40-7102

SHIELDALLOY METALLURGICAL CORPORATION

WEST BOULEVARD
P.O. BOX 768
NEWFIELD, NJ 08344

TELEPHONE (609) 692-4200
TWX (510) 687-8918
FAX (609) 692-4017

ENVIRONMENTAL DEPARTMENT FAX
(609) 697-9025

December 3, 1991

RE: Environmental Technical Review Meeting

Ladies/Gentlemen:

Please find enclosed minutes of the Environmental Technical Review Meeting held at Shieldalloy Metallurgical Corporation (SMC), Newfield, N.J. on August 27, 1991. Since the meeting, a number of items have been initiated or completed by SMC. Below is a status of some of these key items.

The Lagoon Characterization Work Plan will be submitted to the NJDEPE in December. Lagoon sampling is anticipated to begin in January 1992.

Monitoring well closure and replacements have been proposed to the NJDEPE and expected to be completed in time for January 1992 sampling (1st quarter) pending approval by the Department.

The Draft Risk Assessment should be completed by the end of December.

The Underground Storage Tank Closure Plan and Discharge investigation and corrective action report were submitted to the NJDEPE on September 6, 1991. The tank will be removed upon approval of the plan.

The next Technical Review Meeting will be scheduled after comments on the Draft Report are received from the Department and the final report is produced.

Please call me at (609)692-4200 if you have any questions or comments.

Sincerely,

James P. Valenti

James P. Valenti
Environmental Manager

NF11

Ltr. Encl.

ADD: Yawar Faraz

JPV:lms
Enclosures
Dist: Donna Gaffigan (NJDEPE)
Yawar Faraz (USNRC)
Laura Lombardo (USEPA)
Robert Smith (TRC)
Kenneth J. Siet (DRAI)
Paul Horner (Vineland Water-Sewer Utility)
Jack Reich (ANDCO)
John Fillo (ENSR)
David R. Smith
Damon G. Kenyon

CC: Michael A. Finn
Richard D. Way
Charles L. Harp, Jr., Esq.
Jay E. Silberg, Esq.
Newfield Mayor and Council

MINUTES OF ENVIRONMENTAL TECHNICAL REVIEW MEETING

August 27, 1991

Shieldalloy Metallurgical Corporation
Newfield, NJ

TRC Project No. 7650-N51-01

Technical Review Meeting

A Technical Review Meeting was conducted in the Link Conference Room at the Shieldalloy Metallurgical Corporation (SMC), Newfield, New Jersey facility to discuss technical issues relative to several ongoing projects including the following:

* Brief presentation of the Draft Remedial Investigation Report by TRC Environmental Consultants, Inc. (TRC).

* Discussion of the Evaluation of Groundwater Pumping Effectiveness Report prepared by Dan Raviv Associates Inc. (DRAI) and submitted to the New Jersey Department of Environmental Protection (NJDEP) in January 1991.

* A discussion of the Ground Water Pretreatment system that ANDCO and Stone & Webster are designing for the SMC facility in Newfield, NJ.

* A discussion on how to improve communication between the NJDEPE, SMC, and the Borough of Newfield and City of Vineland by updating the present Community Relations Plan.

* A discussion of the progress on the Closure of Lagoons B6, B7, and B8.

* A discussion of the Radiological Characterization study.

* A discussion of the closure of the 3 registered underground storage tanks (UST) located on the SMC Newfield, NJ facility.

A list of attendees is provided on Attachment "A".

Introduction and Welcome

D. Smith, SMC, provided an introduction and opening remarks relative to the purpose and goals of the periodic technical meetings that are held to discuss environmental studies and work being performed at SMC's Newfield, NJ facility.

The purpose of the meetings are to report on project status, gain input from regulators, and involve and inform local community representatives. Copies of the meeting minutes will be distributed to all "interested parties" and pertinent information will be available in the Administrative Record.

I Draft Remediation Investigation/Feasibility Study

R. Smith, J. Oliva and J. Smith of TRC provided a brief presentation on the findings of the Draft Remedial Investigation (RI) conducted at SMC's Newfield, New Jersey facility.

