

August 27, 1998

Docket No. 040-07102
EA No. 98-413

License No. SMB-743

Nigel Morrison
Vice President and General Manager
Shieldalloy Metallurgical Corporation
West Boulevard
P.O. Box 768
Newfield, NJ 08344

SUBJECT: INSPECTION NO. 040-07102/98-001

Dear Mr. Morrison:

On July 27-28, 1998, Penny Lanzisera, Sattar Lodhi, and Marie Miller of this office conducted a safety inspection at the above address of activities authorized by the above listed NRC license. The inspection was an examination of your licensed activities as they relate to radiation safety and to compliance with the Commission's regulations and the license conditions. The inspection consisted of observations by the inspectors, interviews with personnel, and a selected examination of representative records. Information provided in your correspondence dated April 20, May 6, May 13, July 31, August 4, August 11, and August 21, 1998, and provided during a telephone conversation with Mr. Jim Valenti on August 5, 1998, was also examined as part of the inspection. The findings of the inspection were discussed with you and other members of your organization at the conclusion of the inspection. The enclosed report presents the results of this inspection.

Based on the results of this inspection, seven apparent violations were identified and are being considered for escalated enforcement in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG 1600. Accordingly, no Notice of Violation is presently being issued for these inspection findings. One of these apparent violations is of particular concern because it was identified in a previous inspection of your licensed activities and documented in a Notice of Violation with our letter dated November 30, 1995. The violation involved a failure to perform adequate surveys to assess the dose to workers during work activities involving licensed material. From this inspection, it appears that your corrective actions were not effective since this item has recurred. Please be advised that the number and characterization of apparent violations described in the enclosed inspection report may change as a result of further NRC review.

A predecisional enforcement conference, open to the public, to discuss these apparent violations has been scheduled for October 1, 1998, at 9:30 a.m. The NRC announces enforcement conferences to the public by issuing a press release. The decision to hold a predecisional enforcement conference does not mean that the NRC has determined that a violation has occurred or that enforcement action will be taken. This conference is being held to obtain information to enable the NRC to make an enforcement decision, such as a common

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understanding of the facts, root causes, missed opportunities to identify the apparent violations sooner, corrective actions, significance of the issues, and the need for lasting and effective corrective action. In particular, you should be prepared to address: 1) the item identified as a recurrent violation; 2) the sale/transfer of Shieldalloy's parent company and how the change in ownership affects the availability of funds for decommissioning of the site; 3) your efforts to comply with 10 CFR 40.42 for timely decommissioning; and 4) your plans for controlling access to or removing contamination from areas adjacent to your property that exhibit radioactive concentrations higher than the NRC's release criteria.

Recurrent and uncorrected violations are given additional weight in the consideration and selection of appropriate enforcement action. Therefore, you should be prepared to discuss those actions taken or planned to ensure that identified violations will be completely corrected and will not recur. The promptness and comprehensiveness of your corrective actions will also be an important factor in deciding any enforcement sanction. Therefore, you should take and be prepared to discuss corrective actions for each violation.

Violations of decommissioning requirements may be categorized at Severity Level III, especially if a licensee has prior notice of the violation but is either unwilling or unable to achieve compliance. Severity Level III violations may be subject to escalated enforcement action, including civil penalties. However, if you provide an acceptable plan for meeting the requirements and fully implement the plan in accordance with a schedule agreed upon by the NRC staff, the NRC will give consideration to categorizing the violations at Severity Level IV and not assessing a civil penalty.

In addition, this is an opportunity for you to point out any errors in our inspection report and for you to provide any information concerning your perspectives on 1) the severity of the violations, 2) the application of the factors that the NRC considers when it determines the amount of a civil penalty that may be assessed in accordance with Section VI.B.2 of the Enforcement Policy, and 3) any other application of the Enforcement Policy to this case, including the exercise of discretion in accordance with Section VII. In presenting your corrective action, you should be aware that the promptness and comprehensiveness of your actions will be considered in assessing any civil penalty for the apparent violations. The guidance in the enclosed NRC Information Notice 96-28, "SUGGESTED GUIDANCE RELATING TO DEVELOPMENT AND IMPLEMENTATION OF CORRECTIVE ACTION," may be helpful.

You will be advised by separate correspondence of the results of our deliberations on this matter. No response regarding these apparent violations is required at this time.

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.

