorporated into the final remedy design so as to minimize the need for off-site disposal. All excavated soils should be evaluated for treatability, and backfill locations should not be limited to MISS excavations. These improvements to the Proposed Plan will satisfy CERCLA and the NCP requirements regarding short-term effectiveness, preference for treatment, and consideration of cost-effectiveness.

3.3 Treating all soils for purposes of disposal as "byproduct material," as defined by the Uranium Mill Tailings Radiation Control Act of 1978 ("UMTRCA"), is contrary to the language of the statute, Congressional intent, and NRC's carefully reasoned prior interpretations formally adopted pursuant to regulation.

3.3.1 Background

The classification of radioactive waste at the FUSRAP Site is governed by the Atomic Energy Act of 1954 ("AEA"), 42 U.S.C. §§ 2011 *et seq.*, as amended by the UMTRCA, 42 U.S.C. § 7901 *et seq.* Prior to 1978, under the AEA, NRC did not have direct regulatory authority over byproduct materials such as the tailings at the Site. Rather, up to that point, NRC regulated such material indirectly through its licensing of source material under the AEA. To address the problem of unregulated tailings piles, Congress enacted the UMTRCA in 1978. Congress enacted Title I of the UMTRCA, which identified inactive processing sites for remediation by

DOE. *Id.* In Title II of the UMTRCA, Congress amended the definition of “byproduct material” under Section 11e.(2) of the AEA to include mill tailings and authorized NRC to regulate tailings at licensed sites. *Id.*

3.3.2 NRC Disposal Characterization

Subsequent to the enactment of the UMTRCA, the question arose as to whether the USACE was required to obtain a license from NRC to remediate byproduct material at FUSRAP sites. NRC consistently stated that its jurisdiction over byproduct material extended *only* to byproduct produced from an activity licensed by NRC at the time the UMTRCA was enacted in 1978. This position was based on carefully and thoroughly reasoned analyses of the relevant statutory language, legislative history, and policy behind the AEA and UMTRCA, and was clearly, consistently and unequivocally articulated by the NRC in Director’s Decisions issued pursuant to 10 C.F.R. § 2.206. *See United States Army Corps of Engineers*, DD-99-7, 49 NRC 299 (NRC Director’s Decision, March 26, 1999); *In the Matter of Envirocare of Utah and Snake River Alliance*, DD-00-06, (NRC Director’s Decision, December 13, 2000). Applied to the Site, this means that only the material in the burial pits is 11e.(2) material subject to NRC authority, while material outside the burial pits, which was not licensed in 1978, is not subject to NRC jurisdiction. There is no dispute that the license applies only to the material in the three burial pits. Indeed, in various statements throughout the FS (*e.g.*, pages 3-5), the USACE expressly acknowledges this.

Despite the fact that the March 1999 and December 2000 Director’s Decisions clearly stated that material from unlicensed activities is not 11e.(2) material, Envirocare of Utah, which is the only facility licensed to accept 11e.(2) waste, sought clarification from NRC regarding the specific status of material outside the burial pits at the Site. Consistent with the March 1999 and December 2000 Director’s Decisions, NRC responded, in a January 26, 2001 letter to Envirocare, that waste outside the burial pits at the Site is *not* 11e.(2) material and therefore not subject to NRC jurisdiction. *See Michael F. Weber to Envirocare of Utah*, January 26, 2001. Because Envirocare was only licensed to accept 11e.(2) material for commercial disposal, NRC stated “Envirocare should verify through the Corps that the material it proposes to accept from the Site is *material from the burial pits licensed by the NRC.*” *Id.* (emphasis added).

Subsequently, without any public notice or opportunity for comment, NRC completely reversed itself in a September 20, 2001 letter to Envirocare of Utah. Thereafter, NRC reaffirmed and clarified its new position in a June 12, 2002 letter to American Ecology Corporation. Contrary to its well-considered and formally adopted interpretations that byproduct from unlicensed activities is not 11e.(2) material, NRC's letters classified *all* tailings at the Site as 11e.(2) byproduct material, including the material outside the burial pits that NRC had previously stated was not 11e.(2) waste. NRC's reversal of position in its September 2001 and June 2002 letters is inconsistent with the statutory language and legislative history of UMTRCA, inconsistent with NRC's carefully reasoned prior interpretations, and contrary to fundamental principles of administrative law and due process. Stepan urges the USACE to seek reconsideration of this decision as it has a significant effect on the safety and cost of the remedy. When the NRC's decision to classify all soil as byproduct material is considered, the options for disposal are limited and the transportation routes long.

It must be emphasized that NRC cannot reasonably base its reversal of position on the nature of the material outside the burial pits at the Site. The 11e.(2) characterization is based on the genesis of the material, not on its physical characteristics. In denying an 11e.(2) classification in the December 2000 Director's Decision, NRC stated "[a]lthough the material may be chemically, physically, and radiologically similar to section 11e.(2) byproduct material, it is not material over which NRC has jurisdiction." *In the Matter of Envirocare of Utah and Snake River Alliance*, DD-00-06, (NRC December 13, 2001), at 9. Furthermore, 10 C.F.R. § 40.2(a), the regulation cited by NRC in its June 2002 letter as the basis for regulation in this context, cannot reasonably be applied to the unlicensed tailings at the Site. This Site simply does not fall within the class of sites purportedly covered by the regulation, as demonstrated by the legislative history.

Not only is NRC's reversal of position an improper interpretation of its jurisdiction under UMTRCA, but it is procedurally deficient under the Administrative Procedures Act ("APA"), 5 U.S.C. 551 *et. seq.* NRC's September 2001 informal interpretation that tailings from the entire Site are 11e.(2) material is inconsistent with NRC's former, formally promulgated position that it lacks jurisdiction over materials not licensed at the time of the enactment of UMTRCA in 1978.

This expanded interpretation of NRC's jurisdiction will have a significant effect on the manner and cost of disposal of these materials. Thus, NRC's interpretation of its jurisdiction under the UMTRCA is a legislative rule subject to the notice and comment provisions of the APA.

However, neither Stepan nor, to Stepan's knowledge, the USACE was provided notice or an opportunity to comment on NRC's proposed reinterpretation of its authority under UMTRCA. NRC's failure to provide notice or an opportunity to comment on its proposed interpretation violated the APA. *See, e.g., United Technologies Corp. v. EPA*, 821 F.2d 714, 719 (D.C. Cir. 1987); *Salt Pond Assoc. v. United States Army Corps of Engineers*, 815 F. Supp. 766 (D. Del. 1993).

3.3.3 Conclusion

NRC's reversal of its previous classification of material outside the burial pits at the Site is inconsistent with the UMTRCA statutory language, legislative history, and prior formal and informal agency interpretations. As such, the classification of byproduct as 11e.(2) material, as stated in NRC's September 2001 letter, violates both UMTRCA and fundamental principles of administrative law, while significantly impacting the safety and cost of the remedy.

Accordingly, the USACE should challenge NRC's position and implementation of the USACE remedy should await resolution of this issue.

3.4 The impact on plant operations must be considered if the water reservoir and pump house are relocated.

The FS states that the water reservoir and pump house located on the MISS will be relocated to permit remediation of underlying contaminated soils. There is no reason given as to why these structures are being treated differently from other structures beyond that they are located on the MISS. If the USACE persists in relocating the reservoir and pump house, their relocation must be sequenced in such a manner so as to not interrupt Stepan's business operations. The reservoir and pump house are crucial to the manufacturing plant constituting, among other things, the emergency source of water for the fire protection system for the entire facility. Business interruption must be avoided, as further described in Section 4.

4.0 COMMENTS REGARDING BUILDINGS REMEDY

4.1 The potential demolition of portions of Stepan's production buildings is inconsistent with the remedial objectives of the Maywood FUSRAP program, would be highly disruptive to Stepan's business, is not adequately defined by the FS and Proposed Plan, and constitutes a taking of Stepan's property.

4.1.1 Background

In Section 2.4 of the FS, the USACE expresses concern that certain plant buildings contain contaminated components that could inadvertently be released during future building renovations. This concern is based on RI data that was collected in 1982. NRC regulatory guidance applicable to this situation has changed since the RI was conducted, and, therefore, insufficient data are available to evaluate the contaminated buildings. In addition, the radon cleanup standard is met everywhere on the Site. Notwithstanding, the Proposed Plan proposes potential partial demolition of Stepan buildings 4, 10, 13, 15, 20, 67, 78 and the guard house, in addition to complete demolition of the warehouse (Building 3) necessary to excavate the NRC licensed burial pit No. 3. Although demolition of Building 3 is anticipated by Stepan, even partial demolition of the other buildings (which comprise most of the company's Maywood specialty chemicals plant) would shut down the plant, adversely impact its 100 local employees and constitute a taking of Stepan's property. Because the buildings do not pose an unacceptable risk to human health, there is no reason to pursue partial demolition. Moreover, containment and decontamination remedies have not been adequately developed and evaluated.

4.1.2 Necessity

Results from radiation surveys demonstrate that even partial demolition of plant buildings is not necessary. Nuclear Safety Associates, Inc. conducted a radiation survey of the Stepan facility following discovery of thorium-bearing residue in a vacant area of the Stepan property. That study, in part, surveyed the interiors of all plant buildings and concluded in a report issued in September 1982 that:

- insignificant removable alpha emitting material was present on building surfaces; and
- gamma exposure rates in all buildings except Building 76 were indicative of naturally occurring levels in the Maywood area.

Subsequently, Building 76 was conveyed to the Government as part of the MISS property transfer in 1985. In addition, the Stepan facility has been under surveillance by a certified health physicist since about 1980. No worker safety or public health risk has been identified as a result of radionuclide contamination in plant buildings, and the Proposed Plan concludes that there also are no exceedances of the New Jersey indoor radon standard.

Furthermore, the demolition is not necessary to access any contaminated soils under the buildings. Page 2-51 of the FS states that certain buildings on Stepan's property will be demolished to access underlying contaminated soils. This is directly contrary to the statements otherwise throughout the FS and Proposed Plan that inaccessible soils will be addressed at the time they are made accessible by the various property owners or operators. No justification is provided for singling Stepan out to force demolition of buildings associated with an active industrial operation, particularly buildings in which no risk has been documented and at a property on which institutional controls will be implemented.

The FS goes on to state that the buildings must be demolished so that contamination would not be "inadvertently" released to the environment when improvements to the property are made subsequent to the remedial action. There is no difference between demolition now or demolition later. The same protective actions could be undertaken in the future and can be assured through a deed restriction. Thus, it simply is not necessary to demolish the buildings at this time based on speculation regarding future acts that can be controlled. For example, during 2001 Stepan performed renovations to the boiler house (Building No. 4). Radiological monitoring conducted by Stepan as an integral element of that program detected elevated contaminant levels in sludges within subgrade sewers. These materials were removed and containerized for future disposal by the USACE. It is probable that activity levels previously detected in the floor of Building No. 4 resulted from this residual material, the removal of which should satisfy FUSRAP criteria without building demolition.

4.1.3 Adverse Impacts

The proposed demolition would have a significant adverse impact on the plant's operations, thus affecting the company's business and its 100 local employees. The majority of the buildings

identified for potential demolition action include significant production facilities (such as the boiler house) and the plant's office building. Even partial demolition of these buildings would require the plant to shut down during the demolition and reconstruction periods.

Furthermore, demolition would adversely impact important historic resources. In Appendix D of the FS, it is concluded that "The brick buildings dating from the 1920's are considered primary buildings, notable for their architectural merit and for their direct association with the chemical industry, through the type of manufacturing housed within them." Consequently, the archeological and historical studies of the plant indicate that most of the buildings are potentially eligible for protection under National Register of Historic Places ("NRHP") criteria. Demolition of these buildings should, therefore, be avoided.

