N-AC088-GUMENIT

CR

SHIELDALLOY METALLURGICAL CORPORATION

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NEWFIELD, NJ 08344
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Certified Mail: P 233 598 946
Return Receipt Requested

October 9, 1992

Ms. Donna L. Gaffigan
State of New Jersey
Department of Environmental Protection and Energy
Bureau of Federal Case Management
Division of Hazardous Waste Management
401 East State Street
CN-028
Trenton, New Jersey 08625

RE: Third Quarter 1992 Radiochemical Ground Water Sampling Report

Dear Ms. Gaffigan:

In accordance with ¶20(g) of the Shieldalloy Metallurgical Corporation (SMC) 1988 Administrative Consent Order, please find results of the subject sampling event. Monitoring Wells A, W2, SC11S, SC12S, SC13S and SC14S were sampled on July 15, 1992. The locations of these monitoring wells are identified on Enclosure (1) Location of Monitoring Wells Sampled for Radiological Analysis.

The methodology for subject sampling and analyses was consistent with previous subject sampling events. A one gallon sample was collected from each of the six wells while a duplicate one gallon sample was collected from Well SC12S and submitted for analysis as a quality control measure. After collection the samples were taken to the SMC laboratory to determine the Total Dissolved Solids (TDS) level for each sample. The TDS results as well as the sample identification numbers for the respective wells are presented in Enclosure (2). The samples were then submitted to Teledyne Isotopes (TI) of Westwood, New Jersey for gross alpha analysis.

Results of the gross alpha activity of the subject samples were all less than 3 pCi/ℓ which was the minimum detection limit (MDL) for the analysis (see Enclosure 3). These results satisfy the analytical requirements of this program and are well below the Safe Drinking Water Act's limit of 15 pCi/ℓ. As in past sampling events, radiological levels in background well SC14S are comparible to the other on-site wells. The chain of custody, request for analysis and all available TI quality assurance, laboratory data sheets are found in Enclosure 4.

In the second quarter 1992 subject report, dated August 6, 1992, SMC petitioned the NJDEPE for the discontinuation of the subject sampling program under the ACO. This petition was based on the programs restrictive lower detection limits and the consistent detection of only natural background radiological levels in the subject wells during the four years of monitoring. As of the publication date of this report, SMC has not received a response from the Department to this petition. During the week of October 19, 1992, SMC expects to sample the subject wells in regards to other monitoring programs. At this time SMC will collect additional groundwater samples which will be available for radiological analysis if SMC is directed by the Department to do so. Please advise me at your earliest convenience as to the result of the petition review.

