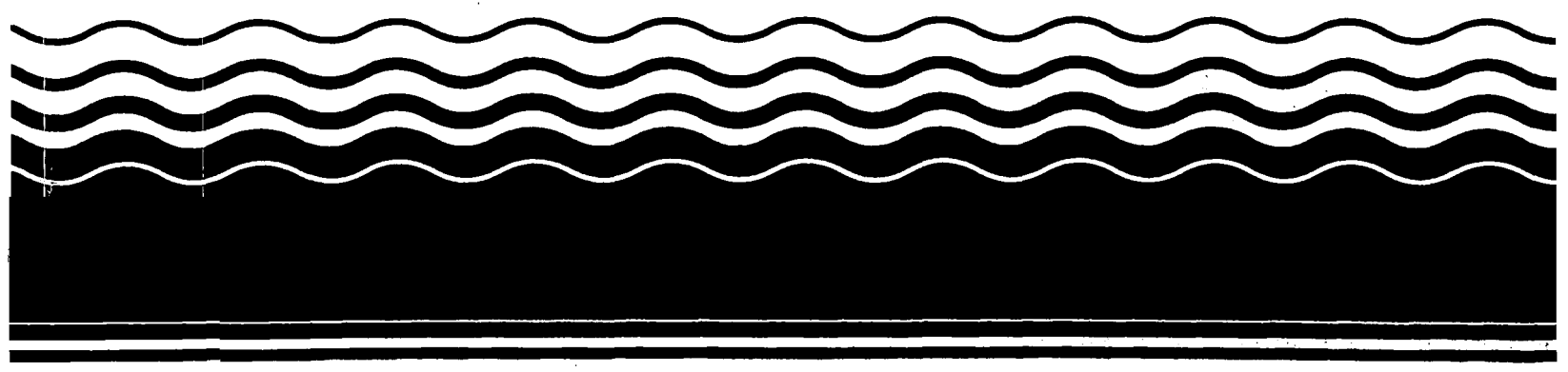


**PB97-963815
EPA/541/R-97/107
January 1998**

**EPA Superfund
Record of Decision:**

**Curcio Scrap Metal Inc., OU 2
Saddle Brook, NJ
9/30/1997**



DECISION DECLARATION

RECORD OF DECISION

CURCIO SCRAP METAL, INC. SITE

SITE NAME AND LOCATION

Curcio Scrap Metal, Inc.
Saddle Brook, Bergen County, New Jersey

STATEMENT OF BASIS AND PURPOSE

This Record of Decision presents the selected No Further Action remedy for the Curcio Scrap Metal Site, in Saddle Brook, Bergen County, New Jersey. The remedy was developed in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, 42 U.S.C. §9601, et seq., and to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), as amended, 40 CFR Part 300.

The New Jersey Department of Environmental Protection (NJDEP) concurs with the selected remedy. A copy of the concurrence letter can be found in Attachment 1. The information supporting this remedial action decision is contained in the Administrative Record for this Site, the index of which is Attachment 2 to this document.

DESCRIPTION OF THE SELECTED REMEDY

The U.S. Environmental Protection Agency (EPA), in conjunction with NJDEP, has determined that no further remedial action is necessary at the Curcio Scrap Metal Site. The removal of contaminated materials by the Potentially Responsible Parties (PRPs) in 1994 was successful in remediating the principal threats associated with the Site.

The major components of the No Further Action remedy are:

- Implementation of a groundwater monitoring program to monitor contaminants in the groundwater. Groundwater samples will be collected and analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) and Target Analyte List (TAL) inorganic compounds for the first year on approximately a quarterly basis. Special analytical services will be used, where appropriate, in the analytical procedures to minimize any variability of data. The monitoring program may be modified based upon sampling results collected during the first year. Currently, EPA and NJDEP do not believe that additional groundwater monitoring wells will be required for the purpose of the sampling program. However, if the results of the initial rounds of sampling indicate that additional wells are necessary, then they will be installed.

- A Classification Exception Area (CEA) will be established by NJDEP to provide information on contamination in the groundwater resulting from Site operations. The CEA will remain in effect until contaminant levels are below New Jersey Groundwater Quality Standards. NJDEP may establish a Well Restriction Area (WRA) if groundwater contamination associated with the Site should be determined to impact potential users. By establishing a WRA, NJDEP can assure that contaminants in the groundwater will not pose a threat to human health as a result of well installation and operations;
- After five years, or less, if the sampling and analyses indicate the need for action, the potential risks to human health and the environment will be reassessed. The groundwater monitoring would then either continue for another five-year period, or some other action will be considered. If monitoring reveals that contamination at the Site increases so that an unacceptable risk to human health or the environment develops, an appropriate action can be initiated at any time during the five-year period to address the risks. The CEA will remain in effect until constituents in the groundwater do not exceed established drinking water standards.

DECLARATION

In accordance with CERCLA and the NCP, EPA and NJDEP have determined that all remedial actions for the Curcio Scrap Metal Site have been successfully implemented and no further response actions are necessary to ensure the protection of human health and the environment.

In lieu of a Final Close Out Report, this Record of Decision also documents that the PRPs have completed all construction activities for the Site in accordance with *Close Out Procedures for National Priorities List Sites* (OSWER Directive 9320.2-09). Therefore, the response at the Curcio Scrap Metal Site is complete and it now qualifies for inclusion on the Construction Completion List. However, a five year review will be performed since contaminants remain on the Site above health protective levels.



Jeanne M. Fox, Regional Administrator
U.S. Environmental Protection Agency - Region 2

9/30/11

Date

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DECISION SUMMARY
RECORD OF DECISION
CURCIO SCRAP METAL, INC. SITE

1. INTRODUCTION

This Decision Document presents the No Further Action remedy for the Curcio Scrap Metal, Inc. Site (the Site) located in Saddle Brook, Bergen County, New Jersey. The selected remedy for the Site was chosen in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, 42 U.S.C. §9601, et seq., and to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), as amended, 40 CFR Part 300. This decision document serves to explain the factual and legal basis for selecting the No Further Action remedy for this Site.

The information supporting the No Further Action remedy is contained in the administrative record for this Site. This Decision Document includes a Decision Declaration, Decision Summary and a Responsiveness Summary.

2. SITE LOCATION AND DESCRIPTION

The Curcio Scrap Metal, Inc. Site is located at 416 Lanza Avenue in Saddle Brook, New Jersey. The Site includes, but is not limited to, the real property where two active scrap metal recycling businesses operate; Curcio Scrap Metal, Inc., (CSMI) and Cirello Iron and Steel Company (CISC) (see Figure 1 in Attachment 3). The Site is approximately one acre in size and contains two single story buildings which are used primarily as warehouses. It is bordered by Lanza Avenue on the north, Walther Avenue on the south, a light industrial site on the east and Midland Avenue on the west. The area surrounding the Site is comprised of residential homes and industrial properties.

The Site is subdivided into the East, West and South Lots. CSMI and CISC conduct their business from the buildings located on the West and South Lots (see Figure 1). With the exception of two narrow passageways, all the areas of the West and South Lots are paved. A ten-inch thick reinforced concrete slab currently covers the entire area of the East Lot; however, the East Lot had been unpaved until the completion of the EPA selected remediation of its soils in 1994. The East Lot measures approximately 90 by 100 feet.

3. SITE HISTORY AND ENFORCEMENT ACTIVITIES

Salvaging operations began at the Site in the early 1950's, by Mr. Curcio's father. Prior to this time, the land was used for dairy farming. In 1952, Mr. Curcio purchased the East and West Lots; in 1981, he purchased the South Lot. Initially, only rags and paper were recycled. Later, aluminum and copper were stored and recycled at the Site. Today, CSMI and CISC deal with the collection and compaction of scrap iron, aluminum, and other ferrous and non-ferrous metals. In 1977, the original structures on the Site were demolished, the present main building was erected and sections of the West Lot were paved. In 1978, the truck scale and scale control shed were constructed on the northern edge of the East Lot. The structures at the Site have remained essentially unchanged since 1985.

The New Jersey Department of Environmental Protection (NJDEP) conducted an initial investigation of the Site in October 1982. During this investigation, several disassembled transformers were observed on the Site. Puddles of oil also were observed on the ground beneath and adjacent to the transformers. Samples of the puddles were collected, analyzed and elevated concentrations of polychlorinated biphenyls (PCBs) were detected. Further investigation revealed that transformers containing PCBs were purchased by SECO Corporation from Consolidated Edison Company of New York, Inc. (Con Ed) and subsequently sold to and transported to CSMI by SECO. At least three documented PCB spills have occurred on the Site.

At NJDEP's request, EPA conducted a preliminary assessment of the Site in April 1984. In September 1984, EPA performed a subsequent Site inspection which revealed the presence of hazardous substances such as PCBs, trichloroethylene, copper, lead and nickel, among other substances, in Site soils.

The Site was placed on the National Priorities List (NPL) in July 1987. On May 27, 1988, EPA entered into an Administrative Order on Consent (ACO) with CSMI, SECO Corporation and Con Ed (collectively referred to as 'Respondents'). The ACO required the performance of a Remedial Investigation and Feasibility Study (RI/FS) at the Site in order to determine the nature and extent of contamination along with alternatives to address that contamination.

