FRANK A. LoBIONDO
2ND DISTRICT, NEW JERSEY

REPLY TO:
☐ 235 CANNON HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-3002
202-225-6572
FAX 202-225-3318

☐ 5914 MAIN STREET
MAYS LANDING, NJ 08330
609-625-5008
FAX 609-625-5871

1-800-471-1459

Congress of the United States
House of Representatives
Washington, DC 20515-3002

COMMITTEES:
TRANSPORTATION AND INFRASTRUCTURE
SUBCOMMITTEES:
CHAIRMAN
COAST GUARD AND MARITIME TRANSPORTATION
AVIATION
HIGHWAYS AND TRANSIT

ARMED SERVICES
SUBCOMMITTEES:
TERRORISM, UNCONVENTIONAL THREATS AND CAPABILITIES
TACTICAL AIR AND LAND FORCES

April 6, 2004

Mr. Dennis K. Rathbun
Director
Nuclear Regulatory Commission
Office of Congressional Affairs
Washington, D.C. 20555

Dear Mr. Rathbun:

I have received the enclosed information from Loretta Williams of Newfield, New Jersey, regarding her groundwater issues.

I would appreciate your assistance in reviewing this matter, and your providing me with any information that will enable me to respond to Ms. Williams. If you have any questions, or need further information, please contact my staff assistant, Allan V. Bernardini (Allan.Bernardini@mail.house.gov), in my Mays Landing district office.

Thank you for your help, and I look forward to hearing from you soon.

Sincerely,

Frank A. LoBiondo

Frank A. LoBiondo
Member of Congress

FAL/avb
enc

Loretta Williams
310 Oakwood Drive
Newfield, NJ 08344
Phone (856)697-8221

April 1, 2004

Honorable Frank A LoBiondo, Congressman
5914 Main Street
Mays Landing, NJ 08330

Re: Shieldalloy Metellurgical Corporation,
US Environmental Protection Agency and
US Nuclear Regulatory Commission

RECEIVED
APR 0 2 2004

Dear Rep. LoBiondo:

From 1955 through 1997, Shieldalloy Metallurgical Corporation manufactured specialty steel and super alloy additives, primary aluminum master alloys, metal carbides, powdered metal, optical surfacing products. Raw material used at the facility included oxides of columbium (niobium), vanadium, aluminum metal, titanium metal, strontium metal, zirconium metal, and fluoride (titanium and boron salts. During the manufacturing process, slag, dross, and baghouse dust were generated.
Proyclore, a concentrated ore containing columbium (niobium), contains greater than 0.05% of natural uranium and thorium. The US Nuclear Regulatory Commission licenses this material.

Shieldalloy has discontinued all furnace operation and the smelting of Ferro columium, the company is required by the NRC to decommission and terminate the operation license.
Shieldalloy is planning to decommission portions of the plant for restricted release/use and obtain a possession only license from NRC.

In 1972, hexalaent chromium and other metals were detected in the municipal water supply well and also in private wells in Newfield and North Vineland.

In 1983 Shieldalloy was placed on the National Priorities List.
In 1988 Shieldalloy put in a pump and treat system to treat groundwater contamination through groundwater extraction, treatment and discharge. Since it includes a pump and treat action, it will require long-term operation and maintenance until cleanup levels are achieved.

In September 2003, a Groundwater Investigation Report was completed for the Newfield Planning Broad,
ROSE LLC, proposed an adult community housing project on Catawba Avenue, for approval by the Planning Board.

The Planning Board ordered the groundwater testing to show if there was any environmental impact from the superfund site.
In two samples hexavalent chromium and lead above NJDEP standards were found. These tests showed the chromium and lead contamination was moving northeast from Shieldalloy in the direction of the municipal water well.

The US EPA, NJDEP and USNRC received the full groundwater investigation report Rose LLC, and asked to conduct more tests or fund independent testing to find out if Shieldalloy's pump and treat system is working, or if the lead is radioactive lead leaching from their slag and baghouse dust piles.
The answer from the USEPA and NJDEP was the groundwater flows southwest in the direction of North Vineland, and you are not drinking contaminated water at this time.
The USNRC, tests years ago showed the slag and baghouse dust are not leachable, it would take thirty years to leach and do any harm.
The slag and baghouse dust has been there for fifty years!

It is the responsibility of these government agencies to protect the health and welfare of the public from superfund sites like Shieldalloy and not allow them to monitor themselves.

I have notified my state officials on the inaction of the NJDEP on this problem.
I would like you and my state officials to push these agencies to be more responsible in performing their duties as regulatory agencies.

Enclosed are the Groundwater Investigation Report RoseLLC., letter to Kenneth Kalman of the USNRC, Rejection of Decommission Plan and the Shieldalloy and NRC meeting summary.

Sincerely,

Loretta Williams

Loretta Williams

Loretta Williams
310 Oakwood Drive
Newfield, NJ 08344
Phone (856)697-8221

January 7, 2004

Kenneth Kalman
US Nuclear Regulatory Commission
Decommissioning Branch
Mail Stop T7F27
Division of Waste Management
Washington DC 20555-0001

Dear Mr. Kalman:

I am writing in reference to the Groundwater Report, Rose, LLC. in the Borough of Newfield.
In two ground water samples hexavalent chromium and lead tested above NJDEP limit.

The Shieldalloy Corporation in the past has been responsible for hexavalent chromium in the ground water. Also lead 210 a radioactive lead is one of the isotopes in the slag and baghouse dust piles.

Is there a possibility of funding from the Federal Government to do more testing to determine if lead 210 is leaching from Shieldalloy Corporation's slag and baghouse dust piles? Will NRC radiological experts do the testing?

Enclosed is the full Groundwater Report,Rose, LLC.

Sincerely,

Loretta Williams

Loretta Williams
310 Oakwood Drive
Newfield, NJ 08344
(856)697-8221

January 13,2004

US Department of Energy
Office of Repository Development
Allen Benson
1551 Hillshire Drive
Las Vegas, NV 89134

Dear Mr. Benson:

From 1955 through 1997, Shieldalloy Metallurgical Corporation manufactured specialty steel and super alloy additives, primary aluminum master alloys, metal carbides, powdered metals, optical surfacing products. Raw materials used at the facility included oxides of columbium (niobium), vanadium, aluminum metal, titanium metal, strontium metal, zirconium metal, and fluoride (titanium and boron salts. During the manufacturing process, slag, dross, and baghouse dust were generated.