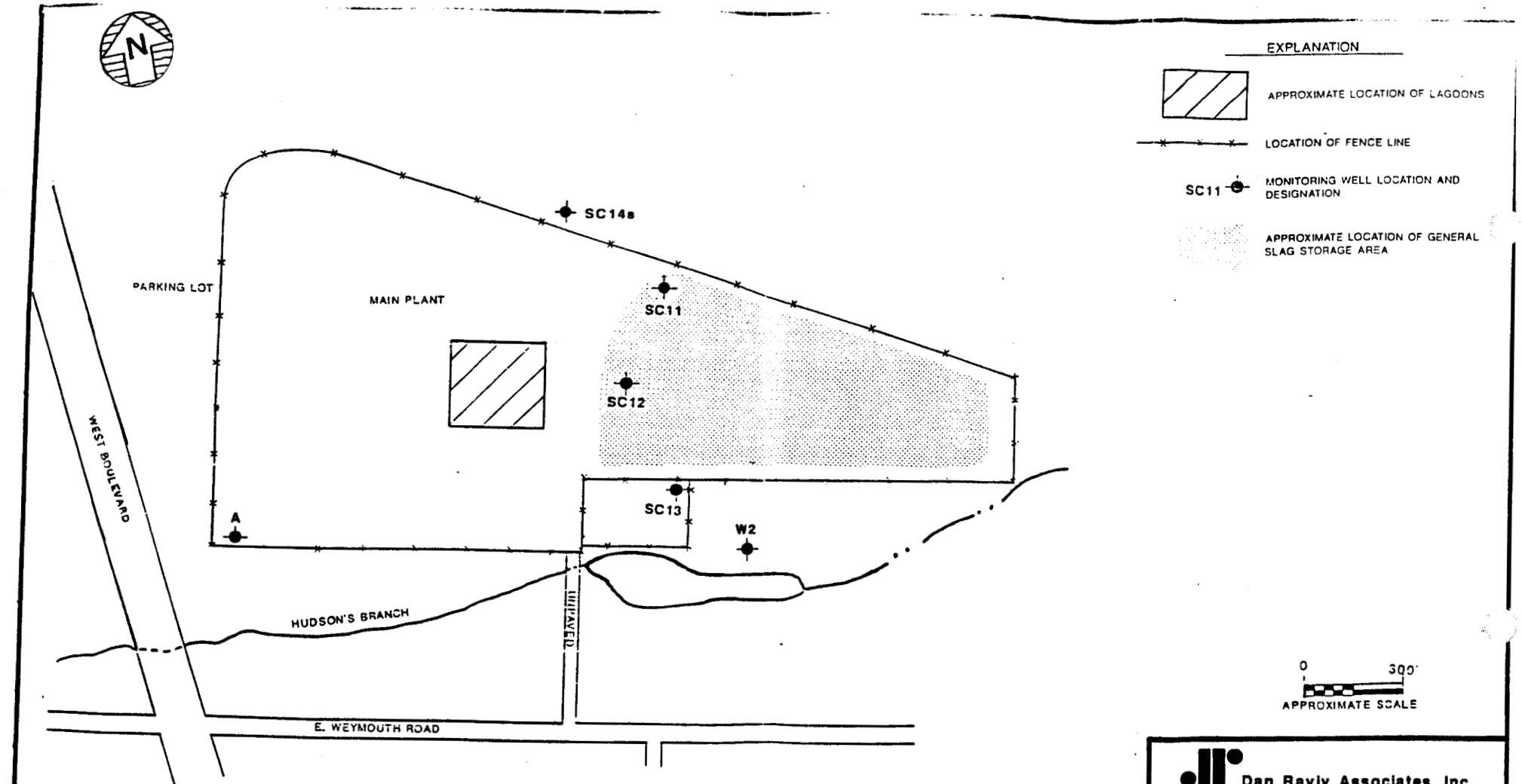
If you have any questions, please do not hesitate to contact me at 609-692-4200.

Sincerely,

Craig R. Rieman
Radiological Safety Manager

CRR:lms
Enclosures
CC: Richard D. Way
David R. Smith
James P. Valenti
Charles L. Harp, Jr., Esq.
Jay E. Silberg, Esq.
Carol D. Berger

ENCLOSURE 1



Dan Raviv Associates, Inc.
57 E. Willow Street Millburn, NJ 07041

LOCATION OF MONITORING WELLS
SAMPLED FOR RADIOLOGICAL ANALYSIS

SHIELDALLOY CORP. - NEWFIELD, NJ

PREPARED BY: KRG/ODL	DATE: OCTOBER 1991
JOB NO.: 83C152	FIGURE: 1

ENCLOSURE 2

Enclosure 2

Shieldalloy Metallurgical Corporation

Gravimetric Analysis for TDS

Sample Well	Sample ID Number	Result (ppm)	Date Analyzed	By
A	GW-92007	•		
W2	GW-92004	225	07/16/92	GJ
SC11S	GW-92001	110	07/16/92	GJ
SC12S	GW-92002	800	07/16/92	GJ
SC12S (QC)	GW-92003	800	07/16/92	GJ
SC13S	GW-92005	4720	07/16/92	GJ
SC14S	GW-92006	*		

• Not Available

ENCLOSURE 3

TELEDYNE ISOTOPES

REVISED 09/25/92
REPORT OF ANALYSIS
RUN DATE 08/13/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 1
3-2853		07/23/92	08/25/92	

MR CRAIG RIEMAN
SHIELDALLOY CORP
PO BOX 768
NEWFIELD NJ 08344

WATER

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/LITER)	NUCL-UNIT-% U/N *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
84105	GW-92001		07/15				GR-A	L.T. 3. E 00		08/05			3
84106	GW-92002		07/15				GR-A	L.T. 3. E 00		09/24			3
84107	GW-92003		07/15				GR-A	L.T. 3. E 00		09/24			3
84108	GW-92004		07/15				GR-A	L.T. 3. E 00		09/24			3
84109	GW-92005		07/15				GR-A	L.T. 3. E 01		08/05			3
84110	GW-92006		07/15				GR-A	L.T. 2. E 00		08/05			3
84111	GW-92007		07/15				GR-A	L.T. 3. E 00		09/24			3

LAST PAGE OF REPORT

APPROVED BY J. GUENTHER (for) 08/13/92

SEND 1 COPIES TO SH300S MR CRAIG RIEMAN

2 - GAS LAB. 3 - RADIO CHEMISTRY LAB. 4 - GE(LI) GAMMA SPEC LAB. 5 - TRITIUM GAS/L.S. LAB. 6 - ALPHA SPEC LAB.