4.1.4 Failure to Adequately Consider Alternatives

As stated above, the NRC regulatory guidance applicable to this situation has changed since the RI was conducted. The FS states, "Contamination in buildings at Stepan will need to be re-evaluated based on this new guidance. Insufficient building survey information is available to perform this evaluation; therefore, additional surveys will need to be performed in the future to define the extent of decontamination necessary to achieve cleanup criteria." FS at 2-48. It is inappropriate to select a remedy when such significant gaps in the data remain. This is particularly true when the remedy proposed would be as destructive and disruptive as demolition.

Furthermore, the FS screens out two potential remedies without providing any rationale for doing so. First, the FS states that decontamination alone (without partial demolition) would address only portions of buildings. This conclusion is completely unsupported. In fact, as discussed above, data indicate that decontamination should not be necessary for most structures. Also as discussed above with respect to the boiler house, elevated levels in many cases may be due to contaminated sludges in sewers or trenches. Additional data and analyses are required before any conclusions can be drawn regarding whether decontamination of surfaces and/or trenches and sewers would adequately address any limited contamination present above acceptable levels.

Second, although determined to be effective in the short-term, the FS screens out surface sealing because it is “not effective in the long-term.” FS at pp. 3-45 – 3-46. This, however, is true for any containment remedy and can be, and repeatedly has been, addressed through inspections and maintenance. Another reason offered for screening out surface sealing is that it is difficult to implement on a property not owned by the government. This argument is disingenuous. It is certainly easier to implement surface sealing at a privately-owned property than to conduct much more intrusive demolition or decontamination. Furthermore, there is only one property at issue, Stepan’s. Stepan is more than willing to cooperate by providing appropriate access to allow the remedy to be maintained so as to avoid unnecessary demolition of its buildings.

Since the contamination evaluation is not yet complete and the alternatives have not been adequately developed, the selection of a remedy for this part of the Operable Unit should be delayed. The delay will not result in any undue risk to human health or the environment. The wastes at issue are the result of operations that ceased 45 years ago, so that any especially mobile contaminants would have dispersed long ago, and investigations demonstrate worker exposures are acceptable.

4.1.5 Taking

Should the USACE persist in demolishing the buildings, Stepan would be entitled to just compensation. Clearly, Stepan has a property interest in its buildings. Each building tagged for potential partial demolition is an integral part of Stepan’s active specialty chemical plant. USACE’s requirement of demolition when other, less destructive alternatives are available amounts to an unconstitutional taking of Stepan’s property without due process of the law. Under these circumstances, the proposed remedy appropriates Stepan’s property, which is grounds for compensation under the Constitution.

4.1.6 Conclusion

The contamination of buildings and structures has been inadequately studied. Available data indicate there is not an imminent or substantial risk to human health or the environment resulting from radiological contamination levels within the Stepan plant buildings. Moreover, the consequential damages to plant production and historical resources which would result from

even partial demolition are far greater than any benefits to be realized. Any residual risks of contaminant release associated with future building renovations could be managed through restrictive covenants placed on the property. In the alternative, other remedial technologies need to be further evaluated before eliminated from consideration. Should demolition be pursued, the demolition would constitute a Constitutional taking, and Stepan would be entitled to just compensation.

5.0 CONCLUSION

As detailed above, the Proposed Plan adopts indefensible cleanup criteria and incorrect disposal characterization. Furthermore, certain key information has yet to be developed for the remediation of the FUSRAP Site. Without this information, appropriate remedial alternatives cannot be developed or evaluated. Consequently, the FS and Proposed Plan have employed unnecessarily conservative cleanup criteria and incorrect disposal characterization, applied those criteria incorrectly to certain properties, eliminated appropriate remedial technologies without explanation, and failed to adequately incorporate the NCP's requirements that the remedy be cost-effective and provide reduction in toxicity, mobility or volume through treatment. In short, the Proposed Plan is based on an inadequate administrative record, its decisions are unnecessary and inconsistent with the NCP, and, accordingly, the proposed remedial actions must be reconsidered in accordance with the comments presented herein.



RADIOACTIVE WASTE MANAGEMENT ASSOCIATES

**Comments on the Proposed Plan
by the Army Corps of Engineers
for Cleanup of the Maywood, New Jersey Superfund Site**

August 2002

by

**Dr. Marvin Resnikoff
Radioactive Waste Management Associates
November 11, 2002**

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RADIOACTIVE WASTE MANAGEMENT ASSOCIATES


November 12, 2002

Allen D. Roos
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New York, NY 10278-0090

Dear Allen:

I've enclosed our comments for Concerned Citizens of Maywood on the Proposed Plan and Feasibility Study for remediation of remaining properties in Maywood. We're hopeful these will be helpful to you in your deliberations. If you or your associates have any questions, feel free to call. Thank you for holding open the window for comments. We could not postmark these comments yesterday because the post office was closed, so we hope that one day late will be acceptable.

Sincerely,



Marvin Resnikoff

Marvin Resnikoff, Ph.D. ♦ Senior Associate

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In the Proposed Plan for Maywood Superfund Site properties, the Army Corps of Engineers (ACE) presents its plan for the remaining 24 contaminated properties in Maywood, New Jersey¹. Under a TAG grant from the Environmental Protection Agency (EPA), Concerned Citizens of Maywood asked Radioactive Waste Management Associates to review the proposed plan. To accomplish this review, we reviewed the Proposed Plan and Feasibility Study, and underlying references found in the Administrative Index, including our own reports to the Army Corps and its predecessor on this project, the Department of Energy (DOE). Unfortunately, not all supporting references are posted on the Administrative Index. We previously submitted comments² to the DOE on a draft Baseline Risk Assessment over eight years ago, but no responsiveness document was prepared by the DOE. Since ACE must, by law, prepare a responsiveness document to public comments on the Proposed Plan, we are again submitting these comments to ACE as part of our comments on this proposed plan. We appreciate ACE's willingness to accommodate Concerned Citizen's request to extend the comment period.

To summarize, while we support ACE in its determination to remediate thorium contamination in Maywood caused by the Maywood Chemical Works, now Stepan, in our opinion, the plan is flawed. We support alternative 3, remediation of the remaining 24 contaminated properties in Maywood, New Jersey without soil treatment, rather than alternative 4. The economic advantage of alternative 4 is small to vanishing, and the downside economic costs are high. With no clear plan for removing contaminants above 5 pCi/g, leaving Th-232 + Ra-226 soil concentration at 15 pCi/g essentially transfers the economic costs from the federal government to landowners. Further, we consider the radiological risk seriously underestimated, and incorrectly done for children. Finally, though not subject to this Feasibility Study and Proposed Plan, we remain concerned about TCE contamination of ground water. These points are discussed in more detail below, following a brief introduction about the extent of contamination at Maywood.

Site Background

To understand the full extent of remaining contamination on the properties slated for remediation under the Proposed Plan, a short discussion would be useful. A fuller exposition appears in our earlier comments on the draft Baseline Risk Assessment³, which are attached.

For 40 years, between 1916 and 1956, the Maywood Chemical Works imported large volumes of monazite sands, from which it extracted rare earths and thorium. The

¹ US Army Corps of Engineers, "Proposed Plan for Soils and Buildings at the FUSRAP Maywood Superfund Site," August 2002.

² Resnikoff, Marvin, Ph.D, Richard Leigh, Ph.D, and Phyllis Fuchsman, "Comments on the Department of Energy's Baseline Risk Assessment for the Maywood Site, Maywood, New Jersey, April 1993," Radioactive Waste Management Associates, July 27, 1994.

³ *Ibid.*

wastes from the extraction procedures - sludges, liquids and tailings - contained large quantities of unextracted thorium-232, as well as uranium-238, another component of the original monazite sands, and all decay products. Atomic Energy Commission (AEC) Inspection Reports in the late 1950's and early '60's provide an estimate of the radioactive concentrations. Radiation readings atop the on-site thorium sulfate pile were 5.5 millirems per hour (mr/h),⁴ which corresponds to thorium-232 concentrations close to 3000 pCi/g. A May 15, 1961 AEC Inspection Report describes radioactive concentrations up to 6,400 pCi/g thorium-232. These materials have not been removed from Maywood. Because of the long half-life of thorium-232, these waste materials will remain radioactive essentially forever.

To understand the full extent of contamination in the Maywood area, one must go back to earlier AEC Inspection Reports: "The manufacture and sale of gas mantles, containing thorium nitrate, was instituted at Maywood Chemical Works some time in 1916. At this time the company occupied a relatively small area adjoining a large swampy area draining into and forming part of the natural watershed of that area. As the company expanded and operations continued, much of the swampy area was filled in by process residues containing approximately 1 - 2% of thorium. A respectable area of Maywood Chemical Works is now standing upon this filled-in ground. Historically, but without documentation, additional large areas, which are now outside of the company property, were used as dumping areas for process wastes. U.S. Route 17 was built through this area, and fairly extensive areas on the other side of Route 17 were also used as dumps for process materials by Maywood Chemical Works."⁵

Although a small amount of thorium waste was sold off, much, including the huge slurry pile, was ultimately moved to on-site, underground storage. Beginning November 1966 through August 1967, thorium wastes from two locations on Stepan Company property east of Rte. 17 were transferred to unlined burial pits on the present Stepan Company site and covered with topsoil. A total of 8,360 and 2,053 cubic yards of radioactive tailings were transferred to Burial Pits 1 and 2 in 1966 and 1967, respectively. In June 1968, 8,600 cubic yards of waste were moved from the South Dike area of the Ballod property to Burial Pit 3⁶. The 1968 storage/burial operation was apparently done without the knowledge or permission of the Atomic Energy Commission. Stepan Company management was fined \$20,000 for deliberately concealing this information from federal inspectors.

Among the seriously contaminated areas now outside the Stepan Company is the Ballod property or former South Dike area. The history of the Ballod site holds important lessons for the future use of contaminated properties and the risk assessment for the Maywood area. Following removal of contaminants from this property, direct

⁴ Letter from W. Karp, Head Source Dept, AEC to J Huber, Maywood Chemical Works, June 22, 1962.

⁵ AEC Inspection Report, August 30 and September 4, 1963.

⁶ AEC Inspection Report, Oct 18 and Nov 2, 1967.

gamma readings averaged 0.05 to 0.1 mr/hr, with spots up to 0.3 mr/hr. While this was acceptable to AEC inspectors, for full-time occupancy, the yearly whole body dose due to direct gamma radiation alone (and other pathways should also be included), would be up to 900 mr/yr, considerably above the present NRC decommissioning limit of 25 mr/yr, or the limit at the time, 500 mr/yr. The present release criteria, agreed to by ACE, EPA and NJDEP, is 15 mrem/yr. Following unrestricted release of the property, the former South Dike area was sold to a developer, Barisi, who had materials hauled off the site so he could build.⁷ The location of these disposed of materials was not stated, but it is likely this movement radioactively contaminated yet another location. In 1977, Barisi hired Kramer Associates, contractors from Ft Lee, to remove additional material from a 10 acre area to a depth of 6 feet. This created, we assume, yet another contaminated area which has not been located. Fill and rubble replaced this exhumed material. The land was never developed and was eventually sold to Ballod & Associates, hence the name. The zoning was changed from industrial to residential and an old age home was built on a portion of the property. There is no reason to believe that this history will not repeat itself at other contaminated properties in Maywood, since the trend in New York suburbs is away from industrial and towards residential use. Zoning for the contaminated Scanel property has been changed from light industrial to mid-rise residential; the zoning for the MISS has been changed from light industrial to commercial high rise. Risk assessments for future use of any Maywood property should therefore consider residential use.

