UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

MAY 3 0 2002

SUBJECT: Approval of a Request for Additional Funding and Exemption from the 12 Month and $2 Million Statutory Limits for a Removal Action at the V&V Mining PCB Site, Big Stone Gap, Virginia

FROM: Abraham Ferdas, Director
Hazardous Site Cleanup Division (3HS00)

TO: Marianne Horinko, Assistant Administrator
Office of Solid Waste and Emergency Response (5101)

THRU: Elaine F. Davis, Acting Director
Office of Emergency and Remedial Response (5201)

ATTN: Thomas R. Sheckells, Director
Region 3/8 Accelerated Response Center (5201G)

The attached "Request for Additional Funding and Exemption from the 12 Month and $2 Million Statutory Limits for a Removal Action" (Request for Additional Funds) pertains to the V&V Mining PCB Site, the location of an abandoned mining facility, in Big Stone Gap, Virginia. The OSC completed a Removal Assessment at the Site, finding elevated levels of hazardous substances (notably lead) that have migrated into and pose a threat to the Powell River adjacent to the Site, and initiated a Time-Critical Removal Action to mitigate threats posed to human health and the environment. Additional CERCLA funding and exemption from the 12 month and $2 million statutory limits are necessary to continue removal actions, which entail stabilization of elevated levels of hazardous substances identified over a larger-than-expected area, including an area occupied by a nearby business.

The OSC conducted a Site Assessment in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This Assessment confirmed the existence of a threat to the public health, welfare, or the environment due to the release of lead, a hazardous substance, from the Site. The concentration of lead detected in impacted creek sediment located along the southwest perimeter of the Site was found to be up to 371 ppm and exceeds levels which are protective of aquatic organisms. The sediment contamination results from the erosion of highly contaminated soil from buried and crushed batteries that infiltrated the Site property. Lead concentrations in the soil at the Site exceeded 92,600 ppm in some locations. The bank of the unknown tributary is contributing to the release of hazardous substances to the Powell River.

Because conditions at the V&V Mining PCB Site continue to meet the criteria for a Removal Action set forth in Section 300.415 of the NCP, 40 C.F.R. § 300.415, and meet the

criteria for exemption from the 12 month and $2 million statutory limits set forth in Section 104(c)(1)(A) of CERCLA, 42 U.S.C. § 9604(c)(1(A), Region III has, pursuant to EPA Delegation 14-2, approved the use of additional CERCLA funds in the amount of $1,150,000, bringing the Estimated Total Project Ceiling to $3,411.990 of which $2,338,325 are Regional Removal Allowance Costs, and has approved an exemption from the statutory limitations on removal actions set forth in CERCLA to continue to perform a Removal Action at the Site. The Removal Action will involve consolidation and/or recycling of all metal debris remaining on Site, removal and proper disposal of all contaminated soils, stabilization of the bank of the unnamed tributary to Powell River, and placement of backfill and/or gravel over all areas of the Site that require excavation.

Attachment: Request for Additional Funding and Exemption from the 12 Month and $2 Million Statutory Limits for a Removal Action

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MAY 3 0 2002

SUBJECT: Request for Additional Funding and Exemption from the 12 Month and $2 Million Statutory Limits for a Removal Action at the V&V Mining PCB Site Big Stone Gap, Virginia

FROM: Robert Kelly, On-Scene Coordinator
Removal Response Section (3HS31)

TO: Donald S. Welsh
Regional Administrator (3RA00)

THRU: Abraham Ferdas, Director
Hazardous Site Cleanup Division (3HS00)

