DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION
Interim Final 2/5/99
RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA750)
Migration of Contaminated Groundwater Under Control

Facility Name:	American Nickeloid Company
Facility Address:	129 Cherry Street, Walnutport, PA 18088
Facility EPA ID #:	PAD002399285

1. Has **all** available relevant/significant information on known and reasonably suspected releases to the groundwater media, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

_X_ If yes - check here and continue with #2 below.

_____ If no - re-evaluate existing data, or

_____ if data are not available skip to #6 and enter"IN" (more information needed) status code.

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Migration of Contaminated Groundwater Under Control" EI

A positive "Migration of Contaminated Groundwater Under Control" EI determination ("YE" status code) indicates that the migration of "contaminated" groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original "area of contaminated groundwater" (for all groundwater "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Migration of Contaminated Groundwater Under Control" EI pertains ONLY to the physical migration (i.e., further spread) of contaminated ground water and contaminants within groundwater (e.g., non-aqueous phase liquids or NAPLs). Achieving this EI does not substitute for achieving other stabilization or final remedy requirements and expectations associated with sources of contamination and the need to restore, wherever practicable, contaminated groundwater to be suitable for its designated current and future uses.

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

Facility History

American Nickeloid Company began its operations at the Walnutport, PA location in 1923. The plant is mainly involved with sheet coil coating and finishing. Four continuous electroplating operations have been conducted at the plant including chrome, copper, nickel and brass. Each of the electroplating operations consists of a metal cleaning/rinsing operation, a plating tank, and a treatment system for the electroplating wastes that are generated.

EPA issued an Administrative Order (USEPA Docket No. RCRA-III-060-CA) to American Nickeloid Company on April 8, 1993 that ordered the company to address the contamination found in soils and groundwater beneath a surface impoundment area located north of the plant building and chrome plating area located within the plant building, as well as the soils and groundwater located in the area of a former naphtha storage tank. These areas are briefly discussed below.

American Nickeloid started its chromium electroplating operations in the 1930s. Over the years, the tanks, pipes and pumps associated with the chromium electroplating processes are known to have leaked. Often the leaks would find their way onto the floor or under the tanks. Cracks in the floor would allow the leaking chromium bearing materials to reach the soils beneath the concrete and eventually reach the groundwater flowing beneath the plant. There are other records of chrome solution spills within the plant that likely contributed to the contamination of the soils and groundwater beneath the building. In 1975, American Nickeloid replaced its four plating tanks and installed new equipment lined with a synthetic material, resistant to chromic acid degradation. Other upgrades to reduce the possibility of chromium electroplating solutions contaminating the soils and groundwater beneath the building were also instituted at that time.

Prior to 1986, treated waste from the facility's chrome-nickel neutralization tank and the copper/cyanide holding tank was pumped into surface impoundments located north of the plant area. A total of four surface impoundments covering an area of approximately 1.5 acres was used by the facility. Three of the surface impoundments were unlined and were used until 1972. The fourth impoundment was installed with a butyl rubber liner in 1972 and was taken out of service in 1985. Effluent from the surface impoundments was discharged into the Lehigh River under a National Pollutant Discharge Elimination System (NPDES) permit. Sludges from the surface impoundments and various treatment/storage tanks were routinely disposed of at approved treatment, storage and disposal (TSD) facilities. The use of the surface impoundments was no longer necessary when they were replaced by a series of treatment tanks, where the electroplating wastes are chlorinated and neutralized, and the copper and zinc are recovered. Contaminated soils and sludges were removed from the no longer used impoundments in 1985 and 1986 and sent off-site for disposal.

From roughly 1970 to 1980, an approximately 275 gallon tank containing naphtha, a degreasing solvent, was located just west of the plant building about 250 feet north of the chromium electroplating area within the building. The tank had a dispenser on it which workers commonly used to dispense naphtha directly into buckets to clean various parts. Any leakage from the dispenser would fall directly on the ground, as the tank did not have any secondary containment. This tank was moved inside the plant in 1980.

Other historical areas of concern at the facility include the following:

- American Nickeloid utilized an area between the plant and surface impoundments to burn paints, organic solvents and wooden pallets. There are no official records that document the amount of waste burned in this area, but facility personnel estimated that less than 55 gallons of waste per day was combusted. An outside contractor removed the visibly contaminated soil from the site in 1982. The paint waste site was covered with soil and revegetated after a PADEP inspection.