Because of the high radioactive concentrations of buried material, it makes little sense to pass thorium tailings or pit material, at radioactive concentrations greater than 2,000 pCi/g, through a soil treatment process. At concentrations greater than 2,000 pCi/g, these tailings must also be placarded for transport, under DOT regulations. Thus, almost 20,000 cubic yards of buried thorium tailings should be removed from the treatment program, making the already shaky economics of Alternative 4, even more so, as we discuss below.

Another seriously contaminated area is designated by DOE as "Unit 7H." This square, 10-acre area lies adjacent to the Sears and Desaussure buildings and is covered by common reed (*Phragmites*), a species characteristic of polluted or disturbed marshlands. A small runoff drainage ditch originates in this area. Unit 7H presently has much higher direct gamma radioactivity levels than the surrounding asphalt-paved parking lots. Though one report is equivocal that residues from the processing operation may have been used as landfill in this area,⁸ the AEC Inspection Report quoted previously clearly points to the unit as one of the "large areas . . . now outside of the company property . . . used as dumping areas for process wastes."

⁷ NJ DEP, Site Inspection Report, Thomas Brady, Oct 7, 1980.

⁸ Ebasco Services Inc, "Final Report for the Maywood Chemical Company Site: Sears and Vicinity Properties, Maywood, New Jersey," prepared for the US EPA, February 1987.

Radiological Risk Underestimated

As stated by both DOE and ACE, the estimated radiation doses are decidedly above risk levels requiring remediation, particularly the future risk levels. The Proposed Plan therefore calls for remediating the remaining 24 contaminated properties in Maywood. We agree. The issues are: how serious is the risk, what cleanup criteria should be applied to the remaining properties, and is soil treatment appropriate?

In our view, the risks calculated by ACE are greatly underestimated. The radiological doses, as estimated by DOE, exceed the regulatory limits and therefore require remediation. However, the actual situation is in fact even more serious. The parameters chosen in the Baseline Risk Assessment for the RESRAD computer model to calculate radiation doses are not conservative. Furthermore, DOE has underestimated the cancer risk associated with given doses by employing an unwarranted "dose reduction effectiveness factor" and by failing to adequately distinguish between risks to children and adults.

The RESRAD model, employed by the DOE, calculates radiation doses due to soil contamination by radionuclides. As far as we can determine, the inputs and printouts appear only in the Maywood Baseline Risk Assessment⁹. No more recent updates are publicly available. A full range of pathways is possible, though not all are appropriate for Maywood. We are concerned here with the input parameters to the RESRAD program. At RWMA we have used the RESRAD program for several years and are quite familiar with the inputs required.

We regard the following inputs to the RESRAD program as non-conservative and also somewhat inconsistent. The draft BRA is more detailed than the more recent versions that are quite sketchy.

1. DOE employs varied contaminated zone thicknesses of 0.15m to 2 m, whereas some of the contaminated zones could be as much as 6 m thick.
2. The radionuclide concentrations could be far in excess of 2.88 pCi Th-232/g, and 3.39 pCi U-238/g.
3. The mass loading in air for inhalation varies from 15 $\mu\text{g}/\text{m}^3$ to 30 $\mu\text{g}/\text{m}^3$, whereas the default parameter for RESRAD is 35 $\mu\text{g}/\text{m}^3$. For construction sites, the values we have employed range up to 500 $\mu\text{g}/\text{m}^3$. For some work environments, such as oil pipe cleaning operations, we have employed 1 mg/m^3 . We therefore regard the mass loading parameter employed by DOE as non-conservative.
4. The standard inhalation rate is generally taken as 20 m^3/day for an adult or 7,330 m^3/y , less for a child. DOE takes 5430 m^3/y .

⁹ US Department of Energy, *Baseline Risk Assessment for the Maywood Site, Maywood, New Jersey*, DOE/OR/21950-003, April 1993.

5. DOE takes a shielding factor of 0.8 for a home, whereas the standard default rate is 0.7.
6. DOE assumes a locally grown vegetables, fruit and grain consumption of 13.5 kg/y to 30 kg/y, compared to a total consumption of 160 kg/y. The EPA and NRC generally take an average of 35 kg/y for home-grown vegetables, fruits and grains. Similarly, the DOE assume 4 kg/y of leafy home-grown vegetables compared to a yearly consumption of 14 kg/y.

To calculate the dose to children due to ingestion and inhalation, one estimates the total intake of radionuclides and multiplies the total intake by a dose conversion factor that relates intake to radiation dose. For children, the intake is generally less because less food is ingested, and less air is inhaled since lungs are smaller, though more soil is incidentally ingested. However, the dose conversion factors are higher than for an adult male. Since the Baseline Risk Assessment was released, new dose conversion factors from ICRP, based on ICRP-60, have appeared. The Baseline Risk Assessment and more recent calculations by ACE employed the dose conversion factors based on ICRP-30 that did not distinguish between children and adults. Depending on the radionuclide and the intake pathway, the radiation dose to children could be much higher than for an adult male. We encourage ACE to redo these risk calculations for children employing dose conversion factors based on ICRP-60. The DOE is beginning to use dose conversion factors based on ICRP-60 at the Y-12 plant.

Given the calculated dose, the next step is to calculate the risk of developing cancer and compare this risk to the range of 10^{-4} to 10^{-6} employed by the EPA, or 10^{-6} used by NJDEP. Here DOE uses a risk factor 6×10^{-4} fatal cancers per rem. This is less than the standard risk factor because the DOE has included a dose rate reduction effectiveness factor (DREF) of 2. In our opinion, this factor has no basis for humans, and recent Japanese bomb survivor data show it is incorrect¹⁰. The data suggest a factor of 10×10^{-4} fatal cancers per rem. Some authors have calculated a factor of 32×10^{-4} fatal cancers per rem¹¹. For children, because of rapidly growing cells and longer lifetimes than adults, the risk factor is even greater¹².

Another error by DOE and ACE in estimating radiation doses lies in the determination of "background" radiological contamination in soil. The DOE is correct in subtracting background concentrations from the measured concentrations of each radiological contaminant in soils, since the Maywood Chemical Works' past thorium processing activities are not responsible for the fraction of cancers and other ailments that can be attributed to naturally occurring background radiation. However, the DOE and ACE makes a serious error in estimating these background levels. Their analytical

¹⁰ Pierce DA and Preston DL, *Radiation-Related Cancer Risks at Low Doses among Atomic Bomb Survivors*, Radiation Research 154, 178-86 (2000).

¹¹ Gofman JW, *Radiation & Human Health*, Sierra Book Club (1981).

¹² National Academy of Sciences, *Health Effects of Exposure to Low Levels of Ionizing Radiation*, BEIR V (Committee of the Biological Effects of Ionizing Radiation), National Academy Press (1990).

measurements, presented in Table 2-1, Baseline Risk Assessment were insufficiently precise to actually measure the concentrations, but instead reveal only the sensitivity of the instrumentation, as clearly presented in, for example, the datum that the Rochelle Park Ra-226 contamination is "<0.7", that is, less than 0.7 pCi/g. In its calculations, however, both DOE and ACE use a background value of 0.7 pCi/g. If all one knows is that the concentration lies between zero and 0.7 pCi/g, then all values between 0 and 0.7 pCi/g have equal probability of occurring, and the most appropriate background value is the average of these, 0.35 pCi/g. This procedure is used correctly by the DOE in evaluating chemical contaminant background levels.¹³ This error makes a substantial difference in calculations of the mean radionuclide concentrations in soils (Tables 3-4A & 3-4B).

We agree with ACE that the radiological and chemical risks of developing cancer should be added.

Cleanup Criteria

The appropriate cleanup criteria has been the subject of controversy for several years. The NJDEP has argued that State law requires a risk of one in a million. This would be accomplished by limiting the contamination residuals and placing a clean soil layer of 3 feet. State law also requires a notification procedure if buried soil is to be exhumed. Under EPA/DOE dispute resolution, soil must be remediated to 5 pCi/g combined radium-226 and thorium-232 above background if the site has unrestricted use. If the site has restricted use, the soil must be remediated to 5 pCi/g combined radium-226 and thorium-232 above background. Excavated soil is to be replaced with clean soil to grade.

In our opinion, under the agreement between State and Federal agencies, the restricted limit of 15 pCi/g combined Ra-226 and Th-232 will not protect the public health. We realize that ACE and the EPA are to be informed of land use changes, but, in our opinion, this will not be effective. According to the agreement,

"Pursuant to CERCLA §121(c) and the Federal Facility Agreement, following successful remediation, the Maywood site will be subject to 5-year reviews to assure that human health and the environment remain protected by the remedial action being implemented. In addition, DOE will remediate, as may be necessary, any areas of the site which have not been remediated due to their inaccessibility, at such time as those areas become accessible for remediation through demolition, relocation, renovation, excavation or otherwise. Also, DOE and EPA, will request that the Borough of Maywood and the townships of Rochelle Park and Lodi during and after the proposed action inform DOE and EPA of any land use or zoning changes affecting any portion of the commercial/government areas of the site and of any permit, building, construction, excavation or demolition activity that might affect unremediated portions of the site (or involve offsite removal of remediated backfill material)."

¹³ Baseline Risk Assessment, p. 2-18.

Assuming that either radium-226 or radium-228 had a soil concentration of 5 pCi/g, we ran DOE's program RESRAD to determine the yearly dose. This is what we found regarding radium contamination in the soil and radiation dose:

Radionuclide	Ground mrem/yr	Radon mrem/yr	Plant mrem/yr	Soil
Ra-226	31.5	277.6	24.6	0.6
Ra-228	24.9	0	21.1	0.2

We assumed a resident under default conditions. That is, the person has a garden, and works for part of the day, and spends a certain portion of time indoors and outdoors. In the table above, the pathways are: ground, direct gamma; plant, food grown in a garden; and soil, incidental soil ingestion, i.e., wiping one's mouth with contaminated soil. We did not assume 1 to 3 feet of clean soil placed on top of a contaminated layer. The input parameters are otherwise default values.

The total dose, obtained by adding all radiation pathways, is more than 25 mrem/yr. That is, reducing the soil concentrations to 5 pCi/g does not lead to doses that meet NRC regulatory requirements, 25 mr/y, or EPA/NJDEP requirements of 15 mr/y.

At some future time, suppose, for example, a site developer purchases the Sears property and wishes to build a high rise residential building that requires a deep foundation. How does this process go? The deed informs the property owner that radioactive material is buried on the site. The Town may or may not remember to inform ACE and the EPA. The property owner clears the Sears property and then must wait for ACE to remove contaminated materials down to 5 pCi/g. But ACE may not have the cash in hand to immediately carry out this remediation, and in any case, must mobilize resources to carry out the work. Federal budgets usually require a 2-year lead time. In the meantime, what happens to the property owner who wishes to build? The effect of this notification procedure is to push all presently inaccessible clean-up to some future date. We maintain that the result is to depress property values for all properties contaminated to >15 pCi/g since the agreement places a severe restriction on the free use of property. Meanwhile, the federal government pushes some costs into the future. The bottom line is that financial costs are transferred from the federal government to individual property owners. This transfer of costs is not recognized in the Proposed Plan. All properties should be decontaminated down to the 5 pCi/g limit.