The Gr-A for IIf 84106, 84107, 84108 and 84111 have been revised, based on longer counting to improve the detection limit.

JrMartin 9-25-92

ENCLOSURE 4

RADIOCHEMICAL WORK SHEET - GROSS BETA/GROSS ALPHA

CUSTOMER SHIELD ALLOY COLLECTION DATE 7/15 SAMPLE TYPE WO

ANALYST M PREPARATION DATE 8/5/92 ALIQUOT 300 mL UNITS

COUNTER A- T2 COUNT DATE: START 8/5/92 STOP

SAMPLE NUMBER	ANALYSIS	WEIGHT OF MOUNT (grams)	Sequence Number	N (counts)	AT (min)	Bkg. (cpm)	E	VOLUME OR WEIGHT (gms) WET ASH 1%	ACTIVITY
841110	GROSS-B	.0422	13	115	50	.82	.352		6.3 ± 2.1 E-00
	-α	↓		9		.10	142		L.T. 2 E-00
11	-B	.3052	14	60		.82	.241		L.T. 4 E-00
↓	-α	↓		8	↓	.10	.05		L.T. 6 E-00

8/2084111 T2(2) 5/100 LT. 3.E00

OF 06 E-05

UNITS CODE A

CALC. BY M DATE 8/11

CHECKED BY HT DATE 8/11

DATE ENTERED AUG 11 1992

FORM IWL-3B
Revised 06/15/81

RADIOCHEMISTRY

BECKMAN - COUNTERS

TENNELEC - COUNTERS

BACKGROUNDS - CHECKSOURCES

SEPTEMBER 1992

Checked 9/9, 9/23

H. Seter

T2

			378-403			307-324			
			β Check Source Cs-137			α Check Source Am-241			
Date	β Blank	α Blank	N	Δt	CPM	N	Δt	CPM	Comm.
1	.84	.10	9761	24.99	390.59	7292	22.9	318.38	
2	.84	.16	9811	25.46	385.34	7225	23.45	308.10	
3	.98	.08	9769	24.9	392.32	7322	22.7	322.5	
4	1.02	.10	9793	25.18	388.91	7			
5									
6									
7									
8	1.02	.06	9790	24.8	394.75	7214	23.23	310.54	
9	.98	.14	9869	24.75	~~388.75~~	7072	22.87	310.10	returned to
10	.74	.08	9805	25.08	390.84	7190	22.42	320.69	orig (?) chs.
11	.94	.12	9815	24.82	395.44	7216	22.42	321.56	
~~12~~	~~.88~~	~~.12~~	~~9825~~	~~24.6~~	399.39	7136	~~22.53~~	316.18	ne.
13									
14	.88	.12	9825	24.6	399.39	7136	22.53	316.18	
15	.90	.02	9843	25.27	389.51	7142	22.4	318.83	
16	.94	.12	9811	24.7	397.20	7238	22.5	321.68	
17	.96	.22	9786	24.5	399.34	7257	22.47	322.96	
18	.98	.10	9783	25.3	386.67	7233	22.5	320.89	
19									
20									
21	.80	.14	9782	25.05	390.53	7160	22.19	322.66	
22	.98	.08	9809	25.4	386.79	7259	22.6	321.3	
23	.82	.04	9795	24.98	392.11	7266	22.5	322.9	
24	1.08	.04	9869	25.01	394.6	7192	22.9	314.6	
25	1.00	.02	9822	25.18	390.07	7149	22.3	320.0	
26									
27									
28	.90	.08	9807	25.23	388.70	7081	22.90	309.21	
29									
30	.74	.06	9809	24.65	397.93	7230	22.7	317.9	
31									

KEY

* = Outside Control Limits
RS = Restart
CG = Change Gas