I. PURPOSE

The purpose of this "Request for Additional Funding and Exemption from the 12 Month and $2 Million Statutory Limits for a Removal Action" (Request for Additional Funds) is to request additional funding and exemption from the 12 month and $2 million statutory limitations for Removal Actions in order to continue a Removal Action at the V&V Mining PCB Site (Site). The Site is located adjacent to Heritage Hall, an elderly care facility, the Lonesome Pine Hospital, and an unnamed tributary of the Powell River, towards which Site runoff flows in Big Stone Gap, Virginia. On May 1, 2001, the OSC initiated a Removal Action with $199,450 of emergency Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) funding at the Site, which has been the subject of a Time-Critical Removal Action since June 2001 (Memorandum from Robert Kelly to Abraham Ferdas, re: "Re quest for Additional Funds and a Modification of Scope of Work for a Removal Action at the V&V Mining PCB Site" (approved June 20, 2001). Additional funding was also received in October, 2001, to increase the Total Project Ceiling to $1,996,158 (Memorandum from Robert Kelly to Abraham Ferdas, re: "Request for Additional Funds and a Modification of Scope of Work for a Removal Action at the V&V Mining PCB Site" (approved October 26, 2001)). A large amount of industrial mining equipment from an abandoned recycling facility was disposed of on this property. During the Removal Action, the OSC identified a significantly expanded volume of soil which has been infiltrated by lead and PCBs, which are listed as hazardous substances as defined in Section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 42 U.S.C. Section 9601(14) A . It has been determined that the lead from this mining equipment, in particular from batteries, has infiltrated into a much larger and deeper area than anticipated. This finding has necessitated an expansion of removal activities to mitigate those immediate threats posed by the Site and identified in the Action Memorandum. The OSC has determined that the Site continues to meet the emergency

exemption criteria in CERCLA Section 104(c)(1)(A) as amended , 42 U.S.C. § 9604(c)(1)(A).[1]

A Removal Site Assessment conducted pursuant to Section 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. § 300.415, revealed ongoing releases of hazardous substances, notably lead, from the V&V Mining PCB Site into the environment. These releases pose a threat to ecological receptors in the unnamed tributary of the Powell River and a potential threat to human receptors. Based upon information obtained from the Removal Site Assessment and the ongoing Removal Action, continued CERCLA funding and exemption from the 12-Month and $2 Million Statutory Limits are necessary to remove contaminated sediment, stabilize eroding soil, cover contaminated soil areas, and perform other activities as described herein in response to the immediate threats posed by the Site. If additional contaminated areas identified during the Removal Action are not addressed, the effectiveness of the ongoing Removal Action and the efforts to protect human health and the environment will be negatively affected. Additional CERCLA funding in the amount of $1,150,000 is requested. This additional funding will raise the Estimated Total Project Ceiling to $ 3,411,990 of which $2,338,315 are Regional Removal Allowance Costs.

II. BACKGROUND AND SITE CONDITIONS

A. Site Description

The V&V Mining PCB Site (Site) consists of, among other things, an abandoned recycling facility for industrial mining parts and supplies. The Site is located immediately adjacent to Heritage Hall, an elderly care facility, and the Lonesome Pine Hospital; these medical facilities are located to the southwest and west of the Site. The Site is situated on land bounded by an active railroad to the southwest and by residences on the north and east. Access to the Site is restricted by a fence that was constructed by the OSC. However, even with the construction of the fence, there is evidence of ongoing human trespassing onto the Site, including broken windows and refuse . Following investigation and inspection of the fence, it is apparent that gaps exist underneath the fence in many areas, large enough for animals and humans to fit through, in addition to a large gap in the fence near the front gate of the Site. Gaps are due to erosion that is occurring on the Site. There is no Site security at the present time due to Site being shut down. The Site is located within the town of Big Stone Gap, Virginia, in close proximity to residential areas.

The Site is basically a flat area, comprised of approximately eight acres of land. Rainwater from the Site flows towards the southwestern area of the Site, where an intermittent stream flows to the east into the Powell River. Prior sediment sampling at the Site confirmed that lead from the Site was migrating into this stream. During heavy rains, soil located behind silt fencing along the southwest boundaries of the Site was heavily eroded.