R. Smith stated that the Draft RI report was submitted to the NJDEPE in late July 1991. The Contaminant Fate and Transport and Human and Environmental Risk Assessment sections will be presented as a separate document. He also stated that preparation of a Feasibility Study will be started upon the completion of RI and Risk Assessment reports.

A copy of the Draft Final RI report Executive Summary was handed out to all attendees. J. Smith briefly discussed the field investigation program and then outlined the initial findings of the RI investigation based on the following field activities.

* 64 surface soil samples were collected across the site.

* 5 test pits were excavated and 5 subsurface soil samples collected.

* 5 surface water, 4 rain runoff water, and 5 stream sediment samples were collected from\near the Hudson Branch.

* 72 soil borings were drilled and 146 subsurface soil samples were collected.

* 19 monitoring wells were drilled and installed at 14 locations both on and off SMC property during the RI investigation. A total of 7 deep monitoring wells (>50 ft) and 12 shallow monitoring wells (<50 ft) were installed.

* 2 rounds of ground water sampling were conducted during the RI investigation. A total of 52 wells were sampled during the first event and 39 wells were sampled during the second event.

* Collection of 72 air samples from 12 sampling events during non-operational periods at the SMC facility.

The analytical results indicated the following on-site areas warrant further evaluation:

* In the Undeveloped Plant Property - apparent Hudson Branch floodplain, tank T12 wastewater spill area, east side of By-product Storage Area, and the west side of By-product Storage Area.

* In the Manufacturing Area - Department 106, Department 102, former chromium button storage area, former Manpro-Vibra degreasing drainage ditch, underground storage tanks, and the railroad siding area.

* Lagoon and By-product Storage areas.

J. Oliva proceeded to summarize the analytical results obtained during the RI field investigation.

Soil Samples - Volatile organics, semi-volatile organics, and PCB compounds were detected in soil samples but at levels which do not exceed New Jersey Interim Soil Action Levels. DDT was detected in two soil samples at concentrations that exceeded New Jersey Interim Soil Action Levels.

The following inorganics were detected at levels exceeding New Jersey Interim Soil Action Levels: (The interim action levels are not regulations or cleanup levels but guidelines. Specific cleanup levels are determined on a site-by-site basis with consideration given to the risk assessment).

Beryllium exceeded the soil action level of 1 ppm 66 times. The highest concentration (60.1 ppm) was detected in the observed floodplain of the Hudson Branch. Other areas include the Lagoon Area (19.4 ppm), the railroad siding area (20 ppm), and along the eastern and western edges of the By-product Storage Area (29.3 ppm and 22.5 ppm, respectively).

Chromium exceeded the soil action level of 100 ppm 41 times. The highest concentration (5870 ppm) was detected in the observed floodplain of the Hudson Branch. Other areas of concern were the Department 106 Area (2280 ppm), the Department 102 Area (1630 ppm), the railroad siding area (260 ppm), and along the eastern and western edges of the By-product Storage Area (176 ppm and 473 ppm, respectively).

Nickel exceeded the soil action level of 100 ppm 29 times. The highest concentration (3360 ppm) was detected in the observed floodplain of the Hudson Branch. Other areas of concern were the Lagoon Area (912 ppm), the railroad siding area (339 ppm), and along the eastern and western edges of the By-product Storage Area (530 ppm and 1110 ppm, respectively).

Vanadium exceeded the soil action level of 100 ppm 81 times. The highest concentration (12100 ppm) was detected in the observed floodplain of the Hudson Branch. Other areas of

concern were the Department 106 Area (1190 ppm), the Lagoon Area (3950 ppm), the railroad siding area (4110 ppm), the Tank T12 Area (1810 ppm), and along the eastern and western edges of the By-product Storage Area (3990 ppm and 4750 ppm, respectively).

In addition to these inorganics, the following metals were detected at levels exceeding action levels: antimony (1 time), barium (6 times), lead (1 time), cadmium (1 time), and selenium (1 time).