Sincerely,

Original signed by A. Randolph Blough

A. Randolph Blough, Director
Division of Nuclear Materials Safety

N. Morrison
Shieldalloy Metallurgical Corporation

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Enclosures:

1. Inspection Report No. 040-07102/98-001
2. NUREG 1600 (Enforcement Policy)
3. NRC Information Notice 96-28

cc:

David R. Smith, Radiation Safety Officer
State of New Jersey

N. Morrison
Shieldalloy Metallurgical Corporation

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Distribution: w/enclosure 1

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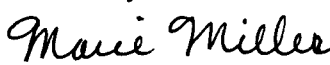
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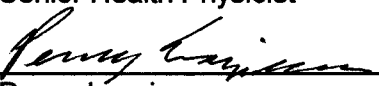
INSPECTION REPORT

Report No. 040-07102/98-001
Docket No. 040-07102
License No. SMB-743
Licensee: Shieldalloy Metallurgical Corporation
Location: West Boulevard
Newfield, New Jersey 08344
Inspection Dates: July 27-28, 1998
Date Followup
Information Received: July 31, August 4, 5, 11, and 21, 1998

Inspectors:


for Sattar Lodhi, Ph.D.
Health Physicist 8-25-98
date


Marie Miller 8-25-98
Senior Health Physicist date


Penny Lanzisera 8-25-98
Health Physicist date

Approved By:


John D. Kinneman, Chief 8-27-98
Nuclear Materials Safety Branch 2 date
Division of Nuclear Materials Safety

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EXECUTIVE SUMMARY

Shieldalloy Metallurgical Corporation NRC Inspection Report No. 040-07102/98-001

An unannounced safety inspection was conducted at the Shieldalloy facility in Newfield, New Jersey, from July 27-28, 1998. The inspection included a review of the licensee's organization and scope of licensed activities; program management oversight; facilities and equipment; material receipt, use, transfer, and control; training of workers; radiation surveys; radiation protection; radioactive waste management; decommissioning activities; posting and labeling; and independent measurements.

Seven violations of NRC requirements were identified. These included: 1) failure to notify NRC within 60 days and either begin decommissioning or submit a decommissioning plan when no principal activity had been conducted for a period of 26 months as required by 10 CFR 40.42; 2) transfer of control in violation of 10 CFR 40.41 and 10 CFR 40.46; 3) failure to perform adequate surveys in accordance with 10 CFR 20.1501 to assess the doses to workers and the residual contamination of potentially contaminated equipment and soil; 4) failure to post a radioactive material storage pile as required by 10 CFR 20.1902; 5) failure to perform personal air monitoring during all baghouse activities in accordance with Condition 13 of the license; 6) use of material not specifically authorized by Condition 10 of the license; and 7) failure to control licensed material that is in an unrestricted area.

Additionally, the licensee committed to restricting the removal of potentially contaminated equipment and/or soil from the licensee's site until adequate procedures for release of equipment, facilities, and soil were developed and implemented. The licensee provided a schedule for developing a program for free release of equipment and soils from the facility in a letter dated July 31, 1998. By letter dated August 21, 1998, the licensee documented that these actions were completed. These commitments were reviewed as part of this inspection.

approximately 4 months in 1998 to supplement the supply. According to the RSO, the customers identified in their April 20, 1998 letter to the NRC, were offered the CANAL-Lite material at a reduced cost from the ferrovanadium material. Both materials are used as slag fluidizers. As stated in the May 13, 1998 letter, Shieldalloy currently has approximately fifty percent of the slag fluidizer market.

The licensee's general manager stated that the licensee is in the process of re-evaluating the ferrocolumbium business. A business plan concerning the ferroalloy business is expected to be completed by the first quarter of 1999.

c. Conclusions

Condition 10 of License No. SMB-743 authorizes the use of licensed material for shipping, receiving, possession, use, research and development, and storage incident to the processing of raw materials to produce specialty alloys, and slag fluidizers, and does not include redistribution of unprocessed licensed material. The licensee stated that their understanding was that the authorization for shipping allowed them to transfer unprocessed licensed material to another licensed recipient who would process the raw materials. Receipt of unprocessed ore for transfer to another licensee is an apparent violation of Condition No. 10 of NRC License No. SMB-743.