The RI was conducted from July 1989 through October 1990 and addressed soil and shallow groundwater contamination. Based on the results of the investigation and the elevated risk posed by the contaminated soil, EPA determined that the cleanup of contaminated soil would be addressed on an expedited basis. Consequently, the Site was divided into two operable units (OUs), or phases. Operable Unit One (OU-1) addressed soil and shallow groundwater contamination. The cleanup of the soils was completed in January 1994. A detailed description of the OU-1 remedial action activities is included in the March 1994 *Remedial Action Report for Operable Unit One: East Lot Soils*, which is included in the Administrative Record. A summary of the soil remediation is presented in Sections 5.1 and 5.2 of this document.

EPA determined that additional groundwater investigation was required in order to fully assess the nature and extent of groundwater contamination, therefore, the groundwater was designated as Operable Unit Two (OU-2). The OU-2 RI for groundwater was conducted from January 1996 to January 1997. A detailed description of the OU-2 groundwater investigation activities is included in the March 1997 *Final Groundwater Investigation Report - Operable Unit 2*, which is included in the Administrative Record and is summarized later in this document. A summary of these findings is presented in sections 5.1 through 5.6 of this document.

4. COMMUNITY RELATIONS HISTORY

Throughout the RI/FS process for both operable units, representatives from EPA and NJDEP have attended meetings with the public concerning the Site. In February 1991, EPA presented its preferred remedial approach for Site soils which outlined the excavation of contaminated soils with off-site disposal. The first public meeting was held on February 21, 1991 to brief interested parties, discuss the RI/FS process for contaminated soils and present EPA and NJDEP's preferred remedial approach of excavation of soils with off-site disposal. A public comment period was established from February 8, 1991 to March 11, 1991, during which time EPA and NJDEP welcomed any verbal and/or written comments or questions on the proposed remedy.

The Administrative Record is a comprehensive collection of all records relating to the selection of the No Further Action remedy for the Site. An information repository has been established for both OUs at the Saddle Brook Memorial Library, as well as EPA offices in New York City. The Index for the OU-2 Administrative Record is Attachment 2 to this Decision Document.

The Proposed Plan, which presented the preferred No Further Action remedy for groundwater, was released to the public for comment in July 1997. The notice of availability of this document was announced by means of a newspaper advertisement in the *Bergen Record* on July 30, 1997. Notices were also mailed to the area residents and other concerned parties identified for this Site. A public comment period was established from July 30, 1997 to August 28, 1997, during which time EPA and NJDEP welcomed any verbal and/or written comments or questions on the proposed No Further Action remedy.

In addition, a public meeting was held during the public comment period, on August 6, 1997 at the Saddle Brook Memorial Library. At this meeting, representatives from EPA and NJDEP presented Site background information and the rationale for the proposed No Further Action remedy and answered questions about the Site. Responses to significant comments and concerns received during the public comment period are included in the Responsiveness Summary, which is Attachment 4 to this document.

5. SITE CHARACTERISTICS SUMMARY

An RI was conducted from July 1989 through October 1990 and addressed soil and shallow groundwater contamination. Based on the results of the investigation and the elevated risk posed

by the contaminated soil, EPA determined that the cleanup of contaminated soil would be addressed on an expedited basis. Consequently, the Site was divided into two OUs. Operable Unit One (OU-1) RI addressed soil and shallow groundwater contamination. The cleanup of the soils was completed in January 1994.

EPA determined that additional groundwater investigation was required in order to fully assess the nature and extent of groundwater contamination, therefore, the groundwater was designated as OU-2. This is the last planned OU for this Site. This ROD addresses the groundwater investigation conducted as part of OU-2 for the Site. During the OU-2 RI for groundwater, EPA and NJDEP evaluated contamination detected in Site groundwater. The OU-2 RI for groundwater was conducted from January 1996 through January 1997.

The findings of the RI's for both OUs are summarized as follows:

5.1 OU-1 RI Findings: SOIL [July 1989 - October 1990]

The soil investigation portion of the OU-1 RI characterized the extent of the soil contamination through the collection and analyses of soil samples from 47 soil borings obtained at two-foot vertical intervals. Of this total, 36 samples were collected from the East Lot. All borings extended to the water table, which is approximately six feet below grade. Each sample was analyzed for volatile organic compounds (VOCs), semi-VOCs, PCBs and inorganic compounds. The results revealed the presence of organic and inorganic substances, with a wide range of concentrations, in Site soils in and around the East Lot. Tetrachloroethylene was detected at a level of 28 parts per million (ppm), trichloroethylene was detected at 6 ppm, and arsenic was detected at 55.6 ppm. The maximum lead concentration detected was 39,300 ppm. PCB levels in the soil ranged from levels of non-detectable to 6,200 ppm.

5.2 OU-1: Remediation of Soils [September 1993 - January 1994]

In June 1991, EPA issued a ROD for OU-1. The ROD called for excavation and off-Site incineration of the contaminated soil. The cleanup level was established to be 1 ppm for PCBs. In September 1991, EPA issued an Administrative Order (Index No. II-CERCLA-10113) requiring the Respondents to remediate the soil in accordance with the ROD.

Because of a nationwide shortfall in incineration capacity for PCB-contaminated materials that occurred after the issuance of the ROD, EPA determined in an Explanation of Significant Difference, dated August 1992, that it was necessary to allow disposal of soils containing less than 1,000 ppm of PCB at a landfill permitted under both the Resource Conservation and Recovery Act (RCRA) and the Toxic Substances Control Act (TSCA) in order to proceed with the remedial action in a timely fashion. This revised remedial approach differed from the ROD only with regard to the off-Site disposition/treatment of the contaminated soil. The on-Site soil cleanup level of 1 ppm

for PCBs, selected in the ROD, remained unchanged.

The OU-1 cleanup was performed during the period from September 1993 through January 1994. The Respondents selected CH2M HILL to perform the remedial design and Westinghouse Remediation Services to conduct the remedial action activities. EPA's contractor, Camp Dresser & McKee (CDM), and the Respondents contractor, CH2M HILL, provided full time oversight of field activities during implementation of the remedial action. Approximately 3,000 tons of contaminated soil were excavated and removed from the Site. Approximately 500 tons of contaminated soil was transported off-Site for disposal at the Aptus Incinerator in Coffeyville, Kansas. Approximately 2,500 tons of contaminated soil was transported off-Site for disposal at the Chemical Waste Management Landfill facility in Model City, New York. When confirmatory sampling indicated that the cleanup level was achieved, the area was backfilled with clean soil and a ten-inch thick reinforced concrete slab was installed over the East Lot. EPA conducted a final inspection on January 19, 1994 and determined that all remedial actions were successfully implemented by the PRPs. A detailed description of the OU-1 remedial action activities is included in the EPA approved March 1994 *Remedial Action Report for Operable Unit One: East Lot Soils*, which is included in the Administrative Record.

5.3 Hydrology

The Site is situated above a fractured bedrock aquifer called the Passaic Formation of the Brunswick Group. An aquifer is a geological formation composed of materials such as sand, soil or gravel capable of supplying groundwater to wells and springs. The aquifer supplies water to public and private wells in the area. The aquifer is a consolidated formation in which groundwater is stored in, and moves through interconnected fractures in the bedrock.

A conceptual model of the aquifer depicts a leaky, multi-unit aquifer system consisting of thin water-bearing units and much thicker intervening aquitards. An aquitard, or confining unit, is characterized by low permeability and does not readily permit water to pass through it, see Figure 2. Confining units generally store large quantities of water. Groundwater flow within the water-bearing units is primarily along fractures. Fractures are commonly of two types: horizontal bedding planes or vertical fractures that cross bedding planes.

Geophysical logging of all boreholes was performed to define the lithology and fractures and to help determine bedrock stratigraphy and structure. Three hydrogeologic zones characterize groundwater conditions within and between the overburden and bedrock at the Site. The three hydrogeologic zones are: the Overburden Water Bearing zone; transition zone; and the Upper Bedrock Aquifer zone.

Based on water level measurements, the direction of groundwater flow was determined to be northeasterly in both the Overburden Water Bearing zone and the Upper Bedrock Aquifer zone. Shallow groundwater, located at a depth ranging between approximately 5 feet to 15 feet below ground surface, is considered to be the Overburden Water Bearing zone. Groundwater in the Overburden Water Bearing zone generally flows in a northeasterly direction. However, changes in the stratigraphy in the easternmost portion of the Site cause a general upgradient flow from the Upper Bedrock Aquifer zone to the Overburden Water Bearing portion of the aquifer. This may limit the vertical migration of contaminants to the deeper bedrock zone. Because of the upward hydraulic head in the Upper Bedrock Aquifer zone in relation to the Overburden Water Bearing zone, there is limited potential for downward flow of water into the Upper Bedrock Aquifer zone within the eastern portion of the East Lot.

5.4 OU-1 RI Findings: Groundwater [July 1989 - October 1990]

The groundwater investigation portion of the OU-1 RI characterized the extent of the contamination in the Overburden Water Bearing zone. As part of the OU-1 RI, in July 1989, six groundwater monitoring wells were installed on the Site. Groundwater samples were collected in August 1989, November 1989, and July 1990. In addition, five temporary well points were installed during the July 1990 sampling event.