The vegetation on the Site is sparse and not suited to minimizing erosion of the bank material into an unnamed tributary of the Powell River. As such, ongoing erosion causes the migration of the

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[1] Authority to approve continued removal action beyond the $2 million/12 month statutory limitation pursuant to the "Emergency Waiver" set forth in Section 104(c)(1)(A) of CERCLA, 42 U.S.C. § 9604(C)(1)(A), up to a total removal action cost of $6 million, has been delegated to the Regional Administrator pursuant to EPA Delegation 14-2.

contaminated materials into the creek. Erosion of the contaminated soil will continue to release hazardous substances unless the Removal Action is completed.

Presently, the Removal Action has resulted in the isolation of all scrap metal debris on the Site, excavation and grading of approximately half of the Site property, removal of PCB-contaminated oil from numerous transformers discovered during the initial emergency response, and isolation and stabilization of one underground storage tank (UST) and various fuel and oil storage containers. During these activities, the OSC found that the volume of contaminated soil present at the Site is larger than originally anticipated. Utilizing X-ray Fluorescence (XRF), the OSC has found that the lead contamination in a vast majority of the Site property is much deeper than originally anticipated, at levels ranging from 400 ppm to 3000 ppm. Approximately 9,200 tons originally of soil have been removed to date. If the additional volume of contaminated soil is not addressed in the Removal Action, the effectiveness of the ongoing action will be diminished.

B. Quantities and Types of Substances Present

Initial sampling and analysis of surface soil and sediment at the Site confirmed the presence of elevated concentrations of lead and PCBs, both hazardous substances. Lead was found in amounts over 92,600 ppm in Site soils and up to 372 ppm in Site sediment (intermittent stream). PCBs were found up to 220 ppm in Site sediment.

During the months of June and July, 2001, EPA conducted extensive additional soil sampling to determine more precisely the extent, depth and kind of contamination at the V & V Mining PCB Site. This survey revealed that the Site exhibits elevated levels of lead throughout the Site. Trenching had revealed contamination 3 feet deep in places. Soil-lead concentrations for total lead were generally 400 ppm or greater and as high as 3000 ppm.

C. Other Actions to Date

Since June 2001, non-hazardous debris piles and other surface materials have been moved, consolidated and disposed of off-site in order to access contaminated materials . More than 30 truck-loads of scrap metal have been shipped off-site to an alternate staging area by the Potential Responsible Parties (PRPs). The PRPs' had subsequently hired a salvage company to evaluate and make preparations for the storage and removal of the items remaining on Site. The salvage contractor had initiated metal scrap recycling. In September 2001, the salvage contractor ceased operations at the Site and has left an abundance of scrap metal lying about the Site.

Completed operations at the Site include installation of a chain link fence, removal of approximately 9,200 tons of soil, removal of all PCB contaminated transformers and oil, and backfilling of approximately 1/8th of the excavated portion of the Site.

During the current Removal Action, the amount of contaminated soil that would require removal was underestimated. Transportation and Disposal (T&D) activities were in full progress, however, T&D activities were discontinued due to lack of funding and an overabundance of contaminated soil.

D. National Priorities List Status

The V&V Mining PCB Site is not currently proposed for inclusion on the CERCLA National Priorities List. The OSC will forward analytical and other information to EPA Site Assessment personnel for further consideration. Removal actions at this Site will not impede any future remedial actions.

E. State and Local Authorities' Roles

The Site was brought to EPA's attention by Virginia Department of Environmental Quality (VADEQ) and Virginia Department of Emergency Management (VADEM), neither of which had the resources necessary to perform a environmental cleanup of the Site that would include offsite disposal of hazardous substances.

The OSC met with the Town Manager from the City of Big Stone Gap, who stated that the City of Big Stone Gap did not have the funding available to carry out a cleanup of this magnitude.

The OSC intends to keep state and local officials updated and to include them in all planning and health and safety matters related to the Site.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT

Access to the Site is not wholly restricted. During the Removal Action, a fence was constructed around the Site but it does not adequately prevent trespassing onto the Site. Rainfall runoff creates large gaps beneath the fence, and a large gap at the front entrance to the Site, next to the gate. The contaminated areas continue to pose a threat to human health since lead concentrations in the contaminated soil at the Site were found to be much higher than levels which EPA typically deems protective of human health in non-residential settings (2,000 ppm).