Pyroclore , a concentrated ore containing columbium (niobium), contains greater than 0.05% of natural uranium and thorium. The US Nuclear Regulatory Commisssion licenses this material.

Shieldalloy has discontinued all the furnace operations and the smelting of fero Columbium, the company is required by the NRC to decommission and terminate the operation license.
Shieldalloy is planning to decommission portions of the plant for restricted release/use and obtain a possession only license from NRC.

Is there a possibility that the slag could be used for shielding, shielding constituents, dry cask storage for spent fuel, containers for the higher level of radioactive material at the Yucca Mountain Project, or other Department of Energy sites?

I enclosed information on the site background, radiological status and isotope concentrations.

Sincerely,

Loretta Williams

Loretta Williams

Concern for our Client • Respect for the Environment

GROUNDWATER INVESTIGATION REPORT

For

Catawba Avenue
Block 1001, //, Lots 2, 8.03 16.01, 19 and 25
Newfield, Atlantic County
New Jersey

Prepared For:
Rose, LLC
660 Sun Haven Road
Clayton, NJ 08312

Prepared By:
Target Environmental Co., Inc.
P.O. Box 283
235 New Orleans Avenue
Egg Harbor City, New Jersey 08215

Written By:

Bill Chetyrbok Jr.
Geologist

Reviewed By:
Mark Hartman
President

September 2003

1.0 Scope of Work

In accordance with the New Jersey Department of Environmental Protection (NJDEP) herein known as the "Department", Target Environmental Co., Inc. (TEC) has compiled this Groundwater Investigation Report on behalf of Rose LLC, of Clayton New Jersey. The subject site, known as Catawba Avenue located in Newfield New Jersey.

This report summarizes all field and analytical data recorded involving the groundwater sampling event conducted on May 5th 2003 in accordance with NJDEP's guidelines.

All onsite work, (performed by TEC) was undertaken in a manner consistent with USEPA's Standard Operating Safety Guides (Hazardous Materials Incident Response Operations course) (165.5) and with the Department of Labor's Occupational Safety and Health Administration's, Safety and Health Standards (29 CFR Part 1910 and 1926) (1989)

All sampling procedures were performed in accordance with NJDEP procedures outlined in the "Field Manual for Water Data Acquisition and the Division of Hazardous Site Mitigation's Field Sampling Procedures Manual. All samples were analyzed by a laboratory certified pursuant to N.J.A.C. 7:18

2.0 Ground Water Investigation

On May 5th, 2003 Target Environmental Co., Inc. personnel mobilized to the subject site to collect ground water samples utilizing a direct push rig equipped with a decontaminated stainless steel screen point groundwater sampler. A sample, GW-1 (AB84392) was collected. Due to an equipment malfunction on that date further sample collection was impossible.

On May 9th, 2003 Target Environmental Co., Inc. personnel mobilized to the subject site to collect ground water samples. Utilizing a direct push boring rig equipped with a decontaminated stainless steel screen point groundwater sampler, TEC employees collected 3 samples GW-2 (AB86330), GW-3 (AB86331) and GW-4 (AB896332). The sample locations can be seen on map #2: **Groundwater Sampling Locations.**

Samples were collected utilizing dedicated disposable Teflon hand micro-bailers on polypropylene line. The first bailers were collected for analysis for volatile organic compounds (VO+10) The VO+10 samples were placed in 40-ml glass vials and preserved with hydrochloric acid. Precautions were taken to eliminate any air from being trapped in the vials. The samples were then placed in a cooler at 4 degrees C. Base neutral +15 samples were collected as well as samples for priority pollutant metals analysis. All samples were taken to a NJDEP certified lab for appropriate analysis. A copy of the laboratory reduced deliverables package may be found in Appendix A.

3.0 FINDINGS

Sample GW-1

Sample GW-1 (AB84392) was taken in the southeaster section of the subject site. The screen point sampler was advanced to a depth of 33 feet below grade utilizing three (3) foot long decontaminated one (1) inch thick stainless steel probe rod. Ground water was observed in the sampler rods at 29.5 feet below grade. Laboratory results indicate that all volatile, organic compounds as well as Base neutral compounds found meet NJDEP GWQS. Lead was discovered in the sample at a level of 5.6 mg/kg. The current NJDEP standard is 5.0 mg/kg. With the exception of Lead, all Priority Pollutant metals meet current NJDEP standards.

Sample GW-2

Sample GW-2 (AB86330) was taken neat the entrance to the subject site close to Gorgo Lane. Close to the southwestern corner of the subject site. The screen point sampler was advanced to a depth of 30 feet below grade utilizing stainless steel probe rod. Ground water was observed in the sampler rods at a depth of 26 feet below grade. Laboratory results indicate that all volatile organic compounds as well as Base neutral compounds found meet NJDEP GWQS. Lead and chromium were discovered to exceed the current NJDEP limit. Lead was observed at a level of 9.6 mg/kg with current standard being 5.0 mg/kg. Chromium was observed at a level of 160

mg/kg. The current NJDEP limit is 100 mg/kg. With the exception of Lead and Chromium, all Priority Pollutant metals meet current NJDEP standards.

Sample GW-3

Sample GW-3 (AB86331) was taken near proposed building lot 6, along the proposed road, close to the center of the subject site. The screen point sampler was advanced to a depth of 36 feet below grade utilizing stainless steel probe rod. Ground water was observed in the sampler rods at a depth of 32 feet below grade. Laboratory results indicate that all volatile organic compounds as well as Base neutral and Priority Pollutant Metals compounds found meet NJDEP GWQS.

Sample GW-4

Sample GW-4 (AB86332) was taken near the proposed entrance of the subject site close to Catawba Avenue. The screen point sampler was advanced to a depth of 36 feet below grade utilizing stainless steel probe rod. Ground water was observed in the sampler rods at a depth of 33.5 feet below grade. Laboratory results indicate that all volatile organic compounds as well as Base neutral and Priority Pollutant Metals compounds found meet NJDEP GWQS.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the sampling events conducted on May 5th, 2003 and May 9th, 2003 two of the four samples were found to meet GWQS. With sample GW-1 marginally exceeding the current NJDEP standard for lead and sample GW-2 exceeding the current NJDEP cleanup standard for Lead and Chromium. Review of a previous Phase I of the subject site has indicated the presence of a National Priorities List Site to the West of the subject site. The site in question is the Shield Alloy Corp site on West BLVD. Newfield, NJ. The site is know to have been the processing location of alloys containing the raw materials: chromium, bismuth, copper, titanium, vanadium, barium, calcium and aluminum. It is possible, contamination from the Shield Alloy site has caused the increased chromium and lead levels found on the subject site.