Elevated concentrations of VOCs, inorganic compounds and PCBs were detected in the groundwater monitoring wells and temporary well points installed on the East Lot. Vinyl chloride was detected at a level of 160 parts per billion (ppb), tetrachloroethylene was detected at 35 ppb, and methylene chloride was detected at 15 ppb. Lead was detected at a level of 610 ppb and cadmium was detected at 18.6 ppb. PCBs were found at concentrations ranging from non-detect to 10 ppb.

An additional round of groundwater sampling was conducted in September 1993, prior to commencement of the OU-1 soil cleanup activities. PCBs, VOCs and inorganic contaminants were detected at elevated levels. It was necessary to remove the existing monitoring wells installed for the RI because they were located in the East Lot, which was the area to be excavated for the selected soil remedy. Therefore, all of the wells except monitoring well MW-2, which was located in the South Lot, were removed in 1993.

5.5 OU-2: Groundwater Investigation [January 1996 - January 1997]

Subsequent to the remediation of the contaminated soils and the mitigation of the risks associated with the contaminated soils, the Respondents conducted the OU-2 RI, pursuant to the May 1988 ACO, in order to determine the nature and extent of the groundwater contamination.

The Respondents began the groundwater investigation field work in January 1996 and concluded in January 1997. The purpose of the groundwater investigation was to determine the extent of groundwater contamination in the Overburden Water Bearing zone; identify the stratigraphy of deeper portions of the aquifer underlying the Site; and to determine the overall quality of the groundwater at the Site.

The groundwater investigation consisted of the following: installation of six additional monitoring wells; collection of four rounds of groundwater samples from all wells; analyses of all samples for Target Compound List (TCL) VOCs, Target Analyte List (TAL) metals and PCBs; comprehensive analysis of all the data gathered; and assessment of the groundwater quality underlying the Site.

The six monitoring wells were installed at the Site in January 1996. Three overburden monitoring wells were installed in the Overburden Water Bearing zone at depths ranging from ten to fifteen feet below ground surface. The overburden monitoring wells are denoted as MW-1R, MW-3R, and MW-4R. The letter "R" indicates that the new wells were *replaced* in the location of the previous wells which were removed during the OU-1 soil cleanup. MW-2 remained in place from the 1989 RI. Three bedrock monitoring wells were installed at depths ranging from 51 to 68 feet in the Upper Bedrock Aquifer zone. The bedrock wells are denoted as BR-1, BR-2 and BR-3. See Figure 3 for monitoring well locations.

Groundwater in all seven monitoring wells was sampled on a quarterly basis for one year. The four groundwater sampling events occurred in March 1996 (round one), June 1996 (round two), October 1996 (round three), and January 1997 (round 4). All on-Site activities (i.e., installation of wells, collection of samples) were performed by the Respondents, under EPA oversight. EPA collected split samples throughout all four rounds of sampling.

Analytical results from all groundwater samples were compared to federal Maximum Contaminant Levels (MCLs), which are regulatory levels EPA uses to determine if potable drinking water is of acceptable quality, and NJDEP specific Class II-A Groundwater Quality Standards (GWQS) (N.J.A.C. 7:9-6 et seq), which NJDEP promulgated for groundwater in New Jersey. The sampling and analytical work was conducted in accordance with approved quality assurance/quality control (QA/QC) plans.

At the conclusion of the groundwater investigation in January 1997, over 200 groundwater samples had been collected and analyzed. In addition to the data analyses, Site geological investigation and characterization was performed in order to fully assess groundwater conditions at the Site.

The findings of the OU-2 Groundwater Investigation are discussed below in the following sections:

- 5.5.1: Upper Bedrock Aquifer zone - monitoring well investigation findings;
- 5.5.2: Overburden Water Bearing zone - monitoring well investigation findings;
- 5.5.3: Residential well findings.

The analytical results of all groundwater sampling is presented in the March 1997 *Final Groundwater Investigation Report - Operable Unit 2*. The information provided in the following subsections is a brief summary of the elevated concentrations of the contaminants detected in the groundwater during the OU-2 RI.

5.5.1 Upper Bedrock Aquifer zone - Monitoring Well Investigation Findings

Groundwater samples were collected from the three monitoring wells installed in the Upper Bedrock Aquifer zone, BR-1, BR-2 and BR-3, on a quarterly basis beginning in March 1996 and concluding in January 1997 (see Figure 3 for monitoring well locations). These wells range in depth from 51 - 68 feet below the ground surface, see Figure 2. Table 1 contains a list of those chemicals which were detected at elevated concentrations in the monitoring wells located in the Upper Bedrock Aquifer zone.

In two of the three Upper Bedrock Aquifer zone wells, no VOCs were detected at levels exceeding the NJDEP GWQS and/or federal MCLs. In BR-1, only *trichloroethylene (TCE)* was detected at 1.1 ppb and 1.9 ppb. The GWQS for TCE is 1 ppb and the MCL is 5 ppb.

The following inorganic compounds were detected at concentrations exceeding the NJDEP GWQS and/or federal MCLs: aluminum, arsenic, lead and thallium.

In BR-3, *Aluminum* concentrations ranged from 296 ppb to 416 ppb. The state GWQS and federal MCL for aluminum is 200 ppb.

Arsenic concentrations, in all three bedrock wells, ranged from 1.6B ppb to 12.2 ppb. The GWQS for arsenic is 8 ppb and the MCL is 50 ppb. The data indicate that six of the twenty-four samples analyzed had a "B" qualifier. This "B" qualifier indicates that the integrity of the sample is suspect and the presence of arsenic may be considered a false positive.

During the last sampling event, *lead* was detected in two of the three wells at concentrations ranging from 5.7 ppb to 29.8 ppb. For lead, the GWQS is 5 ppb and the federal action level is 15 ppb.

Thallium was not detected during the March and June 1996 sampling events. During the October 1996 sampling event, thallium was detected in two wells at concentrations of 3.2B ppb and 3.6B ppb. During the January 1997 groundwater sampling event, 3.2B ppb thallium was detected in BR-3. EPA's split sample result indicated thallium at 10.6 ppb during the January 1997 round of sampling. The GWQS for thallium is 10 ppb and the MCL is 2 ppb. The data indicate that three of the twenty-four samples analyzed had a "B" qualifier. This "B" qualifier indicates that the integrity of the sample is suspect and the presence of thallium may be considered a false positive.

Due to some variability in the analytical results for arsenic and thallium during the groundwater investigation, special analytical procedures will be performed during future sampling events which are expected to yield less variable results.

5.5.2 Overburden Water Bearing zone - Monitoring Well Investigation Findings

Groundwater samples were collected from the four monitoring wells installed in the Overburden Water Bearing zone, MW-1R, MW-2, MW-3R and MW-4R, on a quarterly basis beginning in March 1996 and concluding in January 1997 (see Figure 3 for monitoring well locations). The depths of these wells range in depth from ten to fifteen feet below the ground surface (see Figure 2). The results indicate that the northeast corner of the Site (MW-3R and MW-4R) is impacted the most by Site contaminants. Table 2 contains a list of those chemicals which were detected at elevated concentrations in the monitoring wells located in the Overburden Water Bearing zone.

The results of the sampling indicate that three VOCs, vinyl chloride, benzene and trichloroethylene, were detected at concentrations exceeding state GWQS and/or federal MCLs. Vinyl chloride was detected in MW-3R at concentrations ranging up to 7.3 ppb. Benzene was detected at concentrations of 2.9 ppb to 16 ppb. Trichloroethylene was detected at concentrations ranging from 2.7 ppb to 19 ppb. For a comparison of these numbers to the health based levels, please see Table 2.

In addition, the sampling results indicate that the following inorganic compounds were detected at concentrations exceeding the GWQS and/or MCLs: aluminum, arsenic, iron, lead, manganese, sodium, and thallium. Aluminum was detected at concentrations ranging from 147 ppb to 12,700 ppb. Arsenic was detected at concentrations ranging from 95 ppb to 226

ppb. Iron was detected at concentrations ranging from 158 ppb to 38,700 ppb. Lead was detected at concentrations ranging from 11 ppb to 47 ppb. Manganese was detected at concentrations ranging from 51 ppb to 8,530 ppb. Thallium was detected at concentrations ranging from 3B ppb to 15 ppb. This "B" qualifier indicates that the integrity of the sample is suspect and the presence of thallium may be considered a false positive. For a comparison of these numbers to the health based levels, please see Table 2.

It should be noted that the water in the Overburden Water Bearing zone is not currently being used as a potable water source. In the Overburden Water Bearing zone, the soil is characterized as unstratified with low permeability and low yields (less than 2 gallons per minute (gpm)). Aquifer yields of greater than 2 gpm are required for residential, agricultural or commercial use. Therefore, the Overburden Water Bearing zone portion of the aquifer does not produce sufficient quantities of water to readily serve as a reliable long term potable source.

5.5.3 Residential Well Findings

As part of the groundwater investigation, the Respondents conducted an updated well record search. The updated well record search indicated that there are no private wells in a downgradient direction within one mile of the Site and within the Overburden Water Bearing zone or the Upper Bedrock Aquifer zone. There is one private well, located twenty-five feet upgradient from the Site, which was sampled in February 1997. No organic or inorganic contaminants were found to be present in this well at levels above established drinking water standards.