Groundwater Contamination

We remain concerned about chemical contaminants in groundwater in Maywood. We realize that this Proposed Plan does not deal with this issue, but carbon tetrachloride, tetrachloroethylene and trichloroethylene levels in groundwater are far above regulatory standards. Groundwater samples collected in monitoring wells in Maywood in 1985 were

compared to New Jersey State standards for drinking water, and the NJDEPE Groundwater Cleanup Criteria^{14,15} in the attached memo. Eight volatile organic compounds (VOCs), benzene, carbon tetrachloride, chlorobenzene, trans-1,2-Dichloroethene, methylene chloride, tetrachloroethylene, trichloroethylene and vinyl chloride, were detected at the Maywood site at levels which greatly exceed NJDEPE-Groundwater Quality Standards (Table 2a).¹⁶ Six inorganic contaminants, arsenic, cadmium, chromium, lead, mercury and zinc, were reported on the site contaminant list at levels exceeding NJDEPE Groundwater Cleanup Criteria (Table 2b).¹⁷ Our concern is that some chemicals, such as TCE, travel much faster in groundwater than radionuclides. If TCE is in the groundwater than radionuclides may eventually follow. This argues for reducing radionuclide contaminants to levels as low as reasonably achievable.

Soil Treatment

Alternative 3 in the Proposed Plan differs from alternative 4 in that Alt. 4 employs treatment and Alt. 3 does not. However, the economic difference is small, only \$10 million in a \$250 million budget. In our opinion, the proposed soil treatment procedure, though vastly improved over previous versions, has still not been well documented. The proposed procedure calls for separating particles by size. Gravel and stones will supposedly not be contaminated. Therefore, gravel and stones will serve as fill and not be transported to a distant disposal location; the contaminated portion may then undergo further treatment by being separated radiologically, to further refine the separation. However, under the Proposed Plan, gravel and stones will be washed to remove any residual contamination. ACE does not specify the disposition of this wash water, particularly if thorium and decay products are soluble. Further, results of development testing of the soil separation procedure, done in the year 2000, and testing results by Sanford Cohen in 1997, are not in the Administrative Record. The bottom line is the public does not know whether the soil treatment process is effective. The community supports a limit of 5 pCi/g and the soil treatment process may not be capable of reaching this limit. At least, there is no document in the Maywood record that proves that soil treatment is effective. This raises our suspicions about the process. In our opinion, disposal costs for waste water will reduce this \$10 million margin. Further, it is unlikely that the buried pit material can be treated at all, since the average combined radionuclide concentration already exceeds 2000 pCi/g. If this pit material is not treated, this will further reduce the \$10 million margin. Community residents have already spoken against employing the soil treatment process in Maywood. This community concern should be recognized.

¹⁴ NJ State Primary Drinking Water Standards as of January 1994-NJDEP; N.J.A.C. 7:10-1

¹⁵ New Jersey Groundwater Cleanup Criteria for Class II-A Groundwater, *New Jersey Register*, February 1, 1993

¹⁶ *Ibid.*

¹⁷ *Ibid.*

Waste Disposal

We remain concerned that Maywood material may not be disposed of at sites that can safely handle this material. Some sites, such as Cotter, in Canon City, Colorado, should be carefully investigated by ACE and the EPA before being considered for disposal of Maywood waste. Citizens from that community have asked that additional waste material not be sent to Cotter. As you may be aware, the Cotter mill was subject to a successful personal injury law suit. In our opinion, the Cotter Corporation did not use due care in disposing of waste materials and operating the mill. We urge the EPA and ACE to look into the matter.

Conclusion

We support a dose limit of 5 pCi/g for unrestricted use. Restricted use of 15 pCi/g may not be effective. We support alternative 3 for all properties since future use of New York City suburban areas points to increasing residential use. We encourage ACE to redo the risk assessment to correctly calculate the doses to children, to use appropriate dose conversion and risk factors.

**Comments on the Department of Energy's
Baseline Risk Assessment for the Maywood Site
Maywood, New Jersey
April 1993**

by

**Dr. Marvin Resnikoff, Dr. Richard Leigh
and Phyllis Fuchsman
Radioactive Waste Management Associates
July 27, 1994**

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This review of the Baseline Risk Assessment for the Maywood Site¹ is prepared on behalf of Concerned Citizens of Maywood by Radioactive Waste Management Associates under a TAG grant from the Environmental Protection Agency (EPA). In preparing this critique, we have reviewed a large number of references which are listed at the end of this report.

The Maywood site consists of a large number of properties, which DOE has attempted to characterize so as to detail the risk and determine the extent of contamination. In order to take a larger perspective, we will attempt to synthesize and analyze the results of the Remedial Investigation,² Baseline Risk Assessment and other documents and come to broader brush conclusions. In this report, we have concentrated on radioactive contamination, although chemical contamination at the site is also extensive.

DOE clearly presents the purpose of the Baseline Risk Assessment (BRA). It is "... to evaluate the risk to human health and the environment from the radioactive and chemical contaminants in the absence of remedial action." The report "does not assume future control [of the site] by DOE," and "current institutional controls are not expected to remain in place."³ In other words, the report is an evaluation of the public health costs of the "no-action alternative," for which DOE is legally mandated to assume that in the near future it simply walks away from the site.

The BRA presents a brief history of the Maywood site, on which we have expanded with information from various sources. We have also investigated the extent to which DOE has fulfilled the report's stated purpose. In our opinion, the Department has seriously underestimated current and future health risks, by failing to account for all exposure pathways, incorrectly calculating background contamination, and incorrectly converting estimated radiation doses to cancer risks. DOE has also failed to assume the end of institutional controls in its assumptions of future land use and movement of contaminants. The movement of contaminants in surface and ground water is of

¹ US Department of Energy, *Baseline Risk Assessment for the Maywood Site, Maywood, New Jersey*, DOE/OR/21950-003, April 1993.

²US Department of Energy, *Remedial Investigation Report for the Maywood Site, Maywood, New Jersey*, DOE/OR/21949-337, December 1992.

³BRA, p. ES-1.

particular concern. In addition, we have commented on the Department's selection of chemical "contaminants of concern."

Site Background

All parties agree that the original source of radioactive contamination in Maywood and adjacent boroughs was the Maywood Chemical Works. For 40 years, between 1916 and 1956, the Maywood Chemical Works imported large volumes of monazite sands, from which it extracted rare earths and thorium. The wastes from the extraction procedures - sludges, liquids and tailings - contained large quantities of unextracted thorium-232, as well as uranium-238, another component of the original monazite sands.

From the more recent characterization reports, it is difficult to understand the full hazard posed by these waste materials. Atomic Energy Commission (AEC) Inspection Reports in the late 1950's and early '60's provide an estimate of the radioactive concentrations. Radiation readings atop the on-site thorium sulfate pile were 5.5 millirems per hour (mr/h),⁴ which corresponds to thorium-232 concentrations close to 3000 pCi/g. A May 15, 1961 AEC Inspection Report describes radioactive concentrations up to 6,400 pCi/g thorium-232. Because of the long half-life of thorium-232, these waste materials will remain radioactive essentially forever.

During the early years of operation, the extraction residues were pumped to unlined diked areas in a low-lying western portion of the original site (now the Ballod property) and other diked areas on the original site. Additionally, wastes were dumped into nearby wetlands:

"The manufacture and sale of gas mantles, containing thorium nitrate, was instituted at Maywood Chemical Works some time in 1916. At this time the company occupied a relatively small area adjoining a large swampy area draining into and forming part of the natural water shed of that area. As the company expanded and operations continued, much of the swampy area was filled in by process residues containing approximately 1 - 2% of thorium. A respectable area of Maywood Chemical Works is now standing upon this filled-

⁴ Letter from W. Karp, Head Source Dept, AEC to J Huber, Maywood Chemical Works, June 22, 1962.

in ground. Historically, but without documentation, additional large areas, which are now outside of the company property, were used as dumping areas for process wastes. U.S. Route 17 was built through this area, and fairly extensive areas on the other side of Route 17 were also used as dumps for process materials by Maywood Chemical Works.”⁵

Route 17 was built in 1932 on top of some of the thorium tailings, cutting through a large storage area located near the intersection of the route and the New York, Susquehanna and Western railroad tracks, near the north corner of the present Maywood Interim Storage Site (MISS). After this point, tailings were trucked to the Ballod property and later were pumped to a diked area on the property of Maywood Chemical Works to the east of Route 17. A large slurry mound, two football fields in area and 20’ high, was located in the north corner of the present MISS.

Radioactive contamination continued after the close of thorium extraction operations at Maywood Chemical. To understand the magnitude of the problem and the level of the company’s awareness, we quote from a 1963 AEC Inspection Report:

“The amount of thorium leaving the plant site by mechanical, airborne or solvent action is not known. There is no doubt that some thorium has been transported by leaching action of rain and surface water to the Bergen County water shed.

“The inspections conducted on 5/24/57 and 5/15/61 revealed that the licensee did not possess any radiological survey instruments . . . The licensee had obtained a Civilian Defense GM survey meter, range 0 - 50 mr/hr. Alrutz stated he intended to use this instrument during the proposed clean-up program at Maywood.

“Mr. James Alrutz, graduate chemist and Production Manager at the Maywood facility, has the collateral duty of Radiation Safety Officer. Alrutz has had no special training in the field of radiological safety. He has learned to use a survey meter and to a limited degree has become familiar with the provisions of Parts 20 and 40 . . . Alrutz stated that he has complete authority in the area of radiological safety.

⁵ AEC Inspection Report, August 30 and September 4, 1963.

"It is noted that personnel monitoring has never been utilized, even during the period of active processing of monazite sands."⁶

Although a small amount of thorium waste was sold off, much, including the huge slurry pile, was ultimately moved to on-site, underground storage. Beginning November 1966 through August 1967, thorium wastes from two locations on Stepan Company property east of Rte. 17 were transferred to unlined burial pits on the present Stepan Company site and covered with topsoil. A total of 8,360 and 2,053 cubic yards of radioactive tailings were transferred to Burial Pits 1 and 2 in 1966 and 1967, respectively. In June 1968, 8,600 cubic yards of waste were moved from the South Dike area of the Ballod property to Burial Pit 3⁷. The 1968 storage/burial operation was apparently done without the knowledge or permission of the Atomic Energy Commission. Stepan Company management was fined \$20,000 for deliberately concealing this information from federal inspectors.

The present arrangement for managing the thorium waste materials is described as "storage" by the Nuclear Regulatory Commission (NRC). In NRC terms, "storage" is considered temporary, whereas "disposal" is intended to be permanent. The Stepan Company, which bought Maywood Chemical Works, continues to hold a "possession only" license, under which it was allowed to decontaminate and store the wastes. In February 1971, the Stepan Co. attempted to allow its AEC license to lapse, saying it no longer "possessed" radioactive materials, but this attempt to make the thorium waste materials "disappear" was foiled by the AEC. It is extremely important to emphasize that these wastes have never been disposed of.

Similar to the release of the Grace & Co. license at the Wayne site, the AEC allowed contaminated properties to be released for unrestricted use without a risk assessment and without a careful analysis of future radiation doses to the general public. To this day, the NRC does not require a risk assessment when a license is terminated. By contrast, the EPA does require risk assessments before the release of Superfund sites. Several former AEC licensees are now engaged in defense against damage suits as a result of lax waste management practices and regulatory procedures.

⁶ AEC Inspection Report, August 30 and September 4, 1963.

⁷ AEC Inspection Report, Oct 18 and Nov 2, 1967.