Chromium has three stable forms in the environment Chromium metal, Chromium (III) and Chromium (VI) or hexavalent chromium. Chromium (III) is require by the human body but hexavalent chromium is dangerous to humans if inhaled or ingested.

The subject site does demonstrate a small level on groundwater pollution. Due to the hexavalent chromium and leads nature of being harmful if ingested or inhaled, soil samples should be taken to insure that no human exposure may occur. A Well Head Restriction should also be seen as a possibility to insure health and safety by avoiding consumption of contaminated ground water. It is understood that most residences in this area are currently service by city water supply. It is recommended that this also be the case for potential homes in this area

Hampton-Clarke, Inc.
veritech laboratories

175 Route 46 West, Unit D
Fairfield, NJ 07004
(973) 244-9770
Federal ID: 222679402

Target Environmental Co., Inc.

Format: NJDEP-S
Project: Newfield
PO Number:

Samples submitted on: 5/9/03

Address

Date: 5/29/03
HCI Project: 05091717

This report is a true report of results obtained from our tests of this material. In lieu of a formal contract document, the total aggregate liability of Veritech to all parties shall not exceed Veritech's total fee for analytical services rendered.

Robin Cousineau - Quality Assurance Director

Or

Stanley Gilewicz - Laboratory Director

CT #: PH-0671 MA #: NJ386 NJ #: 14622 NY #: 11408 PA #: 68-463

Lab#	Sample ID				Lab#	Sample ID			
TestGroup/Analyte		Units	MDL PQL RL	Result	TestGroup/Analyte		Units	MDL PQL RL	Result
AB64362	GW-1								
PP Metals (Water) 200.7									
Antimony		ug/l	2.5	ND					
Arsenic		ug/l	4.0	ND					
Barium		ug/l	25	120					
Beryllium		ug/l	4.0	ND					
Cadmium		ug/l	2.0	ND					
Chromium		ug/l	25	35					
Copper		ug/l	25	ND					
Lead		ug/l	5.0	5.6					
Nickel		ug/l	10	16					
Selenium		ug/l	25	ND					
Silver		ug/l	10	ND					
Thallium		ug/l	5.0	ND					
Zinc		ug/l	25	58					
Volatile Organics + 10 (624)									
1,1,1-Trichloroethane		ug/l	0.30	ND					
1,1,2,2-Tetrachloroethane		ug/l	1.0	ND					
1,1,2-Trichloroethane		ug/l	0.75	ND					
1,1-Dichloroethane		ug/l	0.53	ND					
1,1-Dichloroethene		ug/l	0.70	ND					
1,2-Dichloroethane		ug/l	0.50	ND					
1,2-Dichloropropane		ug/l	0.40	ND					
2-Butanone		ug/l	2.7	ND					
2-Chloroethylvinylether		ug/l	0.87	ND					
2-Hexanone		ug/l	3.0	ND					
4-Methyl-2-Pentanone		ug/l	1.3	ND					
Acetone		ug/l	4.4	ND					
Acrolein		ug/l	17	ND					
Acrylonitrile		ug/l	1.8	ND					
Benzene		ug/l	0.40	ND					
Bromodichloromethane		ug/l	0.83	ND					
Bromoform		ug/l	0.67	ND					
Bromomethane		ug/l	1.1	ND					
Carbon disulfide		ug/l	1.3	ND					
Carbon tetrachloride		ug/l	0.54	ND					
Chlorobenzene		ug/l	0.40	ND					
Chloroethane		ug/l	1.4	ND					
Chloroform		ug/l	0.61	ND					
Chloromethane		ug/l	1.7	ND					
Cis-1,2-Dichloroethene		ug/l	0.37	ND					
Cis 1,3-Dichloropropene		ug/l	0.53	ND					
Dibromochloromethane		ug/l	0.30	ND					
Ethylbenzene		ug/l	0.91	ND					
M+p Xylenes		ug/l	0.82	ND					
Methylene chloride		ug/l	0.82	ND					
O Xylene		ug/l	0.38	ND					
Styrene		ug/l	1.3	ND					
Tetrachloroethene		ug/l	0.50	ND					
Toluene		ug/l	0.31	ND					
Trans 1,2 Dichloroethene		ug/l	0.69	ND					
Trans-1,3-Dichloropropene		ug/l	0.35	ND					
Trichloroethene		ug/l	0.90	ND					
Vinyl chloride		ug/l	0.62	ND					