Residents in the vicinity of the Site receive their water from public water supply wells which are operated by the municipalities of Garfield, Lodi and Fair Lawn. The township of Garfield operates two municipal wells, which are approximately one mile upgradient of the Site. The townships of Lodi and Fair Lawn operate municipal wells within two to three miles in the area of the Site. In addition, the water drawn from the public water supply wells that are operated by the municipalities of Garfield, Lodi and Fair Lawn, is currently being treated, prior to distribution, for the presence of VOCs which are not suspected to be related to the Site. The average depth of all of these municipal supply wells is approximately 400 feet below ground surface.

5.6 SURFACE WATER AND SEDIMENTS

In June 1995, as part of the OU-1 soil remediation Site activities, the Respondents remediated a small body of standing surface water (Area 1) and associated sediments (Area 2) of Schroeder's Brook, located nearby the Site (please see Figure 4). These areas are located along the NJ Transit railroad tracks, just south of the Route 46 overpass bridge, approximately 300 feet to the east of the Site. Sampling indicated that No. 2 fuel oil was present on the top layer of the small body of standing surface water. The oil was absorbed onto absorbent pads designed for cleaning up oil spills. Stones, along the edges of the small surface water body, which were suspected to be contaminated were washed with high pressure water or steam. The wash water was collected, the recovered oily material and absorbent pads were all collected, containerized and disposed off-site in a permitted facility.

In addition, contaminated stream sediments in Area 2 were excavated to an approximate depth of four feet. Excavation began at the western (upstream) end of Area 2 and progressed to the eastern (downstream) end. Confirmatory sampling indicated that the cleanup level was achieved. The sediments were then solidified and shipped off-site for disposal.

These two areas were then restored to form a rock lined channel that meets the State of New Jersey's erosion and sediment control standards. A stabilizing mesh fencing was placed over the stone backfill. A total of 88.5 tons of stone backfill was used for the restoration.

A detailed description of the Area 1 and Area 2 cleanup activities is included in the August 1995 *Remedial Action Report - Sediment Area*, which is included in the Administrative Record.

6. SITE RISK SUMMARY

The RI for OU-1 was conducted from July 1989 through October 1990 and addressed soil and shallow groundwater contamination. In December 1990, EPA performed a risk assessment to characterize potential risks to public health from exposure to soils at the Site. Risks were estimated to be high primarily due to the high levels of metals and polychlorinated biphenyls (PCBs) detected in soils on and around the East Lot. Based on the high concentrations of these contaminants in the Site soils, and the correspondingly high risks associated with potential exposure to the soils, EPA determined that soil remediation should be addressed on an expedited basis. Consequently, the Site was divided into two OUs or phases. OU-1 addressed soil contamination. The cleanup of the soils was completed in January 1994.

EPA determined that additional groundwater investigation was required in order to fully assess the nature and extent of groundwater contamination, therefore, the groundwater was designated as OU-2. The OU-2 RI for groundwater was performed from January 1996 to January 1997.

In June 1997, EPA completed a document titled *Baseline Risk Assessment for the Curcio Scrap Metal, Inc. Site - Operable Unit Two* (Risk Assessment). This baseline Risk Assessment presents an evaluation of the potential risks and hazards to human health that may exist at the Site, currently and in the future, were there to be no further remedial actions taken. Although the vicinity of the Site is currently zoned as residential, amongst the residences there is a mix of light industries, which have been operating in the area for many years. Risks were evaluated based on potential human exposure to contaminants currently present in Site groundwater. To be most protective of human health, the baseline risk assessment assumed that the Site would be developed for residential use in the future. The aquifer underlying the Site is designated by NJDEP as a Class - II-A drinking water aquifer.

The data used in the Risk Assessment includes the samples collected by the Respondents' contractor during the four rounds of the groundwater investigation (March 1996 to January 1997) and the split samples obtained by EPA during technical oversight of the investigation.

The OU-2 groundwater risk assessment investigated the nature and extent of contamination in the Upper Bedrock Aquifer zone and the Overburden Water Bearing zone portions of the aquifer underlying the Site. The groundwater risk assessment addresses the potential human health impacts associated with exposure to groundwater contamination in the absence of remediation. The risk assessment included an evaluation of the four rounds of groundwater samples collected by the PRPs' contractor during the groundwater investigation (March, June, October of 1996 and January 1997) and the split samples obtained by EPA during technical oversight of the investigation. The results from EPA's sampling of a single residential well are also included. All data were validated in accordance with EPA Region II protocols. The data qualifiers have been included in the data summary tables for completeness.

EPA conducted a baseline risk assessment to evaluate the potential risks to human health from groundwater exposure. The risk assessment evaluated contaminants in groundwater based on seven on-Site monitoring wells. The Overburden Water Bearing zone samples were collected from four shallow Overburden Water Bearing zone wells (MW-1R, MW-2, MW-3R and MW-4R) and three Upper Bedrock Aquifer zone wells (BR-1, BR-2, and BR-3). All samples were analyzed for low detection VOCs, target compound list pesticides/PCBs, and target analyte list inorganics. A summary of the potential contaminants of concern for the Upper Bedrock Aquifer zone, Overburden Water Bearing zone, and off-Site well is provided in Attachment 5 - Tables 3, 4, and 5, respectively. Table 6 summarizes the background levels from the on-Site upgradient well. Table 7 lists the selected contaminants of concern for each of the zones within the aquifer. The chemicals listed in Table 7 were selected using the screening procedures identified in the *Risk Assessment Guidance for Superfund* document (USEPA 1989).

6.1 Human Health Risk Assessment

EPA guidelines require the separate analysis of carcinogenic (cancer causing) and non-carcinogenic effects due to chemicals at the Site. It is assumed that the toxic effects of chemicals at the Site would be additive. Therefore, carcinogenic and non-carcinogenic risks associated with exposures to individual contaminants of concern were added to determine the potential risks associated with mixtures of potential carcinogens and non-carcinogens, respectively.

For carcinogens, the individual chemical specific risks are added together for each pathway to develop a total cancer risk. For non-carcinogens, the total non-cancer risks for each chemical in each pathway are added together to determine the total hazard. A Hazard Index greater than 1.0 indicates that potential exists for non-carcinogenic health effects to occur as a result of Site-related exposures. The HI provides a useful reference point for gauging the potential significance of multiple contaminant exposures within a single medium or across media.

Exposure Assessment. The EPA human health risk assessment identified several exposure pathways at the Site under current and potential, future land-use scenarios. Health effects were then evaluated for each of these exposure scenarios and respective chemicals of concern. Based on the present land-use, since residents currently live in the vicinity of the Site, numerous potential exposure scenarios were selected for quantitative evaluation in the risk assessment. Residents, including adults and children, were assumed to ingest the groundwater and also be exposed dermally during showering and through inhalation of VOCs while showering. This evaluation is based on the current use of the single off-Site residential well. For the future scenario, potential residents (children and adults), both on-Site and off-Site, were evaluated for ingestion of water from the Upper Bedrock Aquifer zone, Overburden Water Bearing zone and residential well. In addition, potential exposure through dermal contact while showering and inhalation of VOCs while showering were evaluated. This was based on the current use near the Site of a private drinking water well and the potential for the Site to be developed as residential property in the future. It is important to note that although groundwater data suggest that the Overburden Water Bearing zone aquifer yield is inadequate to support residential use, residential exposure to Overburden Water Bearing zone groundwater is quantitatively addressed in the risk assessment for protectiveness.

Carcinogen Analysis. EPA evaluates the potential for a chemical to cause cancer using a Weight of Evidence approach and a Cancer Potency Factor. The Weight of Evidence approach uses data from human epidemiological studies and animal studies to determine the potential for a chemical to cause cancer. Based on this information, chemicals are classified as Known Human Carcinogens (Group A); Probable Human Carcinogens (Group B1 or B2 based on the available human evidence); Possible Human Carcinogens (Group C) and Not Classifiable (Group D). Non-human carcinogens are classified as

Group E.

Potential carcinogenic risks were evaluated using the cancer potency factors developed by EPA for the contaminants of concern. Cancer slope factors (CSFs) have been developed by EPA's Carcinogenic Risk Assessment Verification Endeavor for estimating excess lifetime cancer risks associated with exposure to potentially carcinogenic chemicals. Separate CSFs are developed for inhalation and oral exposure. CSFs, which are expressed in units of $(\text{mg/kg-day})^{-1}$, are multiplied by the estimated intake of a potential carcinogen, in mg/kg-day, to generate an upper-bound estimate of the excess lifetime cancer risk associated with exposure to the compound at that intake level. The term "upper-bound" reflects the conservative estimate of the risks calculated from the CSFs. Use of this approach makes the underestimation of the risk highly unlikely.

The Weight of Evidence and CSFs for the chemicals of concern are presented in Table 8. The data was obtained from the Integrated Risk Information System (IRIS), the Health Effects Assessment Summary Tables, and EPA's National Center for Environmental Assessment.

For known or suspected carcinogens, EPA considers an excess upper bound individual lifetime cancer risk of between 10^{-4} to 10^{-6} to be acceptable. This level indicates that an individual has no greater than a one in ten thousand to one in one million chance of developing cancer as a result of site-related exposure to a carcinogen over a 70 year period under specific exposure conditions at the Site. NJDEP's acceptable upper bound risk is 10^{-6} . A summary of the carcinogenic risk estimates is presented in Table 9.

Under the current Site conditions, the off-Site residential well groundwater does not pose any significant carcinogenic risk to human health. The risks were calculated at 7.1×10^{-7} (7 in ten million) for adults and 5.4×10^{-7} (5 in ten million) for children.