- American Nickeloid utilizes an area (10 by 50 foot concrete pad) at the southeast corner of the plant building for less than 90 day storage of drums of paint and solvent wastes. Waste solvents stored in this area include ethyl acetate and methyl ethyl ketone.

- A 20,000-gallon No. 6 fuel oil tank was excavated and removed from the property in January 1991. An inspection of the sumps at the time of excavation indicated that the southern sump had leaked and was the source of staining visible in the fill around the wall. The visibly stained soil was removed and eventually disposed of as non-hazardous.

2. Is **groundwater** known or reasonably suspected to be **"contaminated"**[1] above appropriately protective "levels" (i.e., applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?

__X__ If yes - continue after identifying key contaminants, citing appropriate "levels," and referencing supporting documentation.

_____ If no - skip to #8 and enter "YE" status code, after citing appropriate "levels," and referencing supporting documentation to demonstrate that groundwater is not "contaminated."

_____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

The American Nickeloid Company occupies 40 acres adjacent to the Lehigh Canal within the Great Valley sub-section of the Valley and Ridge Physiographic Province. The facility is underlain by approximately 15 feet of unconsolidated deposits, including cinder fill and slate rubble, in addition to alluvium, slate chip gravel, gravelly clay and outwash. These deposits are underlain by a one to ten foot thick zone of the weathered Ordovician Age Martinsburg Formation. The Penn Argyl member of the Martinsburg Formation is the upper-most bedrock unit underlying the facility. This bedrock is comprised of a medium to dark gray carbonaceous slate, calcareous slate, and tannish gray metagraywacke-metasandstone.

The shallow aquifer beneath the former surface impoundments is unconfined, with an approximate saturated thickness ranging from 10 to 20 feet. The saturated portion of the shallow aquifer includes the poorly sorted Illinoian Outwash and the weathered, upper portion of the Martinsburg Formation. The discharge of groundwater from beneath the former surface impoundments is generally to the west toward the Lehigh Canal and Lehigh River.

The hydrogeologic conditions in the vicinity of the plant are different from those encountered in the area of the surface impoundments. Some of the area around the plant has been excavated, trenched for drainage and filled with broken slate tailings. Other areas are comprised of glacial outwash and colluvial sediments. The aquifer changes from confined to unconfined in the plant area due to the presence of discontinuous clay lenses in the outwash deposits. Groundwater flow in the vicinity of the plant is generally to the north. At the northern end of the plant, it is probable that groundwater flow turns westerly and moves towards the Lehigh Canal/Lehigh River.

1 "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriate "levels" (appropriate for the protection of the groundwater resource and its beneficial uses).

Several monitoring wells have been installed around the surface impoundments and plant building area. Additionally, numerous piezometers and two sumps have been installed inside the plant in the area housing the chromium electroplating operation. Many of these wells and piezometers are sampled either quarterly or annually based on an EPA approved sampling schedule. Below is a discussion of the data associated with the latest available sampling results. The data are fairly representative of the water quality at the facility for the past several years.

The latest available data (associated with a March 23-26, 2004 sampling event) indicate that groundwater concentrations of chromium in the surface impoundment area wells ranged from 0.009 mg/l to 2.288 mg/l. Groundwater concentrations of chromium in the plant area ranged from nondetect (<0.007 mg/l) to 2,414 mg/l. It should be noted that the highest concentration of chromium detected directly outside of the plant building was 0.034 mg/l (MW-5D). The maximum contaminant level (MCL) for chromium in groundwater is 0.1 mg/l. The facility's NPDES Permit (No. PA0011762) has an average concentration limit of 1.71 mg/l. The chromium concentration in a sample collected at the Canal Well located approximately 400 feet west of the manufacturing plant on the banks of the Lehigh Canal was 1.036 mg/l in a sample collected on March 26, 2004.

Copper and nickel concentrations contained in the groundwater are also analyzed per the sampling schedule. All of the samples analyzed in the latest round of groundwater sampling (May 2002) were below the maximum contaminant level goal (MCLG) of 1.3 mg/l for copper. Nickel concentrations in samples collected from the surface impoundment area wells ranged from nondetect (<0.015 mg/l) to 0.265 mg/l. Groundwater concentrations of nickel in the plant area well samples ranged from nondetect to 0.233 mg/l. EPA's risk based concentration (RBC) for nickel in tap water is 0.73 mg/l (EPA's MCL of 0.1 mg/l for nickel was remanded on February 9, 1995). PADEP's medium-specific concentration (MSC) for nickel in a residential used aquifer with total dissolved solids less than 2,500 mg/l is currently 0.1 mg/l for nickel.