ND = Not Detected

Lab#	Sample ID	TestGroup/Analyte	Units	MDL / PQL / RL	Result
AB86330	GW-2				
PP Metals (Water) 200.7					
Antimony	ug/l	7.5	ND		
Arsenic	ug/l	4.0	ND		
Barium	ug/l	25	110		
Beryllium	ug/l	4.0	ND		
Cadmium	ug/l	3.0	ND		
Chromium	ug/l	25	150		
Copper	ug/l	25	30		
Lead	ug/l	5.0	5.6		
Nickel	ug/l	10	20		
Selenium	ug/l	25	ND		
Silver	ug/l	10	ND		
Thallium	ug/l	4.0	ND		
Zinc	ug/l	20	41		
Volatile Organics + 10 (624)					
1,1,1-Trichloroethane	ug/l	0.20	ND		
1,1,2,2-Tetrachloroethane	ug/l	0.16	ND		
1,1,2-Trichloroethane	ug/l	0.58	ND		
1,1-Dichloroethene	ug/l	0.19	ND		
1,1-Dichloroethane	ug/l	0.33	ND		
1,2-Dichloroethane	ug/l	0.37	ND		
1,2-Dichloropropane	ug/l	0.46	ND		
2-Butanone	ug/l	0.53	ND		
2-Chloroethylvinylether	ug/l	0.17	ND		
2-Hexanone	ug/l	0.25	ND		
4-Methyl-2-Pentanone	ug/l	0.26	ND		
Acetone	ug/l	2.1	ND		
Acrolein	ug/l	0.94	ND		
Acrylonitrile	ug/l	0.76	ND		
Benzene	ug/l	0.20	ND		
Bromodichloromethane	ug/l	0.28	ND		
Bromoform	ug/l	0.42	ND		
Bromomethane	ug/l	0.26	ND		
Carbon disulfide	ug/l	0.27	ND		
Carbon tetrachloride	ug/l	0.21	ND		
Chlorobenzene	ug/l	0.19	ND		
Chloroethane	ug/l	0.19	ND		
Chloroform	ug/l	0.18	ND		
Chloromethane	ug/l	0.22	ND		
Cis-1,2-Dichloroethene	ug/l	0.32	ND		
Cis-1,3-Dichloropropene	ug/l	0.23	ND		
Dibromochloromethane	ug/l	0.44	ND		
Ethylbenzene	ug/l	0.35	ND		
M&P-Xylenes	ug/l	0.38	ND		
Methylene chloride	ug/l	0.25	ND		
O-Xylene	ug/l	0.23	ND		
Styrene	ug/l	0.26	ND		
Tetrachloroethene	ug/l	0.37	ND		
Toluene	ug/l	0.13	ND		
Trans-1,2-Dichloroethene	ug/l	0.38	ND		
Trans-1,3-Dichloropropene	ug/l	0.22	ND		
Trichloroethene	ug/l	0.22	ND		
Vinyl Chloride	ug/l	0.22	ND		

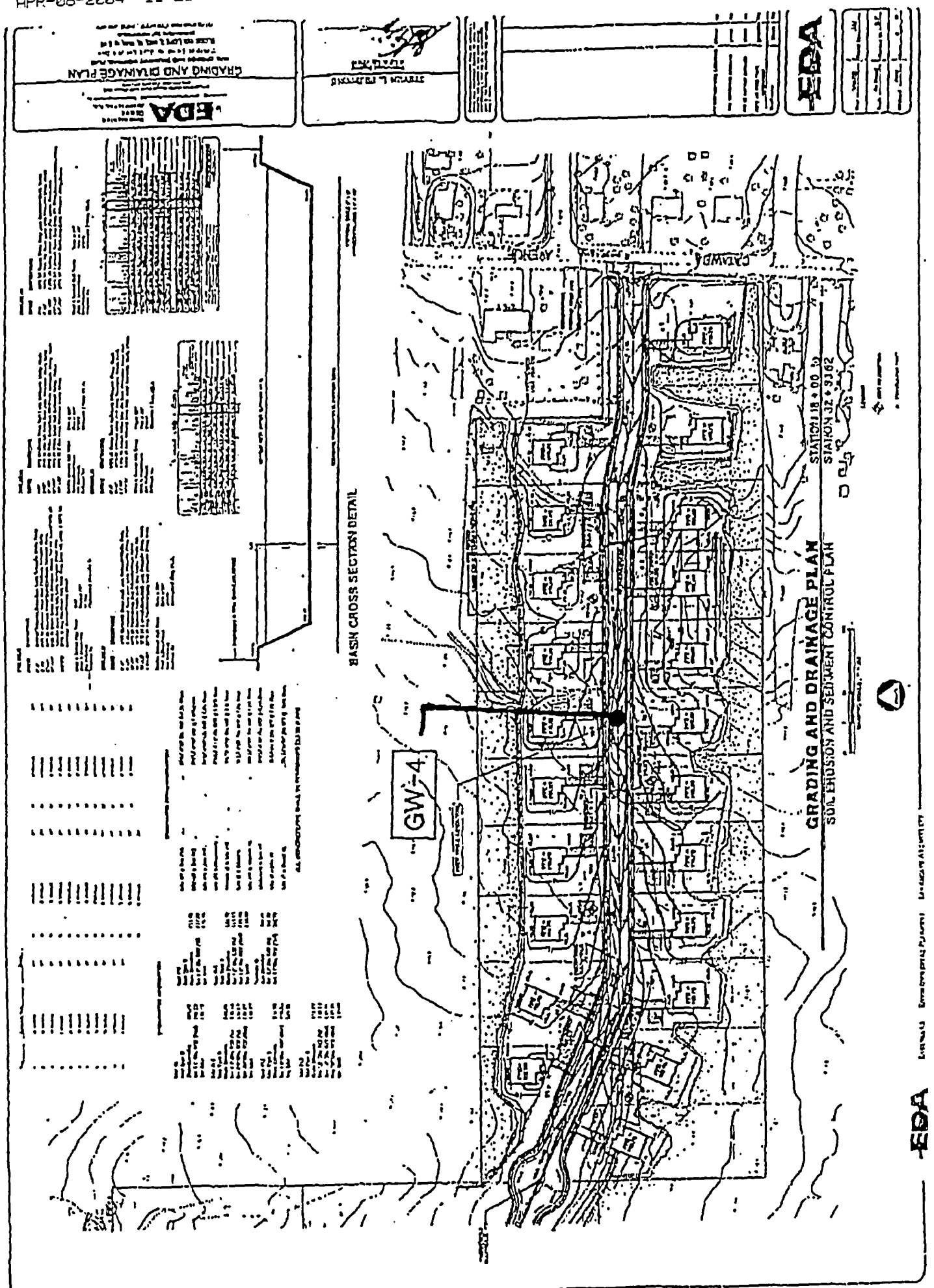
Lab#	Sample ID	TestGroup/Analyte	Units	MDL / PQL / RL	Result
AB86331	GW-3				
Base Neutrals + 15 (625)					
1,2,4-Trichlorobenzene	ug/l	0.35	ND		
1,2-Dichlorobenzene	ug/l	0.24	ND		
1,2-Diphenylhydrazine	ug/l	0.24	ND		
1,3-Dichlorobenzene	ug/l	0.21	ND		
1,4-Dichlorobenzene	ug/l	0.21	ND		
2,4-Dinitrotoluene	ug/l	0.26	ND		
2,6-Dinitrotoluene	ug/l	0.24	ND		
2-Chloronaphthalene	ug/l	0.17	ND		
2-Methylnaphthalene	ug/l	1.7	ND		
2-Nitroaniline	ug/l	1.8	ND		
3,3'-Dichlorobenzidine	ug/l	2.0	ND		
3-Nitroaniline	ug/l	3.4	ND		
4-Bromophenyl-phenylether	ug/l	0.20	ND		
4-Chloroaniline	ug/l	2.5	ND		
4-Chlorophenyl-phenylether	ug/l	0.33	ND		
4-Nitroaniline	ug/l	1.8	ND		
Acenaphthene	ug/l	0.17	ND		
Acenaphthylene	ug/l	0.15	ND		
Anthracene	ug/l	0.17	ND		
Benzidine	ug/l	13	ND		
Benzo[a]anthracene	ug/l	0.24	ND		
Benzo[a]pyrene	ug/l	0.19	ND		
Benzo[b]fluoranthene	ug/l	0.15	ND		
Benzo[g,h,i]perylene	ug/l	0.23	ND		
Benzo[k]fluoranthene	ug/l	0.19	ND		
Bis(2-Chloroethoxy)methane	ug/l	0.19	ND		
Bis(2-Chloroethyl)Ether	ug/l	0.26	ND		
Bis(2-Chloroisopropyl)ether	ug/l	0.32	ND		
Bis(2-Ethylhexyl)phthalate	ug/l	0.92	2.18		
Butylbenzylphthalate	ug/l	0.44	ND		
Carbazole	ug/l	0.19	ND		
Chrysene	ug/l	0.17	ND		
Dibenzo[a,h]Anthracene	ug/l	0.21	ND		
Dibenzofuran	ug/l	1.7	ND		
Diethylphthalate	ug/l	0.27	ND		
Dimethylphthalate	ug/l	0.000	ND		
Di-n-butylphthalate	ug/l	0.69	ND		
Di-n-octylphthalate	ug/l	0.39	ND		
Fluoranthene	ug/l	0.25	ND		
Fluorene	ug/l	0.13	ND		
Hexachlorocyclopentadiene	ug/l	0.39	ND		
Hexachlorobutadiene	ug/l	0.33	ND		
Hexachlorocyclopentadiene	ug/l	1.9	ND		
Hexachloroethane	ug/l	0.31	ND		
Indeno[1,2,3-cd]pyrene	ug/l	0.22	ND		
Isophorone	ug/l	0.46	ND		
Naphthalene	ug/l	0.17	ND		
Nitrobenzene	ug/l	0.15	ND		
N-Nitrosodimethylamine	ug/l	1.1	ND		
N-Nitroso-Di-N-Propylamine	ug/l	0.32	ND		
N-Nitrosodiphenylamine	ug/l	0.25	ND		
Phenanthrene	ug/l	0.21	ND		
Pyrene	ug/l	0.30	ND		
Mercury (Water) 245.1					
Mercury	ug/l	0.20	ND		