Risks were also calculated for potential future conditions, as if residents lived on-Site and used potable wells in the shallow groundwater aquifer. For potential future on-Site residents using water from the Overburden Water Bearing zone, the adult risks were 3.6×10^{-3} (approximately 4 in one thousand) and the risk for children was 2.1×10^{-3} (2 in one thousand) with arsenic as the major risk contributor.

For the on-Site wells in the Upper Bedrock Aquifer zone, the risks are 1.9×10^{-4} (approximately 2 in ten thousand) for adults and 1.1×10^{-4} (approximately 1 in ten thousand) for children. No chemicals individually exceed the target risk range.

These carcinogenic risk numbers, which are considered a conservative upper-bound estimate, indicate the number of people in a population that would be at risk of developing cancer if the Site is not remediated. As indicated in Table 9, carcinogenic risk associated with each of the pathways falls within or below EPA's acceptable risk range of

10^{-4} to 10^{-6} with the exception of the results from the Overburden Water Bearing zone wells. Carcinogenic risks associated with potential on-Site residents' ingestion of water from the Overburden Water Bearing zone posed an unacceptable risk. The hypothetical residential carcinogenic risk for the Site of 5.0×10^{-3} (approximately 5 in one thousand) is attributed to arsenic. Although the risks from the Overburden Water Bearing zone were calculated, it is important to note that it is not anticipated that the overburden will be able to support potable uses based on the low yield.

Non-Carcinogen Analysis. Non-carcinogenic hazards were assessed using a Hazard Index (HI), which is the ratio of the expected contaminant intakes to the safe levels of intake (reference doses). Reference doses (RfDs) have been developed by EPA for indicating the potential for adverse human health effects per kilogram bodyweight per day (mg/kg/day). Reference Doses are an estimate of the daily exposure levels for humans which are thought to be safe over a lifetime (including sensitive individuals). Estimated intakes of chemicals from environmental media (e.g., the amount of a chemical ingested from contaminated drinking water) are compared with the RfD to derive a hazard quotient (HQ) for the contaminant in the particular media. The HQs are then added to develop an HI. The reference doses for the chemicals of potential concern at the Site are presented in Table 10.

Similar to the carcinogens, separate oral and inhalation Reference Doses are developed. The data was obtained from the Integrated Risk Information System, the Health Effects Assessment Summary Tables and the EPA National Center for Environmental Assessment.

Table 11 shows that the Site media currently do not pose any significant risk to human health with the exception of the hazards associated with the Overburden Water Bearing zone wells. Results of the quantitative risk assessment using the Hazard Index approach are summarized in Table 11. Under hypothetical, future conditions where on-Site residents would rely on the shallow Overburden Water Bearing zone groundwater for drinking, a Hazard Index of 30 for adults and 71 for children was calculated. Under this scenario, the chronic Hazard Index was exceeded and the primary chemicals contributing to the hazard were arsenic, manganese and thallium. Evaluation of the individual chemical Hazard Index by toxicity endpoint/target organ resulted in a Hazard Index for arsenic of 22 for adults and 52 for children based on effects on the skin, a Hazard Index for manganese of 5.5 for adults and 13 for children based on effects on the Central Nervous System, and a Hazard Index for thallium of 2.5 for adults and 5.8 for children based on effects on the liver, blood and hair. Again it is important to note that the Overburden Water Bearing zone cannot support potable purposes so that these risks are not likely.

The Hazard Indices for the off-Site resident which are more representative of current risk were well below the level of 1. The Hazard Indices for the potential future on-Site

consumption of groundwater from the bedrock well were 2.2 for adults and 5.1 for children. However, no chemicals individually exceeded the target level of 1, for the adults. The Hazard Index for arsenic is 1.4 based on effects on the skin and 2.4 for thallium based on effects on the liver, blood and hair, for the children.

6.2 ECOLOGICAL RISK ASSESSMENT

In April 1997, EPA performed an evaluation of the need to perform an ecological assessment at the Site. The objective of the evaluation was to determine, through a Site inspection and review of Site information, if ecological pathways of exposure exist, to compile a Site inventory of plants and animals, and to identify any rare and endangered species or their habitat. Details regarding this survey are presented in the *Evaluation of the Potential Need to Perform an Ecological Assessment Report*, dated April 1997. The area of concern identified in the ecological evaluation is a ponded area which is believed to receive groundwater discharge from the Site. This ponded area discharges into a drainage ditch known as Schroeder's Brook and subsequently into Dahnert's Lake, located approximately ¾ mile southeast of the Site. Due to the fact that the Site is located in an industrial area, and the ponded area and drainage ditch are small and intermittent, the area in the vicinity of the Site is not expected to significantly support or attract wildlife. Further, groundwater contaminant levels are expected to decline since the source of the contamination (soil at the Site) has been removed. In addition, the area of standing surface water also receives possible surface runoff the nearby Route 46 roadway, nearby local roads/catch basins, other local light industrial businesses and nearby active railroad tracks. No rare or endangered species were identified near the Site. Therefore, as no suitable habitat exists, and the potential for groundwater contaminants to impact surface water is minimal, EPA has determined that no additional ecological investigation is necessary.

Based on the evaluation of data collected at the Site, the actual or threatened releases of hazardous substances from this Site are not considered to present a current threat to public health or the environment.

6.3 UNCERTAINTIES

The procedures and inputs used to assess risks in this evaluation, as in all such assessments, are subject to a wide variety of uncertainties. In general, the main sources of uncertainty include the following:

- environmental chemistry sampling and analysis;
- environmental parameter measurement;
- fate and transport modeling;
- exposure parameter estimation; and
- toxicological data.

Uncertainty in environmental sampling arises in part from the potentially uneven distribution of chemicals in the media sampled. Consequently, there is significant uncertainty as to the actual levels present. Environmental chemistry analysis error can stem from several sources including the errors inherent in the analytical methods and characteristics of the matrix being sampled.

Uncertainties in the exposure assessment are related to estimates of how often an individual would actually come in contact with the chemicals of concern, the period of time over which such exposure would occur, and in the models used to estimate the concentrations of the chemicals of concern at the point of exposure. Uncertainties in toxicological data occur in extrapolating both from animals to humans and from high to low doses of exposure, as well as from the difficulties in assessing the toxicity of a mixture of chemicals. These uncertainties are addressed by making conservative assumptions concerning risk and exposure parameters throughout the assessment. As a result, the risk assessment provides upper-bound estimates of the risks to populations near the Site, and is highly unlikely to underestimate actual risks related to the Site.

More specific information concerning public health and ecological risks, including quantitative evaluation of the degree of risk associated with various exposure pathways, can be found in the June 1997 *Final Risk Assessment Report - OU-2*.

7. EVALUATION AND SUMMARY OF THE 'NO FURTHER ACTION' REMEDY

After careful consideration of Site-specific details and analysis of all data collected, EPA has determined that the No Further Action remedy, with long-term monitoring, remedial approach is protective of human health and the environment based on the following:

- Currently, potable water is provided to the residents in the vicinity of the Site via the local municipalities and/or local water company. There is presently no elevated risk posed by Site groundwater since no potable wells downgradient from the Site are impacted or considered threatened by Site-related contamination;
- Although there is an elevated risk associated with any potential future use of the Overburden Water Bearing zone for potable water in the vicinity of the Site, this zone is not capable of supporting residential use due to its low water yield. Furthermore, the presence of the upward gradient within the Upper Bedrock Aquifer zone creates a hydraulic barrier which limits the migration of contaminants from the Overburden Water Bearing zone;
- Although there is a slightly elevated risk (but still within EPA's acceptable risk range) associated with the potential future use of the Upper Bedrock Aquifer zone of the aquifer for potable water, a Classification Exception Area (CEA) will be established by NJDEP to provide information on contamination in the groundwater resulting from Site operations. The CEA will remain in effect until contaminant levels are below New Jersey Groundwater Quality Standards. NJDEP may

establish a Well Restriction Area (WRA) if groundwater contamination associated with the Site should be determined to impact potential users. By establishing a WRA, NJDEP can assure that contaminants in the groundwater will not pose a threat to human health as a result of well installation and operations;

- Although slightly elevated human health risks (but still within EPA's acceptable risk range) would occur if the Upper Bedrock Aquifer zone of the aquifer were used as a potable water supply, the extent of contamination is considered limited, and is not indicative of a plume of contamination. Only one organic compound was detected in one well in this zone at a slightly elevated level. Four inorganic compounds were detected in all, and the levels did not significantly exceed the established drinking water standards. Of these four contaminants, only one, arsenic, was detected in all three Upper Bedrock Aquifer zone wells at levels slightly above drinking water standards;

- As part of the No Further Action remedy, throughout the course of the monitoring program, a decrease in Site-related groundwater contamination is expected, since the source of groundwater contamination (contaminated soils) has been effectively removed. Natural attenuation of some contaminants is expected to be observed and will be monitored during the long-term monitoring program; and

- The stratigraphy of the aquifer formation beneath the Site includes an aquitard between the Overburden Water Bearing zone and the Upper Bedrock Aquifer zone. This aquitard acts to limit the migration of contaminants from the Overburden Water Bearing zone downward toward portions of the aquifer which could potentially be used for potable purposes.