V. Training of Workers

a. Inspection Scope

The licensee's training program for workers involved in licensed material activities and working in restricted areas was reviewed.

b. Observations and Findings

The licensee's training program includes initial training to all workers who may work in restricted areas and who may be exposed to radiation or licensed material. This training is limited to informing the workers in writing that radioactive materials are present and used at the facility and workers may contact the RSO for additional information. The licensee's consultant provides general employee training to workers as required by 10 CFR 19.12.

All authorized users, including workers in Building D111, are provided initial and refresher training by the RSO. This training includes principles of basic physics, radiation exposures and effects, methods of protection, instrumentation, radiation and exposure monitoring devices and regulatory requirements. At the end of the training, the participants are required to take and pass a written examination. If the examination indicates inadequate understanding of the material, the trainees are reinstructed and are required to retake the same test. Training records indicated that the latest training to authorized users was provided on July 6, 1998. There were 12 persons who attended this training. Initially, only two of these participants scored 80% or higher. The training

was repeated, deficiencies identified in the test were discussed, and a re-examination was conducted. All participants scored 100%.

Inspectors interviewed workers to determine the effectiveness of the licensee's training program. The workers in Building D111 appeared to be familiar with radiation safety procedures. Inspectors also interviewed a contract worker whose duties required him to enter a restricted area to clean contaminated items for disposal. This individual started work at the site on July 23, 1998, but as of July 27, 1998, had not been provided initial radiation safety training. Inspectors noted that the radiation dose rates at some spots in this restricted area were as high as 1000 microR/hr. The employee's supervisor stated that the individual was instructed to spend minimum amount of time in the area. The individual confirmed that he was given this instruction.

c. Conclusions

The licensee's training program for routine workers appears to be adequate and no safety concerns were identified. However, the licensee should review contract workers' duties and potential exposures to licensed material to determine whether radiation safety training is necessary. The adequacy of potential exposure assessments is discussed in greater detail in Section VII.

VI. Radiation Surveys

a. Inspection Scope

The licensee's radiation survey procedures and the results of the surveys conducted were reviewed.

b. Observations and Findings

The licensee has contracted with a consultant to perform routine surveys of dose rates and removable and fixed contamination in restricted areas. These surveys are performed each quarter and include all areas of use and other restricted areas. The latest surveys were performed by the consultant on May 18 and 20, 1998. Results of these surveys are included in the consultant's draft report dated June 23, 1998. Survey results from Warehouses A, B, D, and G, and Buildings D102, D202 (labs), and D117 (cave) indicated that the fixed contamination in each of these areas was less than 108 disintegrations per minute (dpm) per 100 cm² and the ambient dose rates were less than 40 microR/hr. However, at some locations in D102, dose rates as high as 900 microR/hr, and surface contamination as high as 2000 dpm per 100 cm² were observed. The removable contamination survey results in Warehouses B and G were below 8 and 28 dpm per 100 cm², respectively.

The Flex Kleen and AAF dust collectors in Building D111 were found, by the consultant, to be contaminated with fixed contamination ranging from 470 to 2400 dpm per 100 cm², and 400 to 3100 dpm per 100 cm², respectively. Other areas in D111 also had

elevated levels (as high as 350 dpm) of fixed contamination, and dose rates of approximately 60 microR/hr.

c. Conclusions

The licensee's routine survey program appears to be in accordance with the approved procedures. No safety concerns were identified.

VII. Radiation Protection

a. Inspection Scope

The inspectors reviewed the licensee's radiation survey and contamination control program, interviewed personnel working in radioactive material use areas, and toured work locations of radiologically controlled areas. The inspectors reviewed the licensee's program for evaluating the dose to workers and to members of the public.

b. Observations and Findings

The only work activities involving licensed materials conducted on site during the inspection were demolition activities in restricted and posted areas. Interviews of the workers in Building D102 indicated that workers were involved with demolition of a baghouse previously used for non-licensed activities in Building D102. The procedures included surveying the equipment, tearing down the equipment, power-washing the equipment, placing the equipment on the floor of Building D102, and then moving the equipment to an unaffected and unrestricted area approximately 100 yards away from the building. The inspectors observed that the workers do not wear any type of protective clothing during any of the above activities.