Surface Water Samples included 5 water samples collected from the Hudson Branch, as well as 4 runoff samples collected during a rainfall event from major drainage pathways. Volatile organic and semi-volatile organic compounds were detected in surface water samples but at concentrations that did not exceed NJWPCA levels or federal MCLs. No pesticide/PCB compounds were detected in any surface water samples. The following inorganics were detected at concentrations that exceeded criteria: chromium at 7 locations (maximum concentration of 8.52 ppm), lead at 7 locations (maximum concentration of 1.24 ppm), beryllium at 4 locations (maximum concentration of .468 ppm), and nickel at 3 locations (maximum concentration of .618 ppm). These inorganics were detected at their highest concentrations in runoff samples.

Stream Sediment Samples were collected from 5 locations in the Hudson Branch. Volatile organic, semi-volatile organic, and pesticide/PCB compounds were detected at concentrations below soil action levels. The following inorganics were detected in concentrations that exceeded action levels: beryllium (5 times), chromium (5 times), vanadium (5 times), and antimony (4 times). In general, sediment sample SD2 had the highest concentrations of inorganics. While contaminant concentrations generally decreased with distance from the site, the most downgradient sediment sample (SD5) exhibited an increase in organic levels.

Ground Water Samples were collected in December 1990 and April 1991. Sampling locations changed between the 2 sampling events (52 samples collected in December 1990 compared to 39 samples collected in April 1991).

Volatile Organics - Trichloroethene (TCE) was the volatile organic compound most commonly detected at levels exceeding MCLs. TCE exceeded MCLs in 23 of the 27 wells sampled for VOCs during the December 1990 event and 23 of 33 wells sampled during the April 1991 event. The source of the shallow ground water TCE contamination appears to be centered around the former Manpro Vibra Degreasing unit. Maximum concentrations of TCE in the deep ground water were detected at two locations, the southern portion of the SMC facility (monitoring wells SC22D and A) and an off-site location northwest of monitoring well 5D (located in the 7.5 acre

parcel of land at the toe of the chromium contamination plume). This off-site TCE contamination does not reflect the inorganic plume migration (increasing away from the plume) implying that there is an off-site source North and West of the farm property.

A potential petroleum hydrocarbon leak from underground storage tank 003 was discovered when benzene, toluene, and xylene were detected in downgradient monitoring well SC23S. The concentrations of these volatile BTX compounds increased between December 1990 and April 1991.

Semi-Volatile Organics were not detected in either sampling event in concentrations exceeding MCLs.

Pesticides/PCBs were not detected in the December 1990 sampling event.

Inorganics - In general, total chromium and lead were the inorganics most commonly detected above MCLs during the December 1990 sampling event and total chromium and antimony were most commonly detected above MCLs during the April 1991 sampling event.

Total Chromium - Areas of concern in the upper Cohansey Sand include the following: the Manufacturing Area (20.80 ppm) and RW6S (11.70 ppm). Areas of concern in the lower Cohansey Sand include the following: SC22D (108.0 ppm) and RW6D (26.40 ppm).

Hexavalent Chromium - Areas of concern in the upper Cohansey Sand include the following: west of the Lagoon Area (26.40 ppm) and west of the By-product Storage Area (10.60 ppm). Areas of concern in the lower Cohansey Sand include the following: monitoring well A (60.90 ppm). The concentrations decrease to the southwest.

Other Inorganics of concern include lead (10 to 16 wells exceeded MCLs), antimony (12 to 18 wells exceeded MCLs), and arsenic, beryllium, cadmium, mercury, nickel, and selenium (exceeded MCLs in 1 to 4 wells). These inorganics were detected in the same general areas as total chromium and hexavalent chromium.

Air Samples - The only inorganic that exceeded federal Acceptable Ambient Levels (AALs) was titanium. It was detected at one sampling location during 2 of the 12 sampling events.