As part of the No Further Action remedial approach, a groundwater monitoring program will be required for a minimum of five years. Samples will be collected and analyzed for TCL VOCs and TAL inorganic compounds for the first year on approximately a quarterly basis. Special analytical services will be used, where appropriate, in the analytical procedures to minimize any variability of data. The monitoring program may be modified based upon sampling results collected during the first year. Currently, EPA and NJDEP do not believe that additional groundwater monitoring wells will be required for the purpose of the sampling program. However, if the results of the initial rounds of sampling indicate that additional wells are necessary, then they will be installed.

After five years, or less, if the sampling and analyses indicate the need for action, the potential risks to human health and the environment will be reassessed. The groundwater monitoring would then either continue for another five-year period, or some other action will be considered. If monitoring reveals that contamination at the Site increases so that an unacceptable risk to human health or the environment develops, an appropriate action can be initiated at any time during the five-year period to address the risks. The CEA will remain in effect until constituents in the groundwater do not exceed established drinking water standards.

The present worth cost of the initial five-year monitoring program is estimated to be approximately \$200,000.

The preferred No Further Action remedial approach for the Site has been developed based on the findings of the Groundwater Investigation Report, the baseline Risk Assessment Report and data collected during the groundwater investigation. As described in this document, the remedial approach includes long-term groundwater monitoring and the establishment of a CEA to ensure that the public is not exposed to the relatively low levels of groundwater contamination that exist at the Site. EPA and NJDEP believe the remedial approach is protective of human health and the environment and is cost-effective.

8. NJDEP ACCEPTANCE

NJDEP concurs with the No Further Action with long-term monitoring remedial approach. NJDEP's Letter of Concurrence is Attachment 1 to this Record of Decision.

9. COMMUNITY ACCEPTANCE

A summary of the comments received during the public comment period is provided in the Responsiveness Summary which is Attachment 3 to this Decision Document.

10. EXPLANATION OF SIGNIFICANT DIFFERENCES

There are no significant changes from the recommended No Further Action remedy presented in the Proposed Plan.

11. SITE CLOSE OUT

In lieu of a Final Close Out Report, this No Further Action ROD documents that the Respondents have completed all construction activities for the Curcio Scrap Metal Site in accordance with *Close Out Procedures for National Priorities List Sites* (OSWER Directive 9320.2-09). This decision documents that EPA and NJDEP have determined that remedial actions for this Site have been successfully implemented and no further response actions are necessary. Therefore, the Site now qualifies for inclusion on the Construction Completion List. A five year review will be performed since contaminants remain on the Site above health-protective levels.

ATTACHMENT 1

NJDEP CONCURRENCE LETTER



State of New Jersey

Christine Todd Whitman
Governor

Department of Environmental Protection

Robert C. Shinn, Jr.
Commissioner

Ms. Jeanne Fox
USEPA - Region II
290 Broadway
New York, NY 10007

SEP 30 1997

Dear Ms. Fox,

Re: Concurrence Letter - Record of Decision Operable Unit II
Curcio Scrap Metal, Inc. Superfund Site
Saddle Brook, Bergen County

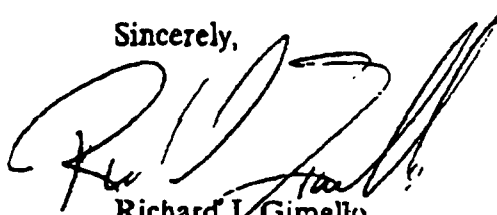
The NJDEP has reviewed the final No Further Action Record of Decision for Operable Unit II of the Curcio Scrap Metal, Inc. Superfund Site in Saddle Brook, Bergen County and we concur with the document as submitted.

This Record of Decision describes the No Further Action with long-term monitoring remedial approach for Operable Unit II of the Curcio Scrap Metal, Inc. Superfund Site. This remedial activity in combination with the establishment of a Classification Exception Area satisfies all substantive requirements pursuant to New Jersey law, and all To Be Considered criteria applicable to the remediation of this facility.

It has therefore been determined by the NJDEP this No Further Action remedial decision will serve to ensure the protection of human health and the environment.

New Jersey appreciates the importance of the Record of Decision in the cleanup process and will continue to take all reasonable steps to ensure that the State's commitments in this area are met.

Sincerely,



Richard J. Gimello
Assistant Commissioner

c. Carole Petersen, Chief - USEPA/Region II

ATTACHMENT 2

ADMINISTRATIVE RECORD INDEX

**CURCIO SCRAP METAL, INC. SITE --OPERABLE UNIT TWO
ADMINISTRATIVE FILE RECORD
INDEX OF DOCUMENTS**

1.0 SITE IDENTIFICATION

1.5 Previous Operable Unit Information

- P. 100001- Report: Remedial Action Report, Operable Unit
100646 One, East Lot Soil, Curcio Scrap Metal, Inc. Site, Saddle Brook, New Jersey, prepared by CH2M Hill, prepared for Consolidated Edison Company of New York, Inc., Curcio Scrap Metal, Inc., Cirello Iron & Steel Co., Inc., and SECO Corporation, March 1994.
- P. 100647- Letter to Ms. Mary Anne Rosa, U.S. EPA, Region
100647 II, from Mr. Ian R. Curtis, Case Manager, Bureau of Federal Case Management, New Jersey Department of Environmental Protection and Energy (NJDEPE), re: Remedial Action Report - OU I, Curcio Scrap Metals Superfund Site, Saddle Brook Township, Union County, May 18, 1994.
- P. 100648- Letter to Mr. Edward R. Underwood, CH2M Hill,
100648 from Mr. Raymond Basso, Chief, New Jersey Superfund Branch II, U.S. EPA, Region II, re: Curcio Scrap Metal, Inc. Superfund Site, Operable Unit One - Remedial Action Report, September 28, 1994.
- P. 100649- Report: Remedial Action Report, Sediment Area 2,
100760 Curcio Scrap Metal, Inc. Site, Saddle Brook, New Jersey, prepared by CH2M Hill, prepared for Consolidated Edison Company of New York, Inc., Curcio Scrap Metal, Inc., Cirello Iron & Steel Co., Inc., and SECO Corporation, August 1995.

3.0 REMEDIAL INVESTIGATION

3.3 Work Plans

- P. 300001- Plan: Groundwater Investigation, Volume I,
300046 Work Plan, Curcio Scrap Metal Inc. Site, Saddle Brook Township, Bergen County, New Jersey, prepared by CH2M Hill, prepared for Consolidated Edison Company of New York, Inc., Curcio Scrap Metal, Inc., Cirello Iron & Steel Co., Inc., and SECO Corporation, October 1994.
- P. 300047- Plan: Groundwater Investigation, Volume II -
300376 Appendices, Curcio Scrap Metal, Inc. Site, Saddle Brook Township, Bergen County, New Jersey, prepared by CH2M Hill prepared for Consolidated Edison Company of New York, Inc., Curcio Scrap Metal, Inc., Cirello Iron & Steel Co., Inc., and SECO Corporation, October 1994.

3.4 Remedial Investigation Reports

- P. 300377- Report: Final Groundwater Investigation Report,
301525 Operable Unit 2, Curcio Scrap Metal, Inc. Site, Saddle Brook Township,
Bergen County, New Jersey, prepared by CH2M Hill, prepared for
Consolidated Edison Company of New York, Inc., Curcio Scrap Metal,
Inc., Cirello Iron & Steel Co., Inc., and SECO Corporation, March 1997.
- P. 301526- Report: Evaluation of the Potential Need to
301543 Perform an Ecological Assessment Curcio Scrap Metal, Inc., OU II Site,
Saddle Brook, New Jersey, prepared by CDM Federal Program
Corporation, prepared for U.S. EPA, Region II, April 15, 1997.
- P. 301544- Report: Final Human Health Risk Assessment,
301774 Curcio Scrap Metal, Inc., Operable Unit Two Site, Saddle Brook N.J.,
prepared by CDM Federal Programs Corporation, prepared for U.S. EPA,
Region II, June 26, 1997.

3.5 Correspondence

- P. 301775- Letter to Ms. Theresa Gerrish, CH2M Hill, from Mr.
301775 Raymond Basso, Chief, New Jersey Superfund Branch II, U.S. EPA,
Region II, re: Curcio Scrap Metal, Inc. Superfund Site - Operable Unit
Two, Groundwater Investigation Work Plan Approval, April 21, 1995.
- P. 301776- Letter to Mr. Edward R. Underwood, CH2M Hill, from
301776 Mr. Raymond Basso, Chief, N.J. Superfund Branch II, U.S. EPA, Region
II, re: Curcio Scrap Metal, Inc. Superfund Site, Sediment Area 2 Remedial
Action Report Approval, September 14, 1995.
- P. 301777- Letter to. Ms. Mary Anne Rosa, U.S. EPA,
301777 Region II, from Mr. Ian R. Curtis, Case Manager, Bureau of Federal Case
Management, New Jersey Department of Environmental Protection and
Energy, (NJDEPE), re: March 1997 Remedial Investigation OU II, Curcio
Scrap Metals Superfund Site, Saddle Brook Township, Bergen County,
May 15, 1997.
- P. 301778- Letter to Mr. Scott Vozza, CH2M Hill, from Ms.
301779 Carole Petersen, Chief, New Jersey Remediation Branch, U.S. EPA,
Region II, re: Curcio Scrap Metal, Inc. Site, Final Groundwater
Investigation Report (GIR) Approval, June 27, 1997.