Building D102 is used for breakdown of ferrocolumbium heats from Building D111. Measurements of the crushed ferrocolumbium material on the floor where the workers routinely perform demolition and power-washing activities indicated exposure rates of approximately 1 milliR/hr. The inspectors questioned whether surveys were performed of the equipment after placing the equipment onto the floor which was covered in licensed material. The workers in Building D102 indicated that the dumpsters where the steel from D 102 is placed is scanned along the outside with a survey meter prior to release of the dumpster off-site. The workers indicated that the release criteria for the scanned dumpsters is 50 microR/hr. The workers also indicated that except for the transportation surveys conducted of the trucks and dumpsters when releasing the material off-site, no additional surveys are performed.

The inspectors also questioned whether the licensee had performed an evaluation of the potential exposure to the workers in Building D102. The licensee's RSO contacted their consultant who provided an assessment, dated July 27, 1998, of the potential exposure to workers in Building D102. The assessment was based on direct exposure from the licensed material on the floor. The assessment did not include potential exposures from contamination of the skin or potential internal exposures.

The records of the licensed activities conducted during the processing of pyrochlore in February 1998 and the subsequent baghouse dust emptying procedures were reviewed during this inspection. The licensee indicated that during the baghouse changeout conducted on June 29, 1998, personal air monitoring was not performed for the first shift conducting baghouse activities. The monitoring equipment was scheduled to be set-up at 8:00 a.m., however the first shift was not notified of this schedule and began work. The licensee estimates that workers performed baghouse activities for approximately 4 hours. The licensee's consultant is performing a dose assessment of this unmonitored activity. Also, samples collected during emptying of baghouse dust on March 12, 1998, have not been analyzed and exposures to the workers calculated.

c. Conclusions

10 CFR 20.1501 requires that each licensee make or cause to be made surveys that may be necessary for the licensee to comply with the regulations in Part 20 and that are reasonable under the circumstances to evaluate the extent of radiation levels, concentrations or quantities of radioactive materials, and the potential radiological hazards that could be present. Failure to make surveys to assure compliance with 10 CFR 20.1201, which limits radiation exposure to occupational workers, and failure to make adequate surveys to evaluate potentially contaminated equipment prior to release to an unrestricted area are potential violations of 10 CFR 20.1501.

Condition 13 of License No. SMB-743 requires that personal air monitoring be performed during baghouse activities. Failure to perform personal air monitoring and failure to assess personal air monitoring results for all baghouse activities is an apparent violation of License Condition 13.

VIII. Radioactive Waste Management

a. Inspection Scope

The inspectors questioned whether any radioactive waste shipments had occurred since the last inspection.

b. Observations and Findings

The licensee indicated that no baghouse dust and no pure ferrocolumbium slag had been shipped off-site as radioactive waste since the last inspection. The licensee's RSO indicated that NRC had requested development and submittal of a sampling plan prior to transfer of baghouse dust to non-licensees. the licensee indicated that they have not yet made this submission. The licensee also stated that three shipments of CANAL-Lite material had been shipped and subsequently returned by clients. As described in Section IV, the licensee discussed their proposal to transfer the mixed ferrocolumbium and ferrovanadium to clients for use as slag fluidizers in a letter dated April 20, 1998. by the licensee's RSO, no further shipments have occurred pending completion of commitments made to the NRC in a letter dated May 6, 1998, and submittal and approval of an amendment request describing the requested activity. In a letter dated

May 21, 1998, Region I requested additional information from the licensee on the sampling methods used. The licensee has prepared a portion of the proposed response and is awaiting isotopic analysis results of aliquots taken of the mixed material prior to completion of the response letter and the amendment request.

c. Conclusions

No violations of NRC requirements were identified. Review of the shipment and sampling of CANAL-Lite material by the NRC will continue when the licensee's procedures are received.

IX. Decommissioning Activities

a. Inspection Scope

The inspection included a tour of the facility and a discussion of current and planned decommissioning activities. The inspection also included a review of the licensee's Decommissioning Funding Plan.

b. Observations and Findings

The licensee's RSO described multiple demolition, excavation and site remediation programs with regard to non-licensed activities that had been conducted on the site since the last inspection. Since some of these activities are in the same building or adjacent to areas authorized for NRC licensed activities, the inspectors requested a status of these programs. Other planned changes to licensed facilities were also discussed. Many of the programs are still in process and include:

1. Sludge removal from 3 basins placed into service in 1971 for treatment of chemical hazardous liquid effluents (B6, B7, and B8). The basins are located in the predominant wind direction from the AAF baghouse and adjacent to the Source Material Storage Yard. The sludge was transferred to Environmental Services-Phillips. The contractor is in the process of removing liners and excavating soil. No screening samples were taken to determine if there was any radioactive contamination of adjacent surface soils or from soils removed from the basins, even though licensed activities had pre-dated installation of the basins.
2. D106, used for sodium bichromate activities (non-licensed activity), approximately ninety percent demolished.
3. Demolition of Building D102 dust collector and related equipment used for non-licensed activities. However, the facility was previously used for break-down of heats from Building D111. Building D102 was posted as a radiation area, since CANAL had been crushed and stored in the building.