Among the seriously contaminated areas now outside the Stepan Company is the Ballod property or former South Dike area. The history of the Ballod site holds important lessons for the future use of contaminated properties and the risk assessment for the Maywood area. Following removal of contaminants from this property, direct gamma readings averaged 0.05 to 0.1 mr/hr, with spots up to 0.3 mr/hr. While this was acceptable to AEC inspectors, for full-time occupancy, the yearly whole body dose due to direct gamma radiation alone (and other pathways should also be included), would be up to 900 mr/yr, considerably above the present limit of 100 mr/yr, or the limit at the time, 500 mr/yr. Following unrestricted release of the property, the former South Dike area was sold to a developer, Barisi, who had materials hauled off the site so he could build.⁸ The location of these disposed of materials was not stated, but it is likely this movement radioactively contaminated yet another location. In 1977, Barisi hired Kramer Associates, contractors from Ft Lee, to remove additional material from a 10 acre area to a depth of 6 feet. This created, we assume, yet another contaminated area which has not been located. Fill and rubble replaced this exhumed material. The land was never developed and was eventually sold to Ballod & Associates, hence the name. The zoning was changed from industrial to residential and an old age home was built on a portion of the property. There is no reason to believe that this history will not repeat itself at other contaminated properties in Maywood, since the trend is away from industrial and towards residential use. Zoning for the contaminated Scanel property has been changed from light industrial to mid-rise residential; the zoning for the MISS has been changed from light industrial to commercial high rise.

Another seriously contaminated area is designated by DOE as "Unit 7H." This square, 10-acre area lies adjacent to the Sears and Desaussure buildings and is covered by common reed (*Phragmites*), a species characteristic of polluted or disturbed marshlands. A small runoff drainage ditch originates in this area. Unit 7H presently has much higher direct gamma radioactivity levels than the surrounding asphalt-paved parking lots. Though one report is equivocal that residues from the processing operation may have been used as landfill in this area,⁹ the AEC Inspection Report quoted previously clearly points to the unit as one of the "large areas . . . now outside of the company property . . . used as dumping areas for process wastes." These earlier landfilling practices on the part of Maywood Chemical Works may also account for the present contamination of properties along the former Lodi Brook.

⁸ NJ DEP, Site Inspection Report, Thomas Brady, Oct 7, 1980.

⁹ Ebasco Services Inc, "Final Report for the Maywood Chemical Company Site: Sears and Vicinity Properties, Maywood, New Jersey," prepared for the US EPA, February 1987.

The means by which other properties associated with the Maywood site became contaminated is less clear. For instance, were properties south of the Stepan Company along Lodi Brook contaminated by surface waters carrying radioactive thorium, uranium and decay products? Were some properties contaminated when radioactive fill, including contaminated mulch, was removed from the Maywood Chemical Works? If fill was removed, was this done with the permission or knowledge of the management? Was the contamination of the Lodi water supply caused by underground migration from the Maywood Chemical Works? The answers to these questions directly relate to future risk, both by providing clues as to how radioactive materials are now migrating in the area and by demonstrating ways by which people could continue to move the waste in the future. These questions have not been resolved by the Maywood BRA. We discuss the special situation of the Lodi municipal wells in the "Water" section below.

In 1984, responsibility for clean-up was assigned to the DOE by the U.S. Congress. Since the Maywood site was designated a Superfund site by the EPA a year earlier, the EPA also has jurisdiction over the cleanup. The DOE is in the process of preparing a Feasibility Study which will lay out the remediation options for the Maywood site and associated contaminated properties.

Present Risk Estimates

DOE has estimated current radiation doses and associated fatal cancer risks for the various "property units" of the Maywood site. For the majority of residential properties, DOE estimates an average dose of 51 mr/year and a maximum dose of 246 mr/year. The associated cancer risks are calculated to be 3×10^{-4} for the average dose and 4×10^{-3} for the maximum dose. Average dose estimates for the most dangerously contaminated commercial/government properties range from 114 to 171 mr/year, with maximum estimates of from 142 to 281 mr/year. These are translated to cancer risks ranging from 5×10^{-4} to 7×10^{-4} for average doses and 2×10^{-3} to 4×10^{-3} for the maximum doses. Though not clearly stated by the Maywood BRA, cancer risk is only one risk of radiation; other risks are genetic effects, including birth defects, non-fatal cancers, and radiation-related illnesses.

These doses as estimated by DOE exceed the regulatory limits of 100 mr/year for public exposure due to operating nuclear facilities and 25 mr/year for low-level waste disposal facilities. However, the actual situation is in fact even more serious. DOE has underestimated exposures by failing to fully measure radon and thoron levels, as well as by overestimating background radiation levels. Furthermore, DOE has underestimated the cancer risk associated with given doses by employing an unwarranted "dose reduction effectiveness factor" and by failing to adequately distinguish between risks to children and adults.

Radon-222 and Lead-212 Inhalation Exposure

When contaminated soils are exposed to air, radon-222 and radon-220 (thoron) emanate as inert radioactive gases. Radon-222 and thoron are decay products in the uranium-238 and thorium-232 decay chains, respectively. Because of its longer half-life of 3.8 days, radon-222 is more likely to be detected in air than thoron, which has a 55.6 second half-life. Radon-222 was detected in the air immediately adjacent to the MISS. One would expect radon-222 to be detected in other areas as well, such as the highly contaminated, marshy "Unit 7H," but DOE did not test for it in most probable locations. A new report, giving radon measurements for 19 commercial properties, will be released soon. The report will also add to data on direct gamma radiation at these properties.

More serious than the inadequacy of radon-222 data is the fact that DOE did not test for thoron at all, although they claim to have done so in some areas. Thoron ultimately decays to lead-212, with a half-life of 10.64 hours. Thus, it is not thoron, but lead-212 particulates that would be detected. DOE failed to employ the high volume air particulate sampling methods that would be required to detect lead-212 particulates. These particulates are the major source of inhalation exposures in the thorium-232 decay chain. At all thorium waste locations we have studied, the major risk is due to direct gamma, followed by the risk due to inhalation of lead-212. Characterization of the Kerr-McKee site in West Chicago, Illinois by the EPA has identified lead-212 as the major risk¹⁰. We are of the opinion the DOE and its contractors have made a major error in not measuring for lead-212 particulates and accounting for this risk.

Background Concentrations in Soil

¹⁰ Environmental Protection Agency, *Remedial Investigation Report, Kerr-McGee Radiation Sites, West Chicago, Illinois*, September 29, 1986.

Another error in estimating radiation doses lies in the determination of "background" radiological contamination in soil. The DOE is correct in subtracting background concentrations from the measured concentrations of each radiological contaminant in soils, since the Maywood Chemical Works' past thorium processing activities are not responsible for the fraction of cancers and other ailments that can be attributed to naturally occurring background radiation. However, the DOE makes a serious error in estimating these background levels. Their analytical measurements, presented in Table 2-1, were insufficiently precise to actually measure the concentrations, but instead reveal only the sensitivity of the instrumentation, as clearly presented in, for example, the datum that the Rochelle Park Ra-226 contamination is "<0.7", that is, less than 0.7 pCi/g. In its calculations, however, DOE uses a background value of 0.7 pCi/g. If all one knows is that the concentration lies between zero and 0.7 pCi/g, then all values between 0 and 0.7 pCi/g have equal probability of occurring, and the most appropriate background value is the average of these, 0.35 pCi/g. This procedure is used correctly by the DOE in evaluating chemical contaminant background levels.¹¹ Why it is ignored for radiological contaminants is not discussed.

This error makes a substantial difference in calculations of the mean radionuclide concentrations in soils (Tables 3-4A & 3-4B). Our revised versions of these tables, where the correct background levels have been substituted for the DOE's inflated values, are included below. Our correction applies both to the "Current Use" and "Future Use" scenarios, and has a greater effect on lower concentrations. Regardless of pathways, the exposure (in mrems) will simply scale with concentration for each contaminant. Reconstruction of all the DOE's tables (Appendices C and D) is not possible here, but it is clear that the exposures will increase substantially, as much as 300% in some cases.

Cancer Risk

Even if radiation doses had been estimated properly, DOE's procedures would still underestimate the associated health risk. Following calculations of radiation dose, a factor is employed to convert radiation dose to the risk of developing fatal cancer. The risk assessment employs the latest fatal cancer risk factor derived by the National

¹¹ BRA, p. 2-18.

Academy of Sciences in the BEIR V report.¹² This value is based on 1986 studies of Japanese bomb survivors.¹³ But, DOE reduced this risk factor with the use of a "dose reduction effectiveness factor," or "DREF," to account for the fact that the exposure rates to persons near a waste facility are low compared to atomic bomb survivors who received large, instantaneous radiation exposures. The DREF reduces the risk factor from 8×10^{-7} /millirem to 6×10^{-7} millirem.

However, there is no human epidemiological support for DREF. Quite the opposite, studies of Hanford workers,¹⁴ whose doses averaged about twice background, show that effects of low exposures for an extended period are comparable to and actually greater than atomic bomb survivors, for the same total dose. The Department assumes that lethal effects in human populations at low exposure rates have not been documented, but the Hanford study shows otherwise.

Studies of atomic bomb survivors are continuing, since 2/3 of the survivors of the explosion are still alive, and the cancer rates are rising as these persons reach the age when cancers are expected. If one projects into the future, it is expected that the recently increased risk factor will have to be increased once again, by a factor of 3. The results for Hanford workers would then be comparable to those for atomic bomb survivors. That is, with this more recent Japanese data, the distinction between long-term, low exposure rates and short-term, high exposure rates has vanished. The DREF should be removed from DOE calculations, and the risk factor should be 8×10^{-7} /millirem, if not much higher.

Child v. Adult Risk

DOE further underestimates the reasonable maximum cancer risk by failing to adequately distinguish between the risk to adults and children for residential properties.

¹² National Academy of Sciences, *Health Effects of Exposure to Low Levels of Ionizing Radiation, BEIR V*, National Academy Press, 1990.

¹³ Shimizu, Y. et al., *Life Span Study Report 11, Part 1. Comparison of Risk Coefficients for Site-Specific Cancer Mortality Based on the DS86 and T65DR Shielded and Kerma Radiation Doses*, Radiation Effects Research Foundation, 1987; and

Shimizu, Y., Hiroo, K., and Schull, W., *Life Span Study Report 11, Part 2. Cancer Mortality in the Years 1950-85 Based on the Recently Revised Doses (DS86)*, Radiation Effects Research Foundation, 1988.

¹⁴ Kneale, G. and A Stewart, "Reanalysis of Hanford Data: 1944-1986 deaths," in *American Journal of Industrial Medicine*, vol. 23, pp. 371-389, 1993.

In general, children inhale and ingest less radioactive material than do adults, but their health risk per unit radioactivity inhaled or ingested is greater than for an adult. Children and adults receive essentially the same doses due to direct gamma radiation, but again, the risk to children for that dose is greater than for an adult. Although DOE takes some steps toward distinguishing between children and adults in its dose calculations, it does not make the distinction in all appropriate categories and fails to carry the distinction through to the calculation of cancer risk.

Although the derived estimates of exposure from most sources differ appropriately between the child and adult scenarios, the radon-222 inhalation doses presented in an appendix are identical.¹⁵ Radon is responsible for a significant part of the average current dose and the majority of the maximum dose, as calculated by DOE. More problematically, the authors average the child and adult doses, both for mean and maximum values, for presentation in the Risk Assessment's main text.¹⁶ This tends to marginally diminish the estimate of the adult dose. These average doses are used in the calculation of cancer risk, using an adult conversion factor. Instead, the authors should have calculated the maximum risk using a conversion factor for the most sensitive population, namely children. Had they done so, the maximum risk would have been much higher.