Site sampling and analytical results indicate that the environment and habitat of ecological receptors (Creek sediment) is impacted by hazardous substances, specifically lead and PCBs, at levels significantly higher than background levels and benchmark risk levels established by the US National Oceanic and Atmospheric Administration (NOAA) and EPA.

Promulgated Federal or State criteria for sediment contamination levels intended for the protection of aquatic organisms do not exist. To determine if threats are posed to ecological receptors, EPA and NOAA instead rely upon a comparison between site-specific contaminant levels and "screening guideline" levels developed from contaminant- and organism-specific toxicity testing. The "screening guideline" levels identify benchmark sediment contaminant levels at which toxicity testing has established a likelihood of adverse biological effects to exposed aquatic organisms. These guidelines, published by NOAA in the form of screening reference tables, indicate that sediment concentrations of lead above 91.3 ppm in freshwater sediment are likely to cause adverse biological effects to exposed aquatic organisms (NOAA Screening Quick Reference Table for Inorganics in Solids (Hazmat Report 99-1 (September 1999))). The concentration of lead in the sediment of the intermittent tributary to the Powell River at the V&V Mining PCB Site is significantly higher than benchmark level of 91.3 ppm.

Hazardous substances released at and from the Site may bioaccumulate in the food chain. Bioaccumulation poses a threat to migratory birds and potentially to human receptors ingesting aquatic organisms such as fish, shellfish, and/or crustaceans in the contaminated environment. However, the areal extent of contamination is sufficiently limited (i.e., limited to the immediate area of the contaminated soil) to negate the current need for significant concern about the potential effects to humans through the food chain. Actions to prevent further contamination of the sediment will ensure that risks to the food chain posed by bioaccumulation are reduced.

The National Oil and Hazardous Substances Contingency Plan, 40 CFR Section 300.415 (b)(2), lists the factors to be considered in determining the appropriateness of a Removal Action. The following factors apply to the V & V Mining PCB Site:

Section 300.415(b)(2)(i) "*Actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances or pollutants or contaminants*"

Lead and PCBs continue to be the major contaminants of concern that have been identified at this location. Temporary fencing has helped in the deterrence of neighborhood children from playing, vandalizing, and/or loitering on the site. Previously, a security guard service was on Site but had to be dismissed due to funding issues. However, due to the large contaminated zones and buildings scattered throughout the property, security officers still occasionally encounter children and domesticated pets on-Site. The OSC conducted a extent of contamination survey as recent as September, 2001 and elevated levels of lead have been found in a much larger area throughout the entire Site. Specifically, surface soil samples range from 425 ppm to above 3,000 ppm of lead throughout the Site. The impacts of lead are detrimental to ecological as well as human receptors. Lead is readily absorbed by microorganisms of the soil and biochemically changed into a lethal organic form. Soil microflora are the basis of the terrestrial food chain and this transformation into organic structures enables higher trophic forms of life to readily incorporate lead into their somatic tissues. This continues throughout the food chain, with only slight modification depending upon species.

Section 300.415(b)(2)(ii) "*Actual or potential contamination of drinking water supplies or sensitive ecosystems*"

There are no residential drinking water wells in the immediate area of the Site. However, sample results in the sediments of the unnamed tributary leading into the Powell River, which is inhabited by mussels (possibly an endangered species), indicated PCB levels up to 220 ppm. PCBs bioaccumulate in animal tissue. PCB levels at the Site are several orders of magnitude higher than levels that NOAA has demonstrated to likely cause adverse effects to freshwater aquatic life. Though temporary erosion and sedimentation controls have been installed, Site contaminants still present the threat of migration into waterways during precipitation and storm events.