4. Sediments in and surface waters around Hudson's Branch are being examined as part of a feasibility study. Design is underway to optimize well locations for groundwater sampling in the area. The licensee suggested that dredging of Hudson's Branch and possible capping of areas may be necessary. Past characterization of sediments from this area, documented in the "Baseline Risk Assessment for the Hudson's Branch Watershed," dated November 3, 1992, indicated asymmetrical mean concentrations in sediments of 2.47 picocuries per gram (pCi/g) and 1.95 pCi/g of thorium-232 and uranium-238, respectively. Soil and sediment samples are not currently planned to be taken by the licensee to ensure that residual contamination in excess of 10 CFR Part 20 - Subpart E release criteria is not placed beneath an engineered cap.
5. Plans submitted to and approved by the State of New Jersey for restoring the licensee's property adjacent to the Source Material Storage Yard to forest land.
6. The AAF baghouse was last used during ferrocolumbium processing conducted in February 1998. Since then ferrovanadium and ferrocolumbium oxide processing, both using ores containing less than 0.05 percent by weight thorium and uranium, has been conducted in Building D111, however only the Flexkleen baghouse has been used. The issue of decommissioning the AAF baghouse has been discussed during radiation safety committee meetings. While no decision has been made to permanently cease use of the baghouse for licensed activities, the licensee's general manager stated that there are no immediate plans to use the shut-down baghouse since operations can continue with only the Flexkleen baghouse in operation.

The inspectors discussed with the RSO the need to evaluate, for radiological purposes, the effect of demolition and remediation activities on the site as a whole, even though licensed activities were not directly conducted in most of these areas. Removal of soils or equipment without an evaluation of radioactivity could result in release of materials in excess of NRC requirements and in greater difficulty (e.g., radioactivity at greater depths or more areas contaminated) in surveying the site at the time of license termination.

The inspectors also toured the four areas that were documented in NRC Inspection Report No. 040-07102/97-001, dated September 24, 1997, as no longer being used for licensed purposes. These areas included Warehouses A and D, an area near Haul Road (also described as Madison Avenue), and a small storage area in Building D117. The licensee's RSO stated that there were no current actions to decontaminate or characterize the areas described above. Warehouse D and Building D117 were currently being used for licensed activities, but the rear half of Warehouse A and Haul Road continued not to be used for licensed activities. The quarterly surveys conducted by the licensee in Warehouse A indicated that the facility may be suitable for release for unrestricted use. However, the quarterly surveys are not adequate in scope for releasing a building for unrestricted use. The inspectors provided the RSO a copy of NRC Administrative Letter 96-05, Revision 1, dated July 14, 1998, and discussed the requirements for Timeliness in Decommissioning of Material Facilities. There had been at least a 26-month duration in which no principal activities had been conducted in the separate Haul Road outdoor area that is unsuitable for release in accordance with NRC

requirements. Independent measurements taken by the inspectors at 3 meters above Haul Road indicated radiation exposure rates ranging from 50 to 100 microR/hr above exposure levels for non-impacted areas.

The inspectors also reviewed the status of the licensee's Decommissioning Funding Plan with respect to finding a buyer of the CANAL and/or CANAL-Lite. The general manager stated that their efforts are continuing to develop a market, however, the viability of a sustained market remains uncertain.

c. Conclusions

10 CFR 40.42(d) requires, in part, that, unless an extension of time has been granted by the Commission pursuant to 10 CFR Part 40.42(f) in addition to notification requirements, a licensee shall either: (1) begin decommissioning its site, or any separate building or outdoor area so that the building or outdoor area is suitable for release in accordance with NRC requirements; or (2) if required by 10 CFR 40.42(g)(1), submit, within 12 months of notification, a decommissioning plan and begin decommissioning upon approval of that plan. Failure to notify the NRC in accordance with 10 CFR 40.42(d), and either begin decommissioning or submit a decommissioning plan for the Haul Road area containing residual radioactivity is a potential violation of 10 CFR 40.42.