Future Risk Scenarios

The worst future exposures presented by DOE are for residents on the Ballod property, who would receive an average dose of 1060 mr/year and a maximum dose of 2799 mr/year. DOE's associated estimates of cancer risk are 6×10^{-3} and 5×10^{-2} (or one chance in twenty). These estimates are high, but they and those for the other properties may be seriously underestimated. The flaws in DOE's assessment of current risk also apply to its analysis of future risk, and the Department's assumptions of future land use and contaminant fate further underestimate the risks at the Maywood site. By assuming that some of the most contaminated properties will never become residential, the authors fail to assess the reasonable worst-case scenario. As discussed previously, the Ballod and Scanel properties show the increasing trend of replacing industrial with residential properties. Also, the Department's failure to assume future movement of contaminants,

¹⁵ BRA, Appendix C, pp. C3-5.

¹⁶ BRA, p 3-44.

as clearly demonstrated at the Ballod property, contributes to the underestimation of risk. Finally, it is unfortunate that DOE does not effectively address the movement of contaminants in surface and ground water, as discussed in the "Water" section below

Future Land Use

In projecting potential cancer risk to future populations, the worst case for any of the property units would be residential use, and many of the properties are evaluated accordingly (although the difference between houses with and without basements is not explored, basements providing opportunities for greater exposure to subsurface contamination and radon). However, the Stepan and MISS properties (excepting the Ballod property) are assumed to remain industrial. The authors' rationalization appears to be that "because DOE is responsible for the cleanup of this site and is committed to pursuing a timely response, the time period considered as the hypothetical future in this assessment . . . is the immediate future."¹⁷ This explanation conflicts with the Baseline Risk Assessment's goal, to thoroughly evaluate the no-action alternative. There is no explanation at all as to why the Scanel properties ("Unit 8"), now vacant, could be used commercially but not as a residence

Since Maywood is located so close to New York City, it is not unreasonable to assume that the properties in question are eventually developed into a large apartment complex for commuters, that foundations are dug and the asphalt is replaced with green lawn. In this case, the direct gamma radiation, and thoron and radon releases would rise. The potential exposures and risks would greatly exceed the estimates prepared in the Maywood BRA. The historical trend in the New Jersey/NYC area is the general decline in industrial locations and the rise of service businesses and residential properties.

Maywood residents should be aware that the Maywood BRA deals with almost entirely with the individual risk to an average adult. In dealing with averages, the Maywood BRA does not consider persons with particular illnesses that make them more susceptible to the effects of radiation, such as persons with lung problems. The Maywood BRA also does not explicitly calculate the total number of expected health effects, including fatal cancers. Since the thorium wastes will remain radioactive essentially forever (thorium-232 has a half-life of 14 billion years), the total number of

¹⁷ BRA, p. 1-18.

fatal cancers over the next 1,000 years, for example, can be quite large. The Maywood BRA is concerned with individual risks and not the total number of health effects.

Contaminant Fate

In addition to assuming that industrial properties remain non-residential, the authors assume for the MISS that the storage pile there will remain in place and remain effectively isolated from the environment. In fact, the pile is likely to be removed soon and would certainly have to be removed for any new owner to agree to buy the property, as is assumed to occur. Depending on the extent of contamination beneath the pile, gamma radiation and radon exhalation from the soil could increase without the shielding effect of the pile.

On the other hand, if the storage pile and other stored wastes are assumed to remain on site, the materials now containing them cannot be assumed to last indefinitely. However, the DOE assumes that "engineering controls and access restrictions eliminate pathways to stored waste for all except current or future employees who maintain the waste."¹⁸ This may be plausible for the near future, but it is impossible to guarantee over the radioactive life of the stored waste, and in fact this assumption violates the basic premise of the report as stated by DOE. A realistic lifetime evaluation of the risks of these wastes must include the possibility that a few hundred years from now the waste chambers are breached and the material dispersed in the environment.

For contaminant intakes which are derived through computer models, the authors make some attempt to account for the movement of materials over time, but they do so only in the most muddled and sloppy manner. A close look at Appendix C shows that although future soil ingestion and inhalation estimates supposedly take into account the effects of erosion, only some of the values differ between the current and future scenarios. Similarly, although direct gamma and radon values calculated from soil concentrations do increase due to assumed erosion, measured direct gamma and radon values are not adjusted for the future scenarios. Future ground water contamination is also modeled, apparently assuming a single point source of radionuclides, a useless assumption in an area with such widely distributed contamination.

Water

¹⁸ BRA, p. 3-25.

Although ground water is not considered a vehicle for current human exposure, it has been a source of drinking water in the past and may be so again in the future. In 1984, Lodi's public water supply, specifically the Home Place well, one of 11 wells that constituted Lodi's municipal water supply, was found to be radiologically contaminated in excess of regulatory standards.¹⁹ The head waters of Lodi Brook emanate from the Sears property, where in the past, a large amount of thorium tailings were used as fill in low-lying marshy areas. These waste materials eventually entered and contaminated Lodi Brook, but apparently are not responsible for contaminating the Home Place well.²⁰ Lodi Brook now consists, for the most part, of a covered culvert and Lodi now receives water from an alternate source. For future scenarios, DOE considers the Lodi water supply as "potable," though not radioactive.

In our opinion, the EPA and DOE have underestimated the potential risk posed by the Lodi municipal wells. The radioactivity in the Home Place well appears to be due to naturally-occurring uranium in the underground formations. Apparently the "hot pocket" is local, since the other wells in the Lodi system were not similarly radioactively contaminated. While we are convinced by the spectrum of radionuclides that the Lodi wells are not presently contaminated by thorium materials, for two reasons we remain concerned about future contamination.

- 1) Since the soil in an extensive area of the former Lodi Brook is contaminated, it remains a distinct possibility that the Lodi wells will become contaminated in the future.
- 2) Specific volatile organic chemicals that are present on the Stepan Company site, move much more rapidly in the environment and have contaminated all the Lodi wells. These chemical compounds (carbon tetrachloride, trichloroethene and tetrachlorethene) have also been detected in the bank of the Westerly Brook channel and Saddle River cores. Wells located upgradient from the Stepan Company site are not similarly contaminated. The presence of VOC's in Lodi wells heightens our concern that thorium and radium will similarly migrate at some later time.

¹⁹ Nuclear Regulatory Commission, "Public Well Above EPA Standards for Radioactivity," PNO-I-84-04, Jan 12, 1984.

²⁰ US EPA Region 2, "Lodi Municipal Well Superfund Site, Superfund Proposed Plan," July 1993.

Because of the presence of these VOC's in the Lodi wells, we are strongly of the opinion that the EPA erred in not identifying Stepan Company as a PRP and requiring a remediation plan for the Lodi aquifer.

It is unfortunate that the DOE has not analyzed the movement of ground and surface waters to determine whether radioactive materials continue to contaminate ground water sources. The DOE acknowledges that it has inadequate data to characterize the extent of ground water contamination. However, a plan to install new monitoring wells was blocked by citizens, who feared that the resulting wastes would not be properly disposed of. New wells are to be added when remedial action takes place at the site.

Despite the lack of data, DOE does conclude that the ground water is not now radiologically contaminated. There are two problems with this conclusion. First, the authors measured "background" contamination for ground water from two wells that are on the site, although hydrologically "upstream" of known contamination. Wells at distance of even a few hundred meters "upstream" would have been a far safer choice. Second, this finding is based on average concentrations in contaminated areas. It would be far more convincing to see maximum values in a table, as well as the averages, as was done for radiologically contaminated soils and for the chemical analyses of water.

Chemical "Contaminants of Concern"

In selecting which chemical contaminants for which to evaluate health risks ("contaminants of concern," or COC's), the DOE does not appear to have adhered to their stated standard of keeping as a COC any contaminant whose mean concentration exceeds twice its background concentration. Table 2-4 shows arsenic with a mean background concentration of 3.3 and mean concentration in shallow soils on the MISS site of 10, three times higher than background. Yet Table 2-8 indicates that arsenic was eliminated as having a concentration less than twice background. This contradiction does not inspire confidence.

A more serious problem comes from the averaging of hundreds, even thousands, of data points into single numbers representing the contamination level of fairly large property units. This procedure certainly simplifies the risk analysis and makes the results easier to understand, but it necessarily obscures the risks arising from highly contaminated, highly localized areas within each property unit. Some serious COC's may have been missed

because of this technique; the only way to be sure is to go through the data banks with a more sophisticated key than averaging.

Conclusions

The Department of Energy has underestimated current and future health risks at the Maywood site in a number of important ways. Although DOE and EPA do not intend to leave the site as it is, a more accurate assessment of the "no-action alternative" would provide a better estimate of the benefits of remediation, in terms of lives saved and illnesses avoided. In a world where no one wants to pay taxes, an underestimate of the risks at the site could lead to the allocation of inadequate funds and a slower or less thorough clean-up.

Since DOE has no obvious motivation to seek a low level of funding, we wonder why it has so seriously underestimated radiation risks. Perhaps its long history of obscuring health risks from military operations has left the Department less able to effectively evaluate the health impacts of contaminated areas like the Maywood site. It also appears that the Risk Assessment's authors treated the report as a formality, judging from the many examples of sloppiness and inconsistency.

Finally, it is particularly important that DOE base its plans for remediation on long-term future risks rather than the short-term scenarios incorrectly employed in the BRA. For example, remediation standards should not be weakened for those areas which are assumed to remain industrial, but are likely to become residential. As the history of the Scanel and Ballod properties shows, the area is moving from light industrial to greater residential density. This is part of long-term trends in the New York metropolitan area. In our view, it is likely that more residences will be located in Maywood, considering its proximity to New York City, and these residences might be high rises. In the future, excavations for building foundations may bring radioactive materials, presently buried under asphalt, to the surface.

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Sigmon, CF, and MB Levine, *Formerly Utilized Sites Remedial Action Program Environmental Compliance Assessment Findings for Maywood Interim Storage Site, Wayne Interim Storage Site, Middlesex Sampling Plant*, prepared for USDOE, Oak Ridge Operations Office, Draft Final, December 20, 1989.

TRC Environmental Corporation, *Final Risk Assessment, Stepan Company and Adjacent Properties Site (Part of the Maywood Chemical Company Site), Maywood, New Jersey*, Work Assignment: C02121 (Ref. No. 1-635-339), prepared for US EPA, Contract No. 68-W9-0003, May 26, 1993.

Memo

To: Mike Nolan, Concerned Citizens of Maywood
From: Michelle Medina, RWMA
Date: November 12, 2002
Re: Chemical contaminants detected at the Maywood Chemical site

Introduction

The purpose of this memo is to compare the available data on chemical contamination to applicable standards and criteria. To do this we investigated the 1996 Baseline Environmental Management Report and the Stepan Remedial Investigation. In addition, an Internet search was performed to locate data and information regarding the Maywood Chemical Company site. On-line databases for the EPA, DOE and the HazDat Database at ATSDR were utilized. Several documents were retrieved including site contaminant lists for the Maywood site (EPA ID#NJD980529762) as well as the Lodi Municipal Wellfield (EPA ID#NJD980769301). A list of Internet addresses where the documents were located is included in the reference list. The chemical contaminant levels detected in groundwater and reported in the Site Contaminant List were compared to drinking water standards and groundwater protection standards devised by the EPA.

Chemical Contaminants Detected in Groundwater at the Maywood and Lodi Sites

The "Site Contaminant List" for Maywood included 110 contaminant records for 63 different contaminants detected at the Maywood site¹. In groundwater, 17 contaminants were detected, 154 contaminants in the soil were reported on the list².