Section 300.415(b)(2)(iv) *"High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate."*

Soil sampling has shown that there are high levels of PCBs and lead throughout the Site and in the unnamed tributary to the Powell River. The soil at the Site does not have a vegetative cover suitable to prevent direct contact with contaminated soil or to prevent erosion of contaminated soil. Heavy rains present the threat of migration of these pollutants or contaminants into nearby waterways, such as the tributary to the Powell River.

Section 300.415(b)(2)(v) *"Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released"*

Precipitation and storm events can cause shallow soil contamination to migrate into nearby waterways. The presence of lead and PCBs in elevated levels (above background) in the closest waterway, the unnamed tributary to the Powell River, was confirmed by sampling and laboratory analysis.

Section 300.415 (b)(2)(vii) *"The availability of other appropriate Federal or State response mechanisms to respond to the release"*

The Virginia Department of Environmental Quality had requested that EPA take the necessary actions to mitigate the threats posed by the release and threat of release of hazardous substances at the Site. Neither the State nor local response mechanisms had the funding or resources to perform a cleanup at this time.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response actions selected in this Action Memorandum, still present an imminent and substantial endangerment to public health, welfare, or the environment.

V. EXEMPTION FROM STATUTORY LIMITS

During the course of the Removal Action, the volume of contaminated soil was found to be significantly larger than originally anticipated. The hazardous substances at the Site pose a threat to human health and the environment and will continue to pose this threat until the Removal Action identified in the Action Memorandum and this Request for Additional Funds is completed. The Removal Action will require additional funding to enable the OSC to complete T&D of the contaminated soil on Site. This additional funding will result in a total estimated project ceiling which is greater than $2 million. In addition, the increased amount of work will cause the project schedule to exceed the 12 month limitation on removal actions.

The Site meets the "emergency exemption" criteria set forth in Section 104(c)(1)(A) of CERCLA, 42 U.S.C. § 9604(c)(1)(A), for exceedance of the $2 million and 12 month statutory limits for Removal Actions as follows:

A. Section 104(c)(1)(A)(i) "Continued response actions are immediately required to prevent, limit, or mitigate an emergency."

The focus of the ongoing Removal Action has been to stabilize the erosion of contaminated soil into the unnamed tributary of the Powell River, remove the lead-contaminated soil from the Site, and to cover the contaminated soil to prevent future human exposure. Since the volume of contamination is now known to be much larger than expected, Site trespassing has been identified and observed, and off-Site migration is continuing, additional response actions are immediately required to minimize human exposure to the contaminants and the migration of contamination to the Powell River. The concentration of hazardous substances at the Site poses a threat to the public health and the environment. The proposed actions will eliminate the immediate threats by reducing the potential for exposure to hazardous substances at the facility and eliminating the migration of hazardous substances to the Powell River. Without an exemption from the statutory limits, the Removal Action will not be completed and threats posed by the Site will not be meaningfully reduced.

B. Section 104(c)(1)(A)(ii) "There is an immediate risk to the public health or welfare or the environment."

The expanded volume of lead-contaminated soil continues to pose a threat to the unnamed tributary of the Powell River and to the public. Elevated concentrations of hazardous substances found at the Site were found to be toxic to terrestrial organisms, above EPA's typical protective levels, exposed at the surface, and able to migrate. Unless the Removal Action includes removal of the additional volume of lead-contaminated soil at the Site, the Removal Action will not acceptably mitigate the threats posed by the Site. Since there is evidence of trespassing by humans and the presence of animals on-Site, the threats posed by the Site are immediate to the public and the environment. The levels of lead found in the soil at the Site are above levels typically thought to be protective of exposed individuals in a non-residential setting.

C. Section 104(c)(1)(A)(iii) "Assistance will not otherwise be provided on a timely basis."

The VADEQ, VADEM, and the Town of Big Stone Gap have been unable to offer financial assistance or resources that would enable the removal action to be completed. EPA's assistance will be necessary to ensure that threats posed by the Site are mitigated in a timely manner.