Preliminary Recommendations

* Confirmation of increased contaminant levels at the downstream sediment sample location (SD5);

* Definition of ground water quality in the lower Cohansey Sand in the general area of the Former Manpro-Vibra Degreasing Unit by installing a deep monitoring well (SC20D);

* Definition of ground water quality in the area south of existing well SC22D by installing a deep monitoring well between SC22D and the Hudson Branch, to confirm the capture zone of the existing recovery well.

Comments

J. Boyer, NJDEPE asked about the approximate time-table for completing the Risk Assessment and Feasibility Study. He was generally concerned by the possible delay of Phase II activities.
R. Smith, TRC responded that the Risk Assessment should be completed by the end of December and the Feasibility Study will start upon completion of the RA Report.
J. Valenti, SMC added that some of the required additional field work, such as replacing and decommissioning some damaged monitoring wells, would be completed prior to the start of the Phase II field activities.

J. Boyer, NJDEPE stated that the NJDEPE can provide guidance on how to complete the ecological risk assessment section of the RA Report.

D. Gaffigan, Case Manager NJDEPE stated that the comments on the Draft Final Remedial Investigation Report should be ready in approximately 2 weeks (week of Sept. 15).

II "Evaluation of Groundwater Pumping Effectiveness" DRAI, 1/91

G. Nicholas, Project Geologist NJDEPE made the following comments:

1) No correlation was made between concentrations detected in downgradient monitoring wells and the capture zone determined in DRAI's December 1990 pumping tests. Increased pumping at recovery wells RW6S and RW6D will not decrease chromium concentrations in monitoring wells SC4D, SC2D or SC5D. He suggested that data should be collected from these monitoring wells and evaluated over a three-month cycle. He further stated that the NJDEPE will likely require an additional recovery well, to be installed in the vicinity of the wells.

2) Concerned that the increased pumping of recovery wells screened within the lower Cohansey Sand is creating a downward hydraulic gradient and thus drawing contaminants down into the more compact lower Cohansey Sand. He realized that the

primary concern at present is to control the contamination plume and that requires a large volume of water to be extracted from the lower Cohansey Sands, but he wants future pumping strategies to consider vertical gradients.

3) The NJDEPE will be sending a letter to SMC that will document the state review and provide additional comments on the report.

4) Concerned that SMC has not yet changed their monthly, quarterly, and annual sampling program. J. Valenti, SMC responded that SMC, starting in August, has initiated a comprehensive program that includes the 1991 ACO required samples, RI monitoring wells, and the relocation or closure of older monitoring wells.

5) Stressed the need for SMC to implement DRAI's toe of plume recommendations. D. Smith, SMC stated that they were waiting for the NJDEPE comments prior to initiating additional work.

III Ground Water Pretreatment

D. Smith, SMC addressed the current state of the proposed ground water treatment system. He stated that the June 1991 ACO between SMC and the State of New Jersey required the following: Optimization Study to increase treatment rate to 400 gpm, perform 2 year acute toxicity program on discharge water into the Hudson Branch, perform 1 year chronic toxicity program on discharge water into the Hudson Branch. The anticipated outfall concentration of chromium (total) is expected to be less than 30 ppb. He asked if revised SDWA Chromium limit (100 ppb) would impact other Chromium limits (i.e. outfall).
J. Valenti, SMC stated that the consulting firm Stone & Webster was performing the Optimization Study. The study is anticipated to be submitted to the NJDEPE on September 16, 1991. The study combines the electro-chemical cell pretreatment system designed by ANDCO, which will treat inorganics to discharge levels, and the present ion exchange system, which will polish the inorganics as well as remove sodium and sulfate.

G. Nicholas, NJDEPE was concerned that SMC would not be prepared for a proposed change in the chromium discharge level in streams. He stated that the NJDEPE is considering lowering the acceptable in-stream chromium levels from 50 ppb to <20 ppb. He said that if that happened (i.e. lower standard adopted) SMC would be out of compliance, and indicated that SMC should be considering such contingencies in the design of the treatment system. He also suggested that injection wells

or infiltration galleries be explored as possible alternatives to stream discharge.