ND = Not Detected

Lab #	Sample ID	Units	MDL / PQL / RL	Result	Lab #	Sample ID	Units	MDL / PQL / RL	Result
Test Group/Analyte					Test Group/Analyte				
AB86332	GW-4 [illegible]								
PP Metals (Water) 200.7									
Antimony		ug/l		2.5	ND				
Arsenic		ug/l		4.0	ND				
Barium		ug/l		25	58				
Beryllium		ug/l		4.0	ND				
Cadmium		ug/l		7.0	ND				
Chromium		ug/l		25	ND				
Copper		ug/l		25	ND				
Lead		ug/l		5.0	ND				
Nickel		ug/l		10	ND				
Selenium		ug/l		25	ND				
Silver		ug/l		10	ND				
Thallium		ug/l		5.0	ND				
Zinc		ug/l		25	78				
Volatile Organics + 10 (624)									
1,1,1-Trichloroethane		ug/l		0.29	ND				
1,1,2,2-Tetrachloroethane		ug/l		0.16	ND				
1,1,2-Trichloroethane		ug/l		0.58	ND				
1,1-Dichloroethene		ug/l		0.18	ND				
1,1-Dichloropropene		ug/l		0.33	ND				
1,2-Dichloroethane		ug/l		0.32	ND				
1,2-Dichloropropane		ug/l		0.46	ND				
2-Butanone		ug/l		0.53	ND				
2-Chloroethylvinylether		ug/l		0.17	ND				
2-Hexanone		ug/l		0.25	ND				
4-Methyl-2 Pentanone		ug/l		0.20	ND				
Acetone		ug/l		2.1	ND				
Acrolein		ug/l		0.84	ND				
Acrylonitrile		ug/l		0.76	ND				
Benzene		ug/l		0.20	ND				
Bromodichloromethane		ug/l		0.20	ND				
Bromoform		ug/l		0.42	ND				
Bromomethane		ug/l		0.50	ND				
Carbon disulfide		ug/l		0.27	ND				
Carbon tetrachloride		ug/l		0.21	ND				
Chlorobenzene		ug/l		0.18	ND				
Chloroethane		ug/l		0.72	ND				
Chloroform		ug/l		0.18	ND				
Chloromethane		ug/l		0.22	ND				
Cis-1,2-Dichloroethene		ug/l		0.30	ND				
Cis-1,3 Dichloropropene		ug/l		0.23	ND				
Dibromochloromethane		ug/l		0.44	ND				
Ethylbenzene		ug/l		0.35	ND				
M&p-Xylenes		ug/l		0.33	ND				
Methylene chloride		ug/l		0.25	2.4				
O-Xylene		ug/l		0.23	ND				
Styrene		ug/l		0.25	ND				
Tetrachloroethene		ug/l		0.37	ND				
Toluene		ug/l		0.19	ND				
Trans-1,2-Dichloroethene		ug/l		0.36	ND				
Trans-1,3-Dichloropropene		ug/l		0.22	ND				
Trichloroethene		ug/l		0.22	ND				
Vinyl acetate		ug/l		0.22	ND				

ND = Not Detected

GW-1
GW-2
GW-3
GRADING AND DRAINAGE PLAN
SOIL EROSION AND SEDIMENT CONTROL PLAN
EDA


GRADING AND DRAINAGE PLAN
SOIL EROSION AND SEDIMENT CONTROL PLAN
BASIN CROSS SECTION DETAIL
GW-4
EDA

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

May 6, 2003

Docket No. 04007102 License No. SMB-743

David R. Smith
Radiation Safety Officer
Shieldalloy Metallurgical Corporation
P.O. Box 768
Newfield, NJ 08344

SUBJECT: MEETING SUMMARY FOR THE NRC, SHIELDALLOY METALLURGICAL CORPORATION (SMC) AND THE STATE OF NEW JERSEY MEETING ON APRIL 16, 2003

Dear Mr. Smith:

This letter transmits the summary from the subject meeting held in Rockville, Maryland, which was open to the public. NRC had requested this meeting to discuss restricted release decommissioning options before SMC submits a revised Decommissioning Plan for its Newfield, New Jersey site. Topics discussed included considerations for maintaining a possession-only license, environmental review requirements for restricted release decommissioning plans, and the phased approach to resolving deficiencies identified in SMC's Decommissioning Plan. The meeting agenda, and licensee and NRC handouts are provided as Enclosure 1. They are also accessible from the NRC web site at http://www.nrc.gov/reading-rm/adams.html.