ATTACHMENT 3

FIGURES

FIGURE 2

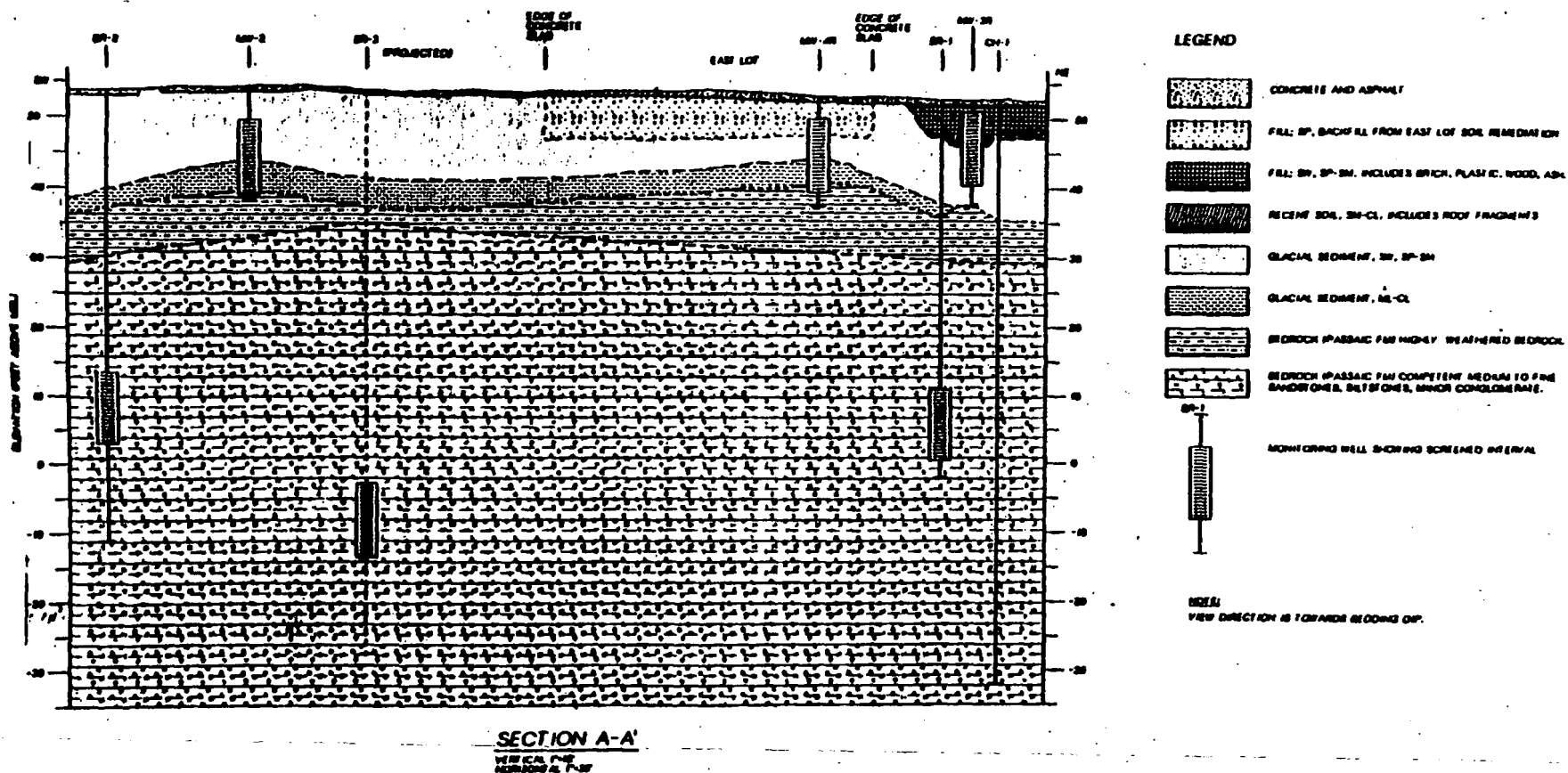
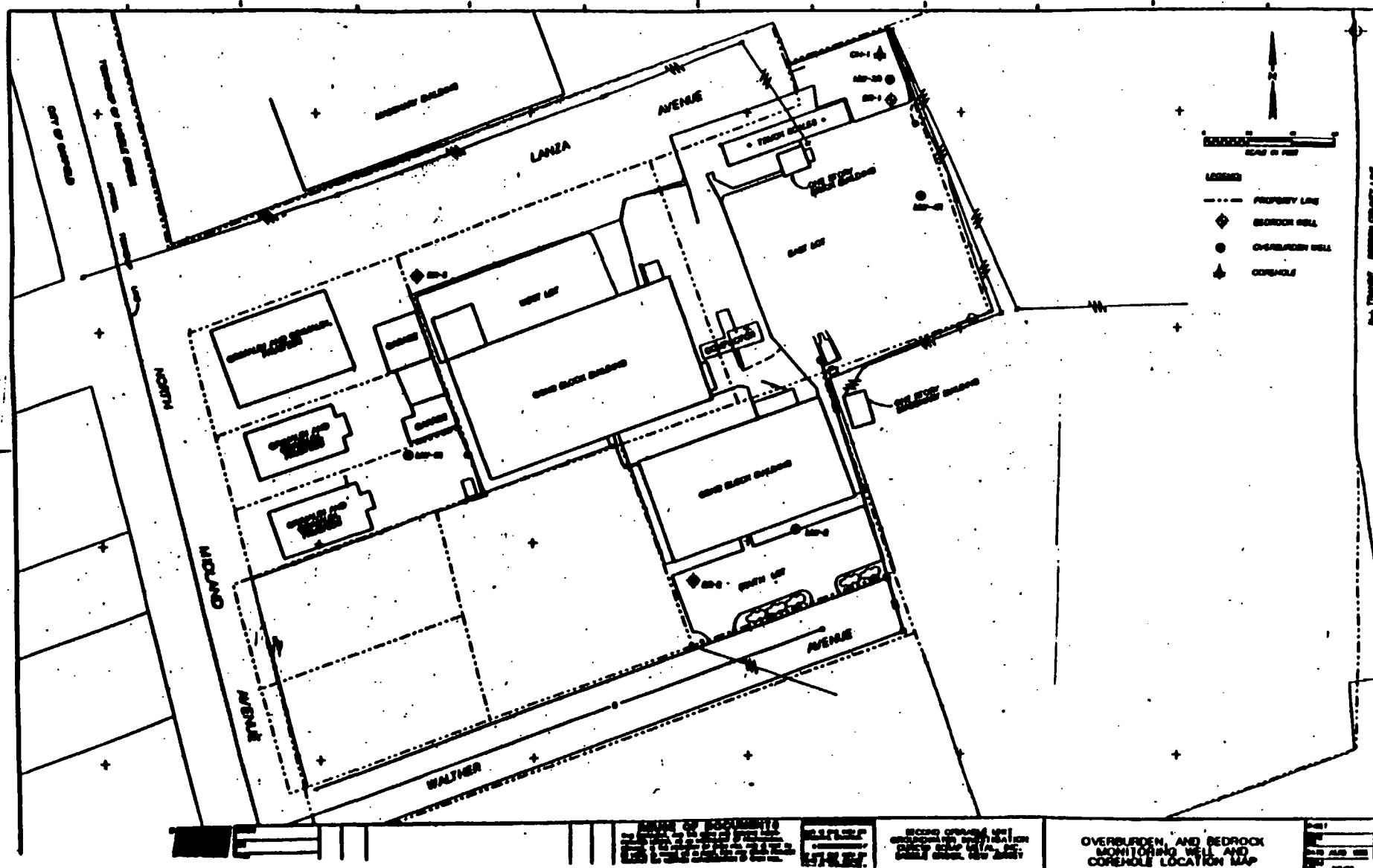
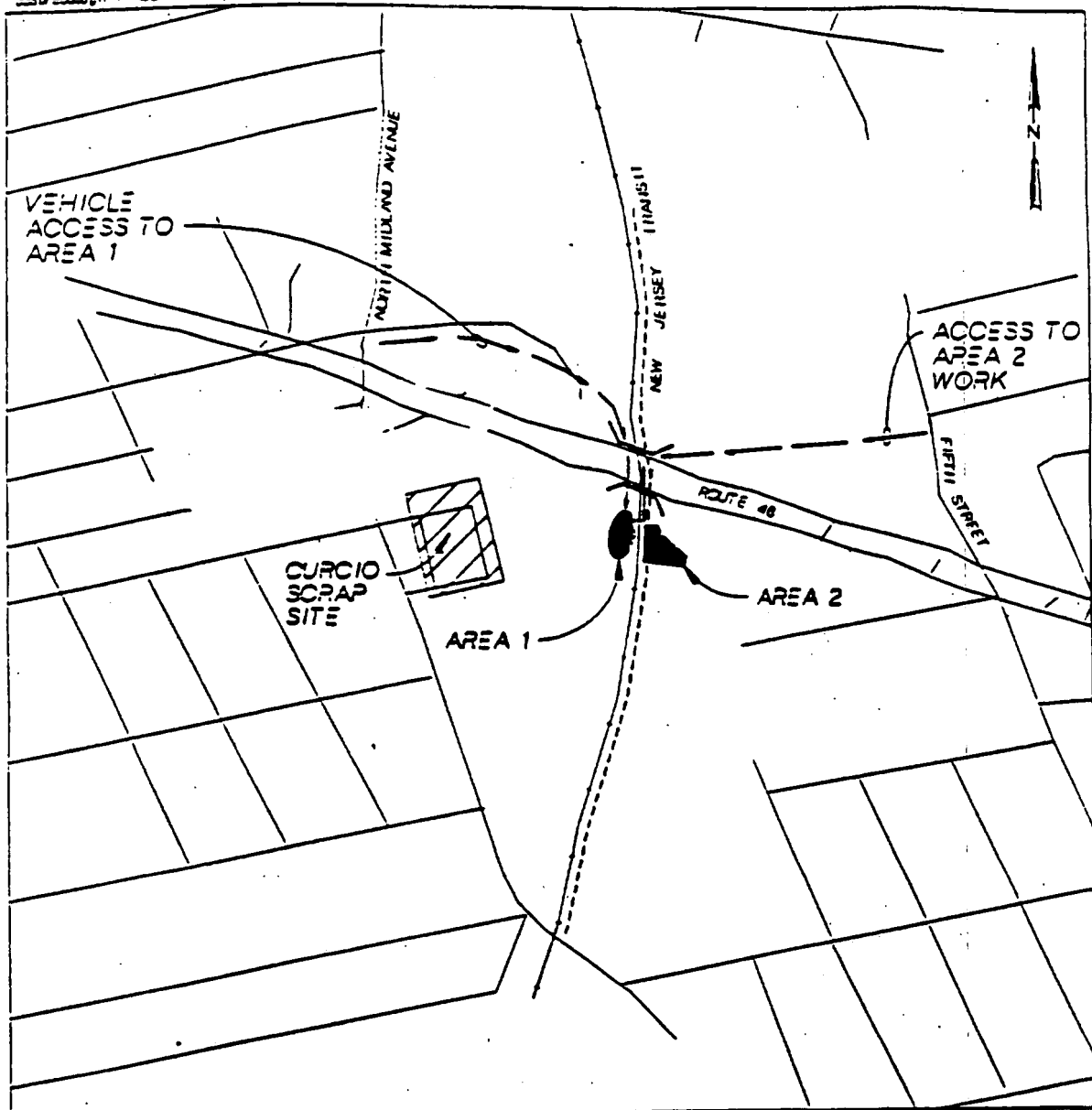