D. Smith, SMC stated that, under the June 1991 ACO, SMC will conduct toxicity studies in the Hudson Branch. If the standard lowers to <20 ppb there will be time to study treatment alternatives in accordance with CERCLA guidelines. K. Siet, DRAI stated that in DRAI's January 1989 report on ground water pumping strategies, well injection and infiltration gallery technologies were evaluated. If necessary, these studies could be reevaluated.

IV Community Relations

W. Elwell and E. Marshall of the Borough of Newfield expressed their concerns about the flow of information from the NJDEPE. They state that, after repeated phone calls to D. Gaffigan, NJDEPE they had not received the information updates they needed to keep the people of Newfield informed relative to project status. They reminded D. Gaffigan and R. Hayton, NJDEPE that the Borough of Newfield was a "major player" and should be kept informed. R. Hayton, NJDEPE stated that in the future copies of all relevant documents will be sent to the Borough of Newfield.

J. Valenti, SMC stated that the old Community Relations Plan is clearly out of date and that the information repository at the Borough of Newfield Library has not been updated. He stated that SMC could update the Community Relations Plan if assistance was required by NJDEPE and requested that the NJDEPE update the information repository.

V Lagoon Closures

J. Valenti, SMC stated that SMC is considering stabilization versus off-site disposal of sludge. He stated that SMC is considering two characterization/treatability study proposals for the sludge in lagoons B6, B7, and B8. SMC will award the contract in early September 1991. Once the characterization/treatability study has been completed, SMC will submit to the NJDEPE a Lagoon Closure Work Plan. SMC anticipates the lagoon sampling will commence in January 1992.

VI Radiological Characterization

C. Rieman, SMC discussed the status of the Radiological Characterization Survey conducted by ENSR during March and April 1991. He stated that ENSR was still waiting for the analytical results from the laboratory. He stated that ENSR would submit a Radiological Characterization Report to SMC within 1 month of receiving the analytical data.

When questioned on the status of the lime pile, C. Rieman, SMC stated that an aerial survey was being conducted to allow SMC to determine the volume and dimensions of the pile. Once this is completed, a cover for the lime pile will be designed. He anticipates completion of the study by early November 1991.

D. Gaffigan, NJDEPE commented that the NJDEPE had not approved the Radiological Characterization Work Plan and that the results of the characterization study were therefore at risk. C. Rieman, SMC stated that any concerns that the NJDEPE have regarding the investigation will be included in the Radiological Characterization Phase II Work Plan which will be reviewed by the NJDEPE. He reminded D. Gaffigan, NJDEPE that the on-site radiological material is under the NRC jurisdiction until SMC gives up its license. All radiological material that has migrated off-site comes under the auspices of the EPA/NJDEPE also.

Y. Faraz, USNRC asked about the monitoring well where Gross bBeta exceeded criteria. Mr. Faraz asked if isotopic analysis had been performed on this well. C. Rieman, SMC questioned which isotopes should be included in such an analysis. He further stated that gross beta only exceeded criteria one time and that due to laboratory problems (presence of dissolved solids in sample) there is low confidence in these gross beta results. The laboratory is working to correct this analytical problem.

SMC discussed conducting one round of isotopic analysis for beta emitters and will consider including it in the Phase II Radiological Characterization Work. The analytical data generated from this sampling would be supplied to both the USNRC and the EPA/NJDEPE.

C. Rieman, SMC questioned how the quarterly radiological data is being used and evaluated by the Department. He also questioned why the NJDEPE in the 1988 ACO established an action level of 5 pci/l while the drinking water standard is 15 pci/l. Patricia Gardener of the NJDEPE replied that the author of the radiological requirements in the 1988 ACO is no longer with the Department and it is not understood why these limits were created. He expressed concern that the public could be concerned about a radiation level that is significantly lower than the safe drinking water criteria. The presence of high background radiation levels in the region was also briefly discussed.