NRC was represented by Region I and Headquarters management and staff. Also participating in the meeting by telephone were representatives from the State of New Jersey, Department of Environmental Protection, and one member from the public. Enclosure 2 lists the attendees.

The meeting opened with introductions and a brief history of the SMC activities authorized under NRC License No. SMB-743. The facility has not conducted primary licensed activities since June 1998. SMC's Decommissioning Plan for restricted release was received on September 11, 2002, and was rejected as detailed in the February 28, 2003 NRC letter. During the meeting, SMC reviewed its options for restricted release given the unlikelihood of transferring ownership of the property to an acceptable third party. While the NRC staff is exploring generically the option of a licensee maintaining a possession-only license, SMC is considering pursuing a storage-only license. NRC's possession-only license envisions compliance with the restricted release requirements including the dose criteria. However, SMC's storage-only license request would allow retrieval of the slag to permit a beneficial re-use of the material, because a permanent closure plan would not be cost effective to permit re-use.

The licensee also discussed its concern with the cost for a site-specific Environmental Impact Statement (EIS). SMC listed approximately thirty reports that had been previously submitted to NRC or NJDEP, including an Environmental Assessment to support the 1998 license renewal, various site characterization reports and remedial investigation reports, and the NRC's draft EIS

for the SMC Cambridge, Ohio site that cost SMC approximately $1.5 million. SMC stated that the cost-benefit analysis for each alternative that could also be applicable to the Newfield site was properly evaluated for the Cambridge site. NRC staff discussed the need to examine the impact or potentially affected resources at Newfield given the proposed restrictions on approximately 10 acres of land. The staff stated that in accordance with staff guidance document NUREG-1748, a concise summary of the site specific information from these past reports, and a current evaluation of potential alternatives is required to be submitted for any restricted release option.

The State of New Jersey offered their perspective of the SMC's issue of re-use of the material. Their experience is that Shieldalloy has not been successful in finding a re-use of this material, and that other NJ sites that had stored radioactive material in the past have resorted to offsite disposal. The State also summarized their promulgated standard for persons planning to transfer property in NJ, i.e., 15 mrem/yr or if all controls failed 100 mrem/yr criteria. The resident from Newfield stated that Newfield is having problems with economic development and that there are other alternatives for clean-up of the entire site.

There were additional discussions on the phased approach to resolving deficiencies, including:

- Seek advice from affected parties. Best practices have identified that this initial involvement of parties takes roughly six months with additional periodic meetings.
- Determine required institutional controls and plan costs to maintain.
- Perform eligibility test for dose assessment to support proposed alternative.
- Spend resources to justify site specific parameters that are sensitive.

Based on these discussions the licensee agreed to submit an action plan for development of a revised Decommissioning Plan by May 16, 2003. NRC staff suggested routine monthly telephone conferences with SMC, and additional technical meetings.

Should you have any questions regarding the enclosed, please contact me at (610) 337-5205.

Sincerely,

Original signed by Marie Miller

Senior Health Physicist
Decommissioning and Laboratory Branch
Division of Nuclear Materials Safety

Enclosures:
1. Meeting Agenda and Handouts
2. Meeting Attendees

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cc w enclosures:
Jill Lipoti, Ph.D., Radiation Protection Programs, NJDEP
Donna Gaffigan, Superfund Case Manager, NJDEP
Ruth Vandegrift, Ohio Department of Health
Loretta Williams, Newfield, NJ Resident

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February 28, 2003

Docket No. 04007102 License No. SMB-743
Control No. 132074

David R. Smith
Environmental Manager
Shieldalloy Metallurgical Corporation
Aluminum Products & Powders Division
12 West Boulevard
P.O. Box 768
Newfield, NJ 08344-0768

SUBJECT: REJECTION OF DECOMMISSIONING PLAN FOR THE NEWFIELD FACILITY AND DENIAL OF THE EXEMPTION REQUEST TO POSTPONE INITIATION OF DECOMMISSIONING PROCESS, CONTROL NO. 132074

Dear Mr. Smith:

On August 30, 2002, Shieldalloy Metallurgical Corporation (SMC) submitted its Decommissioning Plan (DP) for the Newfield Facility. SMC then submitted a letter dated November 15, 2002, which requested an exemption that NRC staff defer taking action on SMC's DP, while the NRC is reviewing its regulations and related guidance for restricted use license termination. These two documents were discussed during the January 9, 2003 telephone conference with you, Carol Berger (your consultant), Marie Miller (of my staff) and me along with the need to resubmit your application for the timely renewal of your NRC license.

Results of our review of the aforementioned documents and of our telephone conversation are provided below:

Decommissioning Plan Acceptance Review

The NRC staff conducted an acceptance review of your DP using the guidance contained in NUREG-1757, Vol.1, Consolidated NMSS Decommissioning Guidance, and NUREG-1748, Environmental Review Guidance for Licensing Actions Associated with NMSS Programs. Based on this initial acceptance review, we determined that the DP does not contain sufficient information for us to continue a more detailed technical review. Additional information is required regarding such aspects of decommissioning as: your site-specific dose modeling, a quantitative site specific cost-benefit analysis to demonstrate that the proposed alternative is As Low As Reasonably Achievable (ALARA), specific institutional controls for restricted release, an agreement by a competent party to assume control of and responsibility for maintenance of the site, financial assurance, and advice from affected parties. This information is also needed to evaluate the adequacy of your Decommissioning Funding Plan as it relates to your DP.