¹ Site Contaminant List at ATSDR HazDat Database

² *Ibid.*

Chemical contaminant levels reported for groundwater on the Maywood and Lodi Site Contaminant Lists were compared to federal and state drinking water standards even though groundwater in these areas is no longer used for potable purposes. Eight volatile organic compounds (Table 1) detected in groundwater wells in the Lodi Wellfield site exceeded drinking water standards set by the EPA and/or the State of New Jersey. Note that carbon tetrachloride, tetrachloroethylene and trichloroethylene levels are far above regulatory standards. Groundwater samples collected in monitoring wells in Maywood in 1985 were compared to New Jersey State standards for drinking water, and the NJDEPE Groundwater Cleanup Criteria.^{3,4} Eight volatile organic compounds (VOCs), benzene, carbon tetrachloride, chlorobenzene, trans-1,2-Dichloroethene, methylene chloride, tetrachloroethylene, trichloroethylene and vinyl chloride, were detected at the Maywood site at levels which greatly exceed NJDEPE-Groundwater Quality Standards (Table 2a).⁵ Six inorganic contaminants, arsenic, cadmium, chromium, lead, mercury and zinc, were reported on the site contaminant list at levels exceeding NJDEPE Groundwater Cleanup Criteria (Table 2b).⁶

In the 1996 Baseline Environmental Management Report for the Maywood site, the DOE reported that the most frequently detected metals in soils at levels above background were arsenic, barium, chromium, copper, lead, lithium and selenium. Five metals, arsenic, cadmium, chromium, lead and mercury, were reported on the site contaminant list at levels which exceeded the NJDEPE-Residential Direct Contact Soil Cleanup Criteria (Table 3b). Two VOCs detected in soils, benzene and xylene, exceeded NJDEPE standards (Table 3a). Benzene exceeded both the NJDEPE Residential Direct Contact Soil Cleanup Criteria and the Impact to Groundwater Soil Cleanup Criteria.⁷ Xylene levels in soils exceeded the NJDEPE Impact to Groundwater Soil Cleanup Criteria.⁸

³ NJ State Primary Drinking Water Standards as of January 1994-NJDEP; N.J.A.C. 7:10-1

⁴ New Jersey Groundwater Cleanup Criteria for Class II-A Groundwater, *New Jersey Register*, February 1, 1993

⁵ *Ibid.*

⁶ *Ibid.*

⁷ NJDEPE Residential Direct Contact Soil Cleanup Criteria and Impact to Groundwater Soil Cleanup Criteria, *New Jersey Register*, February 2, 1992, as revised March 8, 1993

⁸ NJDEPE Impact to Groundwater Soil Cleanup Criteria, *New Jersey Register*, February 2, 1992, as revised March 8, 1993

Types of Chemical Contaminants detected at the Maywood Site

Five chemical contaminants, Aldrin, Dieldrin, DDD, DDE and DDT, which were detected in subsurface soil samples appear on the EPA- Toxic Pollutants List.⁹ Five chemical contaminants present on the Site Contaminant List for the Maywood site, Aldrin, Cresol-o, Hexachlorocyclohexane- γ , Phenol, and Pyrene, appear on the EPA-Extremely Hazardous Substances List.¹⁰ Four more contaminants which appear on the EPA-Extremely Hazardous Substances List, carbon disulfide, chloroform, bromomethane and nitrobenzene, were detected and reported in the Remedial Investigation Report¹¹. Table 4 lists the chemical contaminants detected at Maywood which appear on the Community Right-to-Know List which was developed by the EPA as required by the Superfund Amendments and Reauthorization Act of 1986 (SARA) which requires manufacturing facilities to notify local authorities of the presence of listed chemicals^{12,13}. Chemical contaminants which appear in the EPA-Genetic Toxicology Program are listed in Table 5. These chemicals have genetic effects reported in the literature during the period 1969-1979¹⁴. Chemicals detected and reported which are confirmed carcinogens are listed in Table 6, those which are poisons via skin contact, ingestion or inhalation are listed in Table 7. The most common health effects associated with the various contaminants detected at the Maywood site include: gastrointestinal effects, nausea and/or vomiting, convulsions, and conjunctiva irritation.¹⁵

Even though the groundwater in the vicinity of the Maywood site is no longer used for drinking purposes, according to the EPA, the groundwater in this area should not be used for watering lawns, washing cars, etc. The EPA addressed this concern in their Superfund site summary for Maywood in which the EPA states that "drinking or otherwise coming into contact with contaminated groundwater, inhaling contaminated dusts, or ingesting contaminated soils may adversely affect the health of nearby residents".¹⁶ Chemical contaminants detected at Maywood which are poisons via skin contact, ingestion or inhalation are listed in Table 7.

⁹ 40 CFR §129.4

¹⁰ Lewis, Richard J., Sr. Hazardous chemicals desk reference 3rd Ed., Van Nostrand Reinhold, New York 1742 pp.

¹¹ *Final Remedial Investigation Report* for Stepan Company Property & Sears and Adjacent Properties- prepared by CH2M Hill - 1994

¹² Superfund Amendments and Reauthorization Act Title III, Sections 311-312

¹³ Lewis, Richard J., Sr. Hazardous chemicals desk reference 3rd Ed., Van Nostrand Reinhold, New York 1742 pp.

¹⁴ *Ibid.*

¹⁵ *Ibid.*

¹⁶ EPA National Priority List Summary for Maywood Chemical Company & Lodi Municipal Wellfield

Conclusion

The wells have been closed in the Borough of Lodi for drinking purposes due to radionuclide contamination¹⁷. According to the EPA, groundwater at Maywood and Lodi should not be used for any purpose in which humans (and/or pets) will come into contact with the various contaminants present such as lawn watering and washing cars. Since contaminants are well above regulatory limits, in our opinion the groundwater should be cleaned up. However, since other pollution sources are possible, Stepan Company may not be wholly responsible for all of the chemical contaminants detected. Further, measurements of the chemical contaminants reported here were taken at different locations and different times. A map was not available to identify all locations. One cannot state categorically that remediation of radioactive contamination at specific locations will also reduce the chemical contamination. Generally, each chemical compound will move within groundwater at different speeds.

¹⁷ Public Meeting for the Lodi Municipal Well Superfund Site-Transcript of Proceedings July 20, 1993 Lodi, NJ

Table 1

Volatile Organic Compounds (VOCs) detected in public groundwater wells in 1981 at the Lodi Wellfield (EPA ID#NJD980769301) site which exceed EPA-National Drinking Water Standards and/or New Jersey State Drinking Water Standards for Maximum Contaminant Levels (MCL)..^{18,19}

VOCs	EPA-MCL	NJ-MCL	NJDEPE-Ground Water Cleanup Criteria	Level Detected
Carbon Tetrachloride	5 ppb	2 ppb	0.4 ppb	49.0 ppb
Chlorobenzene	100 ppb		4 ppb	200.0 ppb
1,2-Dichloroethane	5 ppb	2 ppb		3.34 ppb
trans-1,2-Dichloroethene	100 ppb		100 ppb	220 ppb
Methylene Chloride		2 ppb	2 ppb	4.7 ppb
Tetrachloroethylene	5 ppb	1 ppb	0.4 ppb	324.0 ppb
Trichloroethylene		1 ppb	1 ppb	324.0 ppb
Trihalomethanes		100 ppb		115.8 ppb

¹⁸ 40 CFR §141.61

¹⁹ NJ State Primary Drinking Water Standards as of January 1994-NJDEP; N.J.A.C. 7:10-1

Table 2

A. Volatile organic compounds detected in groundwater monitoring wells in the Maywood vicinity during 1985 which exceed New Jersey Maximum Contaminant Levels and NJDEPE -Groundwater Cleanup Criteria.^{20,21}

VOCs	NJ-MCL	NJDEPE Groundwater Cleanup Criteria	Level Detected
Benzene	1 ppb		1240 ppb
Carbon Tetrachloride		0.4 ppb	49.0 ppb
Chlorobenzene		4 ppb	200 ppb
trans-1,2- Dichloroethene		100 ppb	2964 ppb
Methylene Chloride	2 ppb	2 ppb	1087 ppb
Tetrachloroethylene	1 ppb	0.4 ppb	170 ppb
Trichloroethylene	1 ppb	1 ppb	66 ppb
Vinyl Chloride	2 ppb	0.08 ppb	220 ppb

²⁰ NJ State Primary Drinking Water Standards as of January 1994-NJDEP; N.J.A.C. 7:10-1

²¹ New Jersey Groundwater Cleanup Criteria for Class II-A Groundwater, *New Jersey Register*, February 1, 1993

Table 2

B. Inorganic contaminants detected in Maywood monitoring wells in 1985 which exceed Federal Primary Drinking Water Standards, and/or NJDEPE- Groundwater Quality Criteria.^{22,23}

Inorganic Contaminants	Federal Standard	NJDEPE- Groundwater Quality Criteria	Level Detected
Arsenic	50 ppb	0.02 ppb	381 ppb
Cadmium	5 ppb	4 ppb	47.1 ppb
Chromium	100 ppb	100 ppb	372 ppb
Lead		5 ppb	325 ppb
Mercury	2 ppb	2 ppb	229 ppb
Zinc		5000	12900 ppb

²² 40 CFR §141,142,143

²³ New Jersey Groundwater Cleanup Criteria for Class II-A Groundwater, *New Jersey Register*, February 1, 1993

Table 3

A. VOC contaminants detected in soils at Maywood site which exceed NJDEPE Residential Direct Contact Soil Cleanup Soil Cleanup Criteria and/or NJDEPE Impact to Groundwater Soil Cleanup Criteria.²⁴

VOC	NJDEPE-Resident. Direct Contact Soil Cleanup Criteria	NJDEPE-Impact to Groundwater Soil Cleanup Criteria	Level Detected
Benzene	3,000 ppb	1,000 ppb	81,000 ppb
Xylenes (Total)	410,000 ppb	10,000 ppb	120,000 ppb

B. Inorganic chemical contaminants detected in soils at Maywood which exceed NJDEPE-Residential Direct Contact Soil Cleanup Criteria.²⁵

Metal	NJDEPE-Residential Direct Contact Soil Cleanup Criteria	Level Detected
Arsenic	20 ppm	51-90.1 ppm
Cadmium	1 ppm	20 ppm
Chromium	500 ppm	3920 ppm
Lead	100 ppm	5420 ppm
Mercury	14 ppm	93 ppm

²⁴ NJDEPE Residential Direct Contact Soil Cleanup Criteria and Impact to Groundwater Soil Cleanup Criteria, *New Jersey Register*, February 2, 1992, as revised March 8, 1993

²⁵ NJDEPE Residential Direct Contact Soil Cleanup Criteria, *New Jersey Register*, February 2, 1992, as revised March 8, 1993

Table 4

A. Chemical contaminants from Site Contaminant List for Maywood which appear on the EPA-Community Right to Know List:²⁶

Aldrin	Cadmium *	Ethyl Benzene	Selenium
Anthracene	Chromium *	Hexachlorocyclohexane- γ	Toluene *
Arsenic *	Cresol-0	Mercury *	Vinyl Chloride*
Benzene *	Cresol-p	Methylene Chloride	Xylene *
Beryllium	Dibutylphthalate	Napthalene	
Bromodichloromethane	1,2-Dichloroethylene	Nickel	
2-Butanone	Di(2-ethylhexyl)phthalate	Phenol	

* Contaminant level at Maywood exceeds a NJ Regulatory Standard

B. Chemical contaminants detected at Maywood Site as reported in *Final Remedial Investigation Report* in addition to those reported on the Site Contaminant List which appear on the EPA-Community Right to Know List.²⁷

Antimony	Cobalt	Pentachlorophenol
Barium	1,3-Dichlorobenzene	Silver
Benzylbutylphthalate	3,3'-Dichlorobenzidine	Styrene
Bis(2-ethylhexyl)phthalate	1,1-Dichloroethene	1,1,2,2-Tetrachloroethane
Bromoform	1,2-Dichloropropane	Tetrachloroethene
Bromomethane	1,2-Diphenylhydrazine	Thallium
Carbon Disulfide	Manganese	1,1,1-Trichloroethane
4-Chloro-3-methylphenol	Nitrobenzene	1,1,2-Trichloroethane
Chloroethane	4-Nitrophenol	Trichloroethene
Chloroform	n-Nitrosodiphenylamine	

²⁶ Lewis, Richard J., Sr. Hazardous chemicals desk reference 3rd Ed., Van Nostrand Reinhold, New York 1742 pp.