VII Underground Storage Tank Closure

J. Valenti, SMC told D. Gaffigan, NJDEPE that SMC will submit a Closure Plan and a Discharge Investigation and Corrective Action Report to her on September 6, 1991.

VIII Open Discussion

J. Boyer, NJDEPE wanted to confirm that all the material had been removed from lagoons B9 and B10. J. Valenti, SMC confirmed that only rain water remains in those lagoons.

D. Gaffigan, NJDEPE was concerned that possibly some soils from the old lagoon were used in creating raised lagoons B6, B7, and B8. J. Valenti, SMC stated that lagoons B6 and B7 were built on top of the old lagoon and all soil used to create the lagoon walls was imported from off-site. The RI analytical results confirmed that no significant inorganic contaminants are present in the lagoon walls.

G. Nicholas, NJDEPE asked why monitoring well SC23S and other RI installed monitoring wells had only recently been included in the SMC sampling program. D. Smith, SMC stated that they were awaiting the results of the two RI ground water sampling events to modify the sampling program. The revised sampling plan should be finalized during the next quarter.

G. Czock, NJDEPE questioned the possibility of off-site TCE contamination based on the data presented in the Draft Final RI Report. He stated that there was not sufficient proof presented in the Draft Final RI Report of another TCE source. He said the data presented could be interpreted as an earlier slug of TCE contamination emanating from the SMC site. He further stated that SMC must prove that there is another source of TCE contamination. He suggested that this section of the Draft Final RI Report be rewritten to address this issue in greater detail. J. Smith, TRC, stated that if the source of the high TCE levels in monitoring well SC-5D was from an earlier TCE slug, then higher concentrations of TCE should be found in monitoring wells SC-3D and SC-1D. This was not the case as concentrations of TCE in monitoring wells SC-3D and SC-1D were less than that of SC-5D. J. Valenti, SMC stated that the NJDEPE had identified eight PRPs in the area and suggested that the NJDEPE should reopen those case files. R. Hayton, NJDEPE stated that it was not the responsibility of the NJDEPE to determine the sources of contamination but rather SMC's obligation to prove that the contamination was not created by SMC. G. Czock, NJDEPE suggested that the RI report to be modified to strengthen sections discussing the potential non-SMC sources of VOC.

J. Boyer, NJDEPE suggested that future technical meetings be conducted in Trenton, NJ. J. Valenti, SMC stated that one of the purposes of these meetings is to keep the public informed and local representatives would probably not be able to attend meetings in Trenton.

IX Meeting Closure

J. Valenti, SMC thanked everyone for coming and stated that an additional technical meeting to address comments on the Draft Final RI Report would likely be necessary.

ATTACHMENT "A"

ENVIRONMENTAL TECHNICAL REVIEW MEETING

Shieldalloy Metallurgical Corporation, Newfield, NJ

August 27, 1991

Michael Finn	SMC/NY	(212) 686-4008
David Smith	SMC	(609) 692-4200
James Valenti	SMC	(609) 692-4200
Craig Rieman	SMC	(609) 692-4200
Kathi Bodi	SMC	(609) 692-4200
Kenneth Siet	DRAI	(201) 564-6006
Jack Reich	ANDCO	(716) 691-2100
Robert Smith	TRC	(203) 289-8631
Jean Oliva	TRC	(203) 289-8631
Jeffrey Smith	TRC	(203) 289-8631
Walter Elwell	Newfield Borough	(609) 697-1100
Everett Marshall	Newfield Borough	(609) 697-2800
Yawar Faraz	USNRC	(301) 492-0669
Robert Hayton	NJDEPE	(609) 633-1455
Donna Gaffigan	NJDEPE	(609) 633-1455
Gary Czock	NJDEPE/BGWPA	(609) 292-8427
George Nicholas	NJDEPE/BGWPA	(609) 292-8427
John Boyer	NJDEPE	(609) 984-3068
David Mizenko	NJDEPE/BER	(609) 987-2101
Maryanne Quinn	NJDEPE/BER	(609) 987-2025
Patricia Gardner	NJDEPE/BER	(609) 987-6375