We recommend that you develop a revised DP using the NRC staff's phased approach that would have you first focusing on resolving the deficiencies regarding institutional controls, financial assurance, engineering cell design concepts, and advice from affected parties with

D. Smith
Shieldalloy Metallurgical Corporation

respect to these issues, before revising the other portions of your DP. To facilitate your revision of the DP, we are enclosing the staff's preliminary comments on specific topics of your DP as identified in Enclosure 1. As a first step in this process, we suggest that you plan on meeting with us in March 2003, to discuss these deficiencies of your DP as submitted, as well as the phased approach. Based on this meeting, you should provide a schedule for submitting a revised DP.

Exemption Request

Regarding your exemption request, we find that you have not provided a sufficient basis for approval of your request. Although the NRC is reviewing its regulations and related guidance for restricted use, the 10 CFR Part 20 Subpart E, Radiological Criteria for License Termination and associated guidance documents remain applicable. While there could be changes, as with any regulation, the review process for a restricted release termination plan is lengthy and also dynamic. We need to balance the impact of possible changes against the need to prevent further delays to the decommissioning of the SMC Newfield site. We therefore are denying your exemption request. However, as discussed above, as you evaluate and develop your revised DP, we would be agreeable to having a technical meeting on issues associated with meeting the restricted release criteria or an alternative criteria and dose modeling.

Timely Renewal

The remaining licensing issue we discussed was our consideration of your submittal of the DP to be a renewal request. We require a license renewal application for the ongoing remediation activities being conducted under your extended license. Your application for renewal should address the current remediation activities, storage of license source material, and include your Final Status Survey Plan for the areas that you intend to request NRC to amend your license. We request that your application for timely renewal be submitted by April 30, 2003.

If you have any question regarding this matter, please contact Marie Miller of my staff at (610) 337-5205 or by e-mail at mtm1@nrc.gov. In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room (PDR) and will be accessible from the NRC Web site at http://www.nrc.gov/reading-rm.html.

Sincerely,

Original signed by Ronald R. Bellamy

Ronald R. Bellamy, Chief
Decommissioning and Laboratory Branch
Division of Nuclear Materials Safety

Enclosure:
1. NRC Staff Preliminary Comments on SMC Decommissioning Plan

D. Smith
Shieldalloy Metallurgical Corporation

NRC STAFF PRELIMINARY COMMENTS ON SHIELDALLOY DECOMMISSIONING PLAN

DOSE MODELING

Section 5.2.2 Assessment Methodology assumes that the "agricultural farm family" scenario is applicable. It also states that RESRAD Version 6.2 was used, and that it takes into account the potential uses of the site and potential migration of radioactive materials through the environment over time through both natural processes and human activities. Section 5.2.3 describes the input parameters, which were listed in Tables 17.6 -17.13. The following information is needed to assess the adequacy of the exposure scenario and the dose modeling:

1. The exposure scenario includes a situation in which the deed restrictions and prohibition of building a residence near the storage pile fail, yet the cover and shape of the capped pile remain intact. Please provide a justification for how the cell has been designed to withstand erosion and other activities or an exposure scenario should also be included that erodes the cap through natural and human activities if the institutional controls and site maintenance were to fail.

2. The exposure scenario as stated eliminated the direct exposure pathway by placing the house 20 feet away from the contaminated area, and estimated an exposure of less than 10 microrem per hour above background. Please provide the basis for selecting a distance of 20 feet. In addition, provide a basis as to why exposure to direct gamma radiation from other plausible scenarios should not be considered For example, the average member of the critical group could be the family farm member engaging in outdoor activities, such as tending to crops and livestock or recreational activities such as fishing in the on-site pond.

Please consider other exposure scenarios where there could be land activities on top of the engineered cell. For example, an exposure scenario to a worker providing maintenance on and near the cell, or an intruder scenario because of loss of institutional controls, resulting in an occupational re-use of the land over the cell. Comparison of the results for modeling these scenarios to the residential farming scenario should be included to demonstrate the reason for selecting the residential farming scenario as the bounding scenario.

3. An exposure scenario for other areas of the site where licensed materials were used is not addressed in the DP. The DP should address the dose contribution for the other portions of the site to meet the overall dose limits for the site.

4. The input parameters used in Shieldalloy's analysis are primarily the RESRAD default parameters. There was no sensitivity analysis to identify key parameters. Please provide the justification for the values used for key parameters for the Newfield site. Note that information determined based on past groundwater studies may be acceptable. NRC staff are available to discuss appropriate methods for performing sensitivity analyses.

5. The input parameters model an impermeable cover remaining intact and not affected by erosion or water runoff (water runoff coefficient to 100%). Yet, input parameters erode the

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Shieldalloy Metallurgical Corporation

contaminated slag pile over time. Provide or reference the basis for why the engineering cover would remain in place. Also justify how the slag pile erodes with time, although the impermeable cover is not eroded.

6. The partition coefficients were changed based on a referenced source. Compare these K_d values to calculations of estimated travel times based on the uranium and thorium found in ground-water samples from wells near the existing slag piles. Also, explain the basis for inputting the ground water concentration as zero under the initial conditions.

DECOMMISSIONING ALTERNATIVES AND RATIONALE AND ALARA ANALYSIS

Section 6.2 states, in part, that the regulatory decision on the preferred decommissioning alternative for another facility with similar radioactive slag is equally applicable to the SMC's Newfield facility. However, site-specific factors and a thorough examination of other alternatives were not presented. Section 7 states that the estimated cost of off-site disposal was calculated to be approximately $102-112 million versus about $3.0 million for the on-site disposal options. Please elaborate on the other alternatives and explain the cost differences.

1. See 10 CFR 51.60 for the general requirements for a licensee's Environmental Report and NUREG-1748 for developing a site specific Environmental Report. SMC's report can reference other reports, as applicable, but must also describe site specific features that are different from the other referenced site where onsite disposal was considered an acceptable alternative. In particular, alternatives considered should address the summary of the impacts to the community, such as land use, property values, and environmental justice within a 4 mile radius of the center of the facility. Also, identify the potential impacts of the alternatives for the contaminated slag, soils and groundwater on the areas that are already impacted by the past hazardous chemical contamination, such as the ongoing groundwater treatment and offsite restricted well area.