²⁷ *Final Remedial Investigation Report* for Stepan Company Property & Sears and Adjacent Properties- prepared by CH2M Hill - 1994

Table 5

A. List of contaminants from Site Contaminant List for Maywood which appear in the EPA-Genetic Toxicology Program.²⁸

Benzene *	DDE	Methylene Chloride *
Benzo(b)fluoranthene	DDT	Napthalene
Benzoic Acid	1,2-Dichloroethane *	Phenanthracene
Bromodichloromethane	Dibenz(a,h)anthracene	Phenol
2-Butanone	Dibutylphthalate	Pyrene
Cadmium *	Di(2-ethyl)phthalate	Toluene
Chrysene	Ethyl Benzene	Vinyl Chloride *
Cresol-o	Fluoranthene	Xylene *
Cresol-p	Hexachlorocyclohexane- α	Zinc *
DDD	Hexachlororcylohexane- γ	

* Contaminant level at Maywood exceeds a NJ Regulatory Standard

B. Chemical contaminants detected at Maywood Site as reported in *Final Remedial Investigation Report* in addition to those reported on the Site Contaminant List which appear in the EPA-Genetic Toxicology Program.²⁹

Bis(2-ethylhexyl)phthalate	cis-1,2-Dichloropropene	Styrene
Carbon Disulfide	trans-1,2-Dichloropropene	Tetrachloroethane
Chloroform	Heptachlor Epoxide	1,1,2,2-Tetrachloroethene

²⁸ Lewis, Richard J., Sr. Hazardous chemicals desk reference 3rd Ed., Van Nostrand Reinhold, New York 1742 pp

²⁹ *Final Remedial Investigation Report* for Stepan Company Property & Sears and Adjacent Properties- prepared by CH2M Hill - 1994

3,3'-Dichlorobenzidine	4-Nitrophenol	1,1,1-Trichloroethane
1,1-Dichloroethene	n-Nitrosodiphenylamine	Trichloroethene
1,2-Dichloropropane	Pentachlorophenol	

Table 6

A. Chemical contaminants listed on Site Contaminant List for Maywood which are confirmed carcinogens³⁰

Arsenic *	Chromium *	Hexachlorocyclohexane- γ
Benzene *	Chrysene	Indeno(1,2,3-CD)pyrene
Benzo(a)anthracene	DDD	Methylene Chloride *
Benzo(b)fluoranthene	DDT	Nickel
Benzo(a)pyrene	Dibenz(a,h)anthracene	Tetrachloroethylene *
Beryllium	Di(2-Ethylhexyl)phthalate	Vinyl Chloride *
Cadmium *	1,2-Dichloroethane *	
Carbon Tetrachloride *	Hexachlorocyclohexane- α	

* Contaminant level at Maywood exceeds a NJ Regulatory Standard

B. Chemical contaminants detected at Maywood Site as reported in Final Remedial Investigation Report in addition to those reported on the Site Contaminant List which are confirmed carcinogens.³¹

Benzo(k)fluoranthene	1,4-Dichlorobenzene	Lindane
Bis(2-ethylhexyl)phthalate	3,3'-Dichlorobenzidine	Tetrachloroethene
Chloroform	cis-1,3-Dichloropropene	
Cobalt	1,2-Diphenylhydrazine	

³⁰ Lewis, Richard J., Sr. Hazardous chemicals desk reference 3rd Ed., Van Nostrand Reinhold, New York 1742 pp

³¹ *Final Remedial Investigation Report* for Stepan Company Property & Sears and Adjacent Properties- prepared by CH2M Hill - 1994

Table 7

Chemical contaminants detected at Maywood which are Poisons via Skin Contact, Ingestion or Inhalation³².

<u>Skin Contact</u>	<u>Ingestion</u>	<u>Inhalation</u>
Aldrin	Aldrin	Benzene *
Benzene *	Carbon Tetrachloride *	Cadmium *
Cresol-p	Chromium *	Cresol-o
DDT	Cresol-o	1,2-Dichloroethylene
Dieldrin	Cresol-p	Mercury *
Hexachlorocyclohexane- γ ,	DDD	Pyrene
Napthalene	DDE	Selenium
	DDT	
	Dieldrin	
	1,2-Dichloroethane *	
	Hexachlorocyclohexane- α ,	
	Napthalene	
	Nickel	
	Phenol	

* Contaminant level at Maywood exceeds a NJ Regulatory Standard

³² Lewis, Richard J., Sr. Hazardous chemicals desk reference 3rd Ed., Van Nostrand Reinhold, New York 1742 pp

References

EPA National Priority List Summary for Maywood Chemical Company & Lodi Municipal Wellfield at:

<http://www.epa.gov/superfund/oerr/impmp/products/nplsites/html/0200665n.htm> <= for Maywood

...../0200825n.htm <=for Lodi

DOE-1996 Baseline Environmental Management Report-Maywood Site Summary at :

<http://www.em.doe.gov/bemr96/macw.html>

Final Remedial Investigation Report for Stepan Company Property & Sears and Adjacent Properties-
prepared by CH2M Hill -1994

FUSRAP- 10 year Plan-Maywood Interim Storage Site summary at:

<http://www.em.doe.gov/tenyear/ornar3n.html>

FUSRAP-Maywood Site at: <http://em40prod.applem.doe.gov/MAP/Maywood>

Lewis, Richard J., Sr. Hazardous chemicals desk reference 3rd Ed., Van Nostrand Reinhold, New York
1742 pp

New Jersey Groundwater Cleanup Criteria for Class II-A Groundwater, *New Jersey Register*, February
1, 1993

NJDEPE Residential Direct Contact Soil Cleanup Criteria and Impact to Groundwater Soil Cleanup
Criteria, *New Jersey Register*, February 2, 1992, as revised March 8, 1993

NJ State Primary Drinking Water Standards as of January 1994-NJDEP; N.J.A.C. 7:10-1

Site Contaminant List for Maywood & Lodi: in HazDat Database at: <http://atsdr1.atsdr.cdc.gov:8080>

then enter Sensitive Map- Site Activity Query

Superfund Amendments and Reauthorization Act Title III, Sections 311-312

40 Code of Federal Regulations § 129.4,141.61,142,143, 264.94



US Army Corps
of Engineers
New York District

FILE INDEX NO. E02 0256-
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Public Comment Form on the

PROPOSED PLAN FOR SOIL AND BUILDINGS AT THE FUSRAP MAYWOOD SUPERFUND SITE

PLEASE RETURN THIS FORM BY MAIL TO:

Allen Roos
US Army Corps of Engineers
CENAN-PP
26 Federal Plaza, Room 2108
New York, NY 10278-0090

Date: November 11, 2002

Name (optional): Joan Seeman

Affiliation (if any): Sierra Club; Rocky Mt. Chapter

Address (optional):

Telephone (optional):

Enter comments in the space below. Use the other side or additional sheets as needed. If comments are on specific sections or pages in the document, please note that information in the blank below. Please be specific so that comments can be clearly understood. Thanks.
Section or page #:

SIERRA CLUB
ROCKY MT CHAPTER
COMMENTS ON THE PROPOSED PLAN FOR SOIL
AND BUILDINGS AT THE FUSRAP MAYWOOD
SUPERFUND SITE

Page 7

Please explain why the cleanup criterion is 15 pci/g in the industrial area? What is the risk posed with this clean up level? This is a less strict clean-up level established than was completed at the Lincoln Park Superfund Site in Fremont County Colorado. 6.8pci/g was the clean-up level established in the commercial areas for Lincoln Park.

Please define the term "background" used throughout the plan for uranium, thorium 232, radium 226, and radon. What are the background levels for each isotope and where was the location used to establish the background number. Also, what is the risk for the cleanup

criterion for combined radium 226 and thorium 232 at 5pci/g (i.e. one in a million?) for the residential areas?

The exposure dose of 15mrem/yr appears to be far greater the 4 mrem/yr for the drinking water standard for beta emitters. What is this 15mrem/yr exposure pathway? All pathways? Is this for the inhalation pathway, dermal, or ingestion? To what critical organs is this gamma exposure dose determined?

What is the risk posed by the 100 pci/g of total uranium cleanup level?

What is the risk from the 3 pci/l above background? USEPA action level of 4 pci/l (including background) for radon exposure is a USEPA "action level" for cleanup that equals a risk of 7 in 100 for fatal cancers.

Page 9

How is ALL the waste at this site considered 11(e)(2) byproduct material? IF it isn't, how do the agencies separate the waste streams? Many of the chemical constituents are NOT similar to any waste found in other 11(e)(2) by product streams reviewed by this reader. Please help clarify this issue.

Page 21

The plan refers to the increased risk of developing cancers estimated as high as 7 in 1000 from the higher concentration subsurface materials. IS this risk calculation for all the isotopes measured together? Have all isotopes been assessed together, a risk applied and discussed with the community impacted?

Page 32

What radioactive elements are in the pits? This information is not mentioned in the feasibility or plan information submitted for this review. Where is there a suitable "landfill" for radioactivity under 15 pci/g? Is treatment of the soil being considered? What were the results of the soils shipped to Oak Ridge for testing a cleanup approach?

General Questions:

1. According to the Colorado Department of Health, "The Cotter Radiological Health and Safety Procedure 1-7 is oriented toward uranium-bearing materials rather than thorium-bearing materials". They state in correspondence to Steven Landau of Cotter, "Please provide the basis for verifying secular equilibrium for the uranium and thorium decay series. Cotter Radiological health and Safety Procedures 1-7 and 1-8 are oriented toward uranium-bearing materials more than toward thorium-bearing materials. Please state what specific special safety considerations if any are necessary for the thorium decay series radionuclides present in the materials.
2. Would the Corps be concerned if an Environmental Impact Statement had not been completed for an NRC disposal facility
3. Will the Corps send waste to a current Superfund Site?

4. Why does the plan state that the NCP ranges of 1 in 10,000 to 1 in a million are protective ranges? These are considered action ranges.
5. If cerium was what was processed at Maywood, why is there NO information on the rare earths? Why take the position that USEPA has no toxicity data, therefore this element and the series will not be included in a risk assessment. DOE does not have information?
6. Will NRC require processing for the Maywood $11e2$ material?
7. Where did the information regarding background for radon confirm to be 74mrem/yr?
8. Please discuss the trivalent form of chromium in the ranges of 20,100 to 117,000. mg/kg. Are these levels toxic?
9. Where does the information regarding the cost to be \$254,000,000 come from?
10. Will there ever be waste streams that exceed the 2000 pci/g DOT transportation regulations?
11. Why is the Corps only looking at the Cost Effective disposal facilities? Will there be other criteria involved if a facility is found to be negligent? What if a site is currently a superfund site?

Comment forms can be submitted by mail in the pre-addressed envelope provided. Mail returns must be postmarked no later than **November 11, 2002**.