VI. PROPOSED ACTIONS AND COSTS

The scope of the actions for which the additional funding is hereby requested have not changed. Continued actions would include:

1. Relocation of non-hazardous scrap metal to clean areas of the Site, in order to clear room to provide an efficient removal response.
2. Perform on-Site analysis of post excavation areas by X-Ray Fluorescence (XRF) technology with laboratory confirmation analysis, along with documentation of sampling locations sub-meter accuracy GPS data.

3. Continue to excavate soils containing lead levels above 400ppm, down to three feet maximum. This will allow the owners to continue to use the property without additional exposure to or migration of contaminants.
4. Continue to dispose of excavated soils off-Site at a facility acceptable under EPA's Off-Site Rule, 40 C.F.R. § 300.440, and in accordance with Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3).
5. Backfill excavated areas of the Site with a minium of 1 foot of clean fill and/or rock/gravel; plant those areas with suitable groundcover vegetation; and grade the Site for drainage, which may involve installation of drainage ditches to minimize and prevent erosion of backfilled areas.
6. Prior to backfilling to original grade, a warning marker such as colored stone will be placed in the excavated area to prevent anyone digging below the area that has been determined to have elevated levels of lead above 400 ppm remaining on Site.
7. Inform potential future owners, through applicable legal tools, that lead contamination above 400 ppm is present on the property below 3 feet and that lead contamination below 400 ppm is present above 3 feet.

The description of Proposed Actions and analyses regarding Contribution to Remedial Performance and Compliance with ARARs contained in the October 26, 2001 Action Memorandum are applicable to this Request for Additional Funds and will not be repeated here.

The projected cost figures are as follows:

Estimated Costs

The proposed distribution of funding follows:

	Current Ceiling	Proposed Increase	Proposed Ceiling
Regional Removal Allowance Costs:			
Total Cleanup Contractor Costs	$ 1,188,325	$ 1,000,000	$ 2,188,325
15% Contingency		$ 150,000	$ 150,000
Other Extramural Costs Not Funded from the Regional Allowance:			
Total START, including multiplier costs	445,000	-0-	445,000
Total CLP	60,000	-0-	+ 60,000
Subtotal	$ 505,000		$ 505,000
Subtotal, Extramural Costs	$ 1,693,325	-0-	$ 2,843,325
Extramural Costs Contingency			$ +568,665
TOTAL REMOVAL ACTION PROJECT CEILING	$1,555,893		$ 3,411,990

VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If the actions described in the Action Memorandum are not completed, lead will continue to pose a threat to human receptors in the vicinity of the Site. Additionally, hazardous substances and pollutants or contaminants will continue to be released into the unnamed tributary of the Powell River This release will continue to pose a threat to the environment at the Site. Without actions to reduce the potential for direct contact with hazardous substances throughout the Site, potential threats posed to human receptors may increase as people continue to trespass at the Site and expose themselves to lead contamination.

VIII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues pertaining to the V&V Mining PCB Site.

IX. ENFORCEMENT STATUS

The OSC has provided the EPA Removal Enforcement Section with information available to pursue any and all enforcement actions pertaining to the V&V Mining PCB Site. The PRPs for the Site have been identified as Charles and Donald Vandergriff. Neither PRPs can perform the proposed response promptly and/or properly, due to lack of funding.

The total EPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be $4,463,025.50[2]

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[2]Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect costs, consistent with the full cost accounting methodology effective October cost rate expressed as a percentage of Site-specific direct 2,2000. These estimates do not include pre-judgement interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

X. RECOMMENDATION

Because conditions at the V & V Mining PCB Site in Big Stone Gap, Va, continue to meet the criteria for a Removal Action set forth in Section 300.415 of the NCP, and meet the criteria for exemption from the 12 Month Statutory Limit and $2 Million Statutory Limits, I recommend your approval of this Action Memorandum and proposed project ceiling increase of $1,150,000. This will increase the Estimated Total Project Ceiling to $3,411,990 of which $2,338,325 are Regional Removal Allowance Costs. You may indicate your approval or disapproval by signing below.

Approved _____ Date 05/30/02

Disapproved _____ Date _____

ATTACHMENT: Confidential Enforcement Addendum