Four wells in the former Naptha Storage Area were sampled on March 24, 2004 and analyzed for benzene, ethyl benzene, toluene and xylene. Benzene was not detected in any of the samples collected from these wells. Ethylbenzene was detected in each of the wells at concentrations ranging from 0.1 mg/l to 0.63 mg/l which are below the MCL of 0.7 mg/l. Xylene was also detected at trace concentrations ranging from 0.083 mg/l to 1.8 mg/l, which are below the MCL of 10 mg/l for that substance. One sample was found to contain toluene at a concentration of 0.001 mg/l, which is well below the MCL of 1 mg/l for that substance.

Ref.: Phase II RCRA Facility Investigation Draft Report for the American Nickeloid Company, Prepared by Environmental Resources Management, Inc., 9/18/91; Administrative Order, USEPA Docket No. RCRA-III-060-CA, April 8, 1993; Quarterly Status Reports Required by EPA's Administrative Order, 1993 through July 2004; Final Design for the Corrective Measures Implementation at the American Nickeloid Company, Working Document, prepared by Laurie Shields, American Nickeloid, and Dr. Robert Nelson, Illinois State University, September 1996; Correspondence from Cocciardi and Associates, Inc. to Mr. William Cline, American Nickeloid Company, Excavation of Sump Installation, September 10, 1997; Proposed Corrective Measures Alternative for the Former Naphtha Storage Tank Area at American Nickeloid Company, prepared by Laurie Shields, American Nickeloid, and Dr. Robert Nelson, Illinois State University, November 1998; Comprehensive Groundwater Monitoring Evaluation for American Nickeloid Company, prepared by Lisa Hannigan, PADEP, September 1999.

3. Has the **migration** of contaminated groundwater **stabilized** (such that contaminated groundwater is expected to remain within "existing area of contaminated groundwater"[2] as defined by the monitoring locations designated at the time of this determination)?

__X__ If yes - continue, after presenting or referencing the physical evidence (e.g., groundwater sampling/measurement/migration barrier data) and rationale why contaminated groundwater is expected to remain within the (horizontal or vertical) dimensions of the "existing area of groundwater contamination"[2]).

____ If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the "existing area of groundwater contamination"[2]) - skip to #8 and enter "NO" status code, after providing an explanation.

____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

American Nickeloid Company has been under a RCRA Administrative Order since 1993 to address groundwater contamination at the Walnutport, PA facility. The Administrative Order continues to provide EPA/PADEP with oversight responsibilities for recovery and treatment of groundwater from not only the surface impoundment area, but from the chrome plating area within the plant building as well. American Nickeloid Company treats groundwater from the surface impoundment and chrome plating areas to remove chromium and other metals using an ion exchange process. The groundwater recovery and treatment program has existed at the surface impoundment area since the final impoundment went out of service in 1985. To assist in the groundwater recovery efforts in the plant, two shallow recovery sumps were installed in the chrome plating area of the plant building in August 1997. Chromium contaminated groundwater from these sumps, as well as from a few of the piezometers within the building is collected and treated on-site. The treated groundwater is used for plant processes or is discharged to the Lehigh River via the facility's NPDES permit.

Per the Administrative Order, the groundwater recovery and treatment operation will continue until certain Cleanup Goals and Points of Compliance are met for a period of up to six years (monitoring of wells every two years following total discontinuation of groundwater extraction and three consecutive sampling results indicating levels that do not require further action).

1 "existing area of contaminated groundwater" is an area (with horizontal and vertical dimensions) that has been verifiably demonstrated to contain all relevant groundwater contamination for this determination, and is defined by designated (monitoring) locations proximate to the outer perimeter of "contamination" that can and will be sampled/tested in the future to physically verify that all "contaminated" groundwater remains within this area, and that the further migration of "contaminated" groundwater is not occurring. Reasonable allowances in the proximity of the monitoring locations are permissible to incorporate formal remedy decisions (i.e., including public participation) allowing a limited area for natural attenuation.