2. Examine other conservative alternatives, such as offsite disposal to other facilities (compare cost factors per ton or cubic feet), and offsite disposal of the soils and bag-house dust and its impact of reduction on the source term. For example, leaching of thorium and uranium from the bag-house dust in comparison to the slag, and the cost-benefit of the action.

3. Develop and submit a site specific quantitative cost-benefit analysis to support the in-situ stabilization option as ALARA, since the chosen alternative is not the environmentally preferable alternative. The ALARA demonstration should be performed pursuant to Section 7 of NUREG-1727, NMSS Decommissioning Standard Review Plan.

RADIOACTIVE WASTE MANAGEMENT PROGRAM

Section 12.3 sates that no solid or liquid mixed wastes are expected to be generated during the decommissioning process. However, a soil remediation plan is under review by EPA. Please state whether any mixed waste could be generated from remediation of these soils in areas impacted or potentially impacted by NRC regulated source material.

D. Smith
Shieldalloy Metallurgical Corporation

ENGINEERED BARRIERS

Section 8.3 of the DP describes a design concept for the engineered cell and cap, with steep slopes and small top to preclude the potential for building a residence on top of the cell in the future and therefore, precluding the resident farmer scenario. The cell design concept also includes the use of a geotextile layer to limit infiltration.

1. The DP states that the cell has been designed to meet New Jersey (see executive summary) and NRC (see Section 8.3.3) requirements, that it is designed to last 1000 years, and will prevent future erosion. However, specific guidance documents are not referenced. Please do so.

2. No basis is provided for the cell lasting 1000 years or preventing future erosion, especially with steep 3/1 slopes. Furthermore, no basis is provided that the geotextile layer will last 1000 years or the affect on performance if it fails.

3. There is no discussion that the cell and cap have been designed not to rely on maintenance or to preclude major cell failure and major repair or partial replacement over the 1000 year time period. Reference to NRC's Part 40 Appendix A engineered cell cap design guidance for designing disposal cells within the objectives to last 1000 years with no reliance on maintenance may be useful to consider.

The above deficiencies are key concepts for the dose modeling scenario assumptions as well as key assumptions underlying the financial assurance/funding estimate and potential long-term financial liability concerns related to potential engineered cell failure and repair costs.

MAINTENANCE OF SITE

Section 16.3 describes maintenance of the perimeter of the property and the entire Storage Yard. It also states that when all plant operations cease, SMC intends the area would convert to a wildlife sanctuary.

1. Describe any detriments associated with the maintenance of the institutional controls. For example, discuss the potential for vegetation growth or presence of hazardous wildlife that could prevent the completion of quarterly maintenance inspections or impact the engineered cell, i.e., burrowing by animals.

2. Describe maintenance expected for the engineered cap and nature trails after SMC transfers title of the property. Include a discussion of the potential for and the cost of major repair or partial replacement of the engineered cell cap should the cap fail. Note the relationship to the degree of design robustness. For example, more robust design would result in lower reliance on maintenance and greater certainty that the cell cap will not fail and need periodic major and costly repair. A less robust design may need greater funds set aside for periodic major repairs.

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FINANCIAL ASSURANCE

Section 15.1 states that costs of implementing this plan is $2,731,161 as shown in Table 17.14.

1. Please separate the cost of long term surveillance from the cost of site stabilization and cell construction.

2. The cost for site-stabilization and long term surveillance and maintenance of the cap, wildlife area and nature trails for 1000 years was estimated at $781,300. Please show the cost for long-term care on a yearly basis and the method used to determine the total estimate (refer to NRC guidance to calculate this amount) assuming a duration of 1000 years. Also explain the assumptions used regarding the potential for requiring major repair of the cell (see comments regarding maintenance of the site).

3. Describe the financial assurance mechanism provided by the licensee or responsible party for an independent third party to carry out the necessary control and maintenance activities.

4. Address whether costs for additional remediation/recovery actions related to being an EPA National Priorities List site are assumed to be secured with the existing irrevocable stand-by letter of credit.

INSTITUTIONAL CONTROLS (IC)

Section 16.2 provides a summary of the variety of institutional controls that will be implemented.

1. Explain how the proposal for the institutional controls are legally enforceable, such as the authority to enforce and manner in which controls will be enforced. In its DP, SMC proposed the use of a deed notice after license termination while it remains the owner of the site. NRC staff is concerned because a deed notice is not a legally enforceable type of institutional control. Furthermore, SMC did not address enforceability of the institutional controls after transfer of ownership to some other government entity. Such institutional control plans must be agreed to and documented in the revised DP.

2. Identify whether there is an agreement by an independent third party to assume control of and responsibility for the maintenance of the site. Residual contamination at the SMC site will consist of uranium and thorium, both long-lived radionuclides requiring "more stringent" IC according to the LTR SOC. Although SMC proposed eventually transferring their site ownership to some local or state government entity, the DP did not discuss the capability or willingness by any government entity to accept this responsibility in perpetuity. SMC must also address the willingness of entities to accept the funds to be provided and that they are sufficient for control and maintenance as well as resolving concerns over long-term liability due to potential engineered cell/cap repair after transfer of ownership. Therefore, SMC has not demonstrated that its proposal is feasible.

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OBTAINING PUBLIC ADVICE

Section 16.4 states what public advice will be solicited and that it will establish a Restoration Advisory Board (RAB). It also stated that meetings of the RAB will be held each quarter during the planning and implementation phase.

1. Because SMC with its RAB most likely will develop the mechanisms for soliciting public advice from the local parties, please outline in more detail what actions are planned or will be taken to establish an RAB. As stated in Section 4, the RAB should be meeting during the planning phase to provide valuable input. NRC recommends that a site specific advisory board (SSAB) or other effective methods be selected as soon as practical after the licensee notifies NRC of its intention to decommission and terminate the license. See NUREG-1757, Vol 1, Section 17.8 for additional guidance.

2. Describe the administrative support and access to licensee studies and analysis pertinent to the proposed decommissioning for the SSAB. Describe how the summary of the results of all collective discussions and reports by the SSAB will be made publicly available.

3. Although SMC indicated general plans for future interactions to seek advice from affected parties, the DP did not include the results of interactions as required. The advice from affected parties should have been part of the input that SMC used to prepare its DP.