As part of the ongoing demolition and site modifications, the licensee needs to address the following:

1. Surveys required as the facility is modified to evaluate the possible impact by licensed activities over the course of facility operations;
2. Building release surveys (e.g., Warehouse A) of sufficient scope to demonstrate that a previously restricted area is acceptable for free release in accordance with the licensee's release criteria;
3. Records of information important to the safe and effective decommissioning of the facility maintained in accordance with 40.36(f).

In their letters dated July 31, 1998, and August 11, 1998, the licensee provided a plan for developing and implementing procedures to address the items described above. By their letter dated August 21, 1998, the licensee documented that these procedures had been implemented. Provided that the licensee applies the unity rule for the soil release criteria, as described in NRC's letter dated August 25, 1998, no commitments remain outstanding. The adequacy and implementation of these procedures should be reviewed during a future inspection.

Removal of the CANAL via recycling to reduce decommissioning costs is under review by the NRC.

radiation. The soil and dust samples were analyzed on a Princeton Gamma-Tech high purity intrinsic germanium detector coupled to a Nuclear Data Accu-Spec multichannel analyzer. The dust sample was counted for 10,000 seconds and the soil samples were counted for 60,000 seconds.

Radiation level surveys conducted around the ferrocolumbium slag piles indicated results of approximately 1400 microR/hr on contact. Radiation level surveys conducted around the ferrocolumbium oxide pile (non-regulated) indicated results of approximately 200 microR/hr at 3 meters and 1000 microR/hr on contact. The results of the swipes collected in and around Building D102 ranged from 0 to 14 disintegrations per minute per 100 square centimeters (dpm/100 cm²) gross alpha and 0.4 to 14 dpm/100 cm² gross beta. The results of the dust sample collected outside of Building D102 indicated 54.7 pCi/g of actinium-228 (an indicator for thorium-232), 32 pCi/g of palladium-234m (an indicator for uranium-238), 47.5 pCi/g of lead-212 (an indicator for thorium-228), and 1.5 pCi/g of uranium-235. The soil sample results were as follows:

Sample Location	Ac-228 (pCi/g)	Pb-212 (pCi/g)	Pa-234m (pCi/g)	U-235 (pCi/g)	Dose Rate (μ R/hr)
S1-outside fence adjacent to high ratio pile	1.94 \pm 0.03	1.75 \pm 0.01	1.0 \pm 0.5	0.07 \pm 0.03	220
S2-outside fence adjacent to low ratio pile	17.10 \pm 0.12	15.24 \pm 0.04	7.6 \pm 1.3	0.49 \pm 0.09	300
S3-inside fence adjacent to high ratio pile	1.86 \pm 0.03	1.58 \pm 0.01	2.0 \pm 0.7	0.08 \pm 0.03	220
S4-inside fence adjacent to low ratio pile	7.51 \pm 0.05	6.77 \pm 0.02	3.9 \pm 0.8	0.21 \pm 0.05	260
S6-lagoon sample near D111 baghouse	0.44 \pm 0.02	0.40 \pm 0.01	1.6 \pm 0.6	0.04 \pm 0.02	14
S7-background sample at start of dirt road (Madison Ave.)	0.33 \pm 0.02	0.29 \pm 0.01	0.9 \pm 0.3	0.00 \pm 0.02	10

Soil samples taken outside the fence-line were collected for comparison with samples collected by the U.S. Environmental Protection Agency (EPA) on June 23, 1997. The area outside the fence-line is an inactive landfill owned by Newfield Township. The mayor of Newfield was contacted to grant access to the landfill in order to collect

PARTIAL LIST OF PERSONS CONTACTED

Licensee

***Nigel Morrison - Vice President and General Manager**

***Mary Higgins - Vice President, Human Resources and Radiation Safety Committee Chair**

***David Smith - Radiation Safety Officer and Director of Environmental Services**

Hugo Nieves - Superintendent and Operator, Building D111

Steve Danilak - Metallurgist

Carol Berger - Consultant, Integrated Environmental Management, Inc.

***indicates presence at exit meeting**