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Off-site migration of groundwater contamination in the surface impoundment area has been effectively controlled by the recovery system in place. Prior to May 2003, it was questionable whether chromium contaminated groundwater could be migrating from the northwestern portion of the impoundment area to the west toward the Lehigh Canal. In May 2003, American Nickeloid converted monitoring well B-2 into a groundwater recovery well, which when pumped in conjunction with recovery wells B-6 and B-13, prevents the contaminated groundwater from reaching the canal. Prior to pumping well B-2, quarterly concentrations of total chromium had ranged from 0.6 - 1.0 mg/l at that location. Chromium concentrations have increased to 1.5 - 2.0 mg/l since pumping operations began at B-2 indicating that significant concentrations of that contaminant are being captured..

As mention previously in the response to Question No. 2 above, groundwater concentrations of chromium in the plant area ranged from nondetect (<0.007 mg/l) to 2,414 mg/l. The highest concentrations of chromium were detected beneath the chrome plating area within the building. The highest concentration of chromium in groundwater directly outside of the building was 0.034 mg/l at well MW-5D. The maximum contaminant level (MCL) for chromium in groundwater is 0.1 mg/l. These data indicate that the groundwater recovery system within the building is preventing the migration of contamination away from the building.

The Canal Well, located on the banks of the Lehigh Canal approximately 400 feet west of the manufacturing plant, contained chromium at 1.036 mg/l in a sample collected on March 26, 2004. Groundwater at this location is believed to discharge directly into the Lehigh Canal.

Ref.: Phase II RCRA Facility Investigation Draft Report for the American Nickeloid Company, Prepared by Environmental Resources Management, Inc., 9/18/91; Administrative Order, USEPA Docket No. RCRA-III-060-CA, April 8, 1993; Quarterly Status Reports Required by EPA's Administrative Order, 1993 through 2002; Final Design for the Corrective Measures Implementation at the American Nickeloid Company, Working Document, prepared by Laurie Shields, American Nickeloid, and Dr. Robert Nelson, Illinois State University, September 1996; Correspondence from Cocciardi and Associates, Inc. to Mr. William Cline, American Nickeloid Company, Excavation of Sump Installation, September 10, 1997; Proposed Corrective Measures Alternative for the Former Naphtha Storage Tank Area at American Nickeloid Company, prepared by Laurie Shields, American Nickeloid, and Dr. Robert Nelson, Illinois State University, November 1998; Comprehensive Groundwater Monitoring Evaluation for American Nickeloid Company, prepared by Lisa Hannigan, PADEP, September 1999.

4. Does "contaminated" groundwater **discharge** into **surface water** bodies?

_X_ If yes - continue after identifying potentially affected surface water bodies.

____ If no - skip to #7 (and enter a "YE" status code in #8, if #7 = yes) after providing an explanation and/or referencing documentation supporting that groundwater "contamination" does not enter surface water bodies.

____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

As mentioned in the answer to question no. 3 above, a sample collected from the Canal Well on March 26, 2004 contained chromium at 1.036 mg/l. The MCL for chromium is 0.1 mg/l. Over the past 10 years, chromium concentrations in the Canal Well have ranged from nondetect (<0.007 mg/l) to 12.17 mg/l. Trace concentrations or nondetected amounts of chromium were typically seen in samples from this well until approximately mid-2002. A sharp rise in the total chromium concentration was seen at that time, but this does not seem to correlate with the chromium data at any of the other monitoring well locations. This time frame does correspond with a period of drought for Pennsylvania which could account for the spike observed in chromium concentrations. Lehigh County had drought emergency status throughout the spring and summer of 2002. As the drought conditions have subsided in Lehigh County, the chromium concentrations have abated as well.

Ref.: Quarterly Status Reports Required by EPA's Administrative Order, 1993 through July 2004; PADEP News Release, Governor Schweiker Extends Drought Emergency in 20 PA Counties, May 8, 2002.

5. Is the **discharge** of "contaminated" groundwater into surface water likely to be **"insignificant"** (i.e., the maximum concentration[3] of each contaminant discharging into surface water is less than 10 times their appropriate groundwater "level," and there are no other conditions (e.g., the nature, and number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?

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____ If yes - skip to #7 (and enter "YE" status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration[3] of key contaminants discharged above their groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) provide a statement of professional judgement/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.

__X__ If no - (the discharge of "contaminated" groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration[3] of each contaminant discharged above its groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations[3] greater than 100 times their appropriate groundwater "levels," the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identify if there is evidence that the amount of discharging contaminants is increasing.

____ If unknown - enter "IN" status code in #8.

Rationale and Reference(s):

The chromium concentration in the Canal Well (1.036 mg/l) in the latest available sample is marginally greater than 10 times the MCL for that contaminant (0.1 mg/l) and is therefore considered significant as defined in the question above. The trend for chromium over the past four quarterly monitoring events indicates decreasing concentrations over time.

Ref.: Quarterly Status Reports Required by EPA's Administrative Order, 1993 through July 2004

3 As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

6. Can the **discharge** of "contaminated" groundwater into surface water be shown to be "**currently acceptable**" (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented[4])?

X If yes - continue after either: 1) identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site's surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR 2) providing or referencing an interim-assessment,[5] appropriate to the potential for impact, that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialists, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment "levels," as well as any other factors, such as effects on ecological receptors (e.g., via bio-assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.

____ If no - (the discharge of "contaminated" groundwater can not be shown to be "**currently acceptable**") - skip to #8 and enter "NO" status code, after documenting the currently unacceptable impacts to the surface water body, sediments, and/or eco-systems.

____ If unknown - skip to 8 and enter "IN" status code.

4 Note, because areas of inflowing groundwater can be critical habitats (e.g., nurseries or thermal refugia) for many species, appropriate specialist (e.g., ecologist) should be included in management decisions that could eliminate these areas by significantly altering or reversing groundwater flow pathways near surface water bodies.

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[5] The understanding of the impacts of contaminated groundwater discharges into surface water bodies is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration to be reasonably certain that discharges are not causing currently unacceptable impacts to the surface waters, sediments or eco-systems.

Rationale and Reference(s):

Although the latest available analytical results from a sample collected from the Canal Well indicates a chromium concentration approximately 10 times the MCL, the chromium concentration is below the facility's NPDES average discharge limit of 1.71 mg/l and therefore is not expected to have a significant impact on that water body. Historical analytical data indicate that groundwater chromium concentrations have been steadily decreasing at the Canal Well location for the past year and that the spikes in chromium concentrations were likely attributable to the drought conditions experienced in Lehigh County, PA in 2002.

Ref.: Quarterly Status Report Required by EPA's Administrative Order, July 2004; PADEP News Release, Governor Schweiker Extends Drought Emergency in 20 PA Counties, May 8, 2002.

7. Will groundwater **monitoring** / measurement data (and surface water/sediment/ecological data, as necessary) be collected in the future to verify that contaminated groundwater has remained within the horizontal (or vertical, as necessary) dimensions of the "existing area of contaminated groundwater?"

X If yes - continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify the well/measurement locations which will be tested in the future to verify the expectation (identified in #3) that groundwater contamination will not be migrating horizontally (or vertically, as necessary) beyond the "existing area of groundwater contamination."

____ If no - enter "NO" status code in #8.

____ If unknown - enter "IN" status code in #8.

Rationale and Reference(s):

Per the Administrative Order, the groundwater recovery and treatment operation will continue until certain Cleanup Goals and Points of Compliance are met for a period of up to six years (monitoring of wells every two years following total discontinuation of groundwater extraction and three consecutive sampling results indicating levels that do not require further action).

Ref.: Phase II RCRA Facility Investigation Draft Report for the American Nickeloid Company, Prepared by Environmental Resources Management, Inc., 9/18/91; Administrative Order, USEPA Docket No. RCRA-III-060-CA, April 8, 1993; Quarterly Status Reports Required by EPA's Administrative Order, 1993 through July 2004.

8. Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).

_X_ YE - Yes, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI determination, it has been determined that the "Migration of Contaminated Groundwater" is "Under Control" at the **American Nickeloid Company** facility, EPA ID # **PAD002399285** , located at **129 Cherry Street, Walnutport, PA 18088**. Specifically, this determination indicates that the migration of "contaminated" groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing area of contaminated groundwater" This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

_____ NO - Unacceptable migration of contaminated groundwater is observed or expected.

_____ IN - More information is needed to make a determination.

Completed by (signature) /s/ Date 9/28/2004
(print) Andrew Clibanoff
(title) RCRA Project Manager

Supervisor (signature) /s/ Date 9/30/2004
(print) Paul Gotthold
(title) Chief, PA Operations Branch
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