FIGURE 3





NOT TO SCALE

LEGEND

- RAILROAD
- ACCESS ROUTE
- BRIDGE
- AT&T FIBER OPTIC COMMUNICATION CABLE (APPROXIMATE ALIGNMENT)

GENERAL PROJECT LOCATION
(INCLUDING ACCESS ROUTE)
CURCIO SCRAP METAL, INC., SADDLE BROOK, NJ



FIGURE 4

ATTACHMENT 4

RESPONSIVENESS SUMMARY

RESPONSIVENESS SUMMARY

DECISION DOCUMENT

CURCIO SCRAP METAL, INC. SITE - Operable Unit Two

OVERVIEW

This is a summary of the public's comments and concerns regarding the Proposed Plan and related documents for the Curcio Scrap Metal, Inc. Site and U.S. Environmental Protection Agency (EPA) and new Jersey Department of Environmental Protection (NJDEP) response to those comments.

In accordance with the public participation requirements of the Comprehensive Environmental Response, Compensation and Liability Act, as amended (CERCLA), EPA, in conjunction with NJDEP, held a public comment period from July 30, 1997 to August 28, 1997 to provide interested parties the opportunity to comment on the Proposed Plan and documents contained in the Administrative Record for the Curcio Scrap Metal, Inc. Site.

During the public comment period, EPA and NJDEP held a public meeting on August 6, 1997 at 7:00 pm at the Saddle Brook Memorial Library to discuss the results of the Groundwater Investigation and to present the preferred No Further Action remedy. No objections to the No Further Action remedy presented in the Proposed Plan were raised at the public meeting. Public comments received during the public meeting are documented in this Responsiveness Summary.

This Responsiveness Summary is divided into the following sections:

- I. **BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS:** This section provides the history of community concerns and interests regarding the Site.
- II. **SUMMARY OF COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND AGENCY RESPONSES:** This section summarizes the oral comments, as well as written comments, received by EPA and NJDEP at the public meeting and during the public comment period.
- III. **COMMUNITY RELATIONS ACTIVITIES AT THE CURCIO SCRAP METAL, INC. SITE:** This section provides information regarding the location of the Administrative Record repositories.

I. Background on Community Involvement and Concerns

Over the course of the Site investigations and subsequent remedial action, discussions and exchanges of correspondence have taken place between EPA, NJDEP, Township officials and residents regarding Site operations and activities. The Township officials were notified of all activities throughout the implementation of the first remedial phase, or OU-1, at the Site. In addition, EPA was informed by the local Planning Board of the change in zoning laws for the area surrounding the Site.

II. SUMMARY OF COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND AGENCY RESPONSES

Comments raised during the Curcio Scrap Metal, Inc. Site Public Meeting held on August 6, 1997, as well as written comments received during the public comment period, and EPA's and NJDEP's responses are summarized below:

IIA. Summary of Verbal Questions and Responses:

Comment: A resident expressed concern about the possibility of contaminated surface water at the ponding areas along the railroad tracks.

Response: In June 1995, as part of the OU-1 soil remediation Site activities, the areas of standing surface water and associated sediments of Schroeder's Brook were remediated. Confirmatory sampling indicated that the cleanup level was achieved. The contaminated materials were solidified and shipped off-Site for disposal. The areas were then restored to form a rock-lined channel that meets the State of New Jersey's erosion and sediment control standards. In addition to the standing surface water cleanup in June 1995, all of the contaminated soil which was on the Site was removed and transported off the Site for disposal. The Site was then backfilled with clean soil and a reinforced concrete pad was placed over the area where the soil was backfilled. EPA and NJDEP do not believe there are any negative impacts to the standing surface water from the Site. In addition, the area of standing surface water also receives surface runoff from the nearby Route 46 roadway, nearby local roads/catch basins, and other local light industrial businesses.

The resident also expressed concern over the appearance of the standing surface water, which he described as "*green and slimy*". In response to the resident's comment, EPA conducted a Site visit on August 27, 1997, to inspect the standing surface water areas, Schroeder's Brook and Dahnert's Pond (approximately ¼ mile from the Site). EPA believes the greenish coloration of the standing surface water is due to the growth of algae and other natural plantlike material. The greenish colored material which was floating near the surface was inspected and is believed to be elongated pieces of grass. Another form of green algae was observed growing on the rocks in the stream channel. The algae growth observed in the standing surface water area is not believed to be

affected by surface runoff from the Site since all contaminated soil from the Site has been removed. The area surrounding the standing surface water was abundant with lush plantlife. Furthermore, the inspection of Dahnert's Pond revealed that there is abundant algae growth present along the perimeter of the Pond as well as the presence of numerous geese, duck and other wildlife.

Comment: A resident asked if the Site was still active and how it was regulated.

Response: The Site is an active facility. The soil contamination was in the East Lot portion of the facility and the monitoring wells are located at various points throughout the property of the facility. The facility is currently regulated by local and state regulations and requirements.

Comment: A resident asked how much money has been spent on the Site activities to date.

Response: EPA requires that the proper actions are taken by the PRPs to ensure the protection of human health and the environment. All the work performed at the Site was funded by the PRPs. The PRPs have indicated that they have expended in excess of four million dollars on all Site-related work to date.

IIB. Summary of Written Comments and Responses:

During the public comment period, one party, the Consolidated Edison Company of New York, Inc. (Con Ed), submitted a comment letter, dated August 28, 1997, to EPA regarding the Curcio Scrap Metal, Inc. Site Proposed Plan. Con Ed's comment letter is attached to the end of this Responsiveness Summary. These comments are summarized and responded to as follows:

Comment: The commenter questioned the need for collecting groundwater samples on a quarterly basis for the first year. The commenter suggested the frequency of groundwater sampling during the first year should be decreased from quarterly to semi-annually.

Response: The long-term monitoring plan currently being considered by EPA is quarterly sampling of the groundwater for the first year and evaluation of that data. Based upon the review of the first year's data, the frequency of sampling may be modified by EPA. EPA believes that quarterly groundwater sampling for the first year is appropriate in order to further evaluate the quality of the groundwater underlying the Site. Another year of quarterly groundwater monitoring, in addition to the data collected during the quarterly groundwater sampling conducted from January 1996 through January 1997, will provide comprehensive information relative to groundwater quality throughout seasonal fluctuations. If monitoring indicates that contamination at the Site is decreasing, it is likely that the sampling frequency would be reduced. If monitoring reveals that

contamination at the Site increases so that an unacceptable risk to human health or the environment develops, an appropriate action can be initiated at any time during the monitoring period to address the risks.

Comment: The commenter questioned the analysis of groundwater samples for Target Compound List (TCL) volatile organic compounds (VOCs), semi-VOCs and Target Analyte List (TAL) inorganic compounds; and that future groundwater monitoring only include analysis for arsenic, manganese, thallium and possibly lead.

Response: The long-term monitoring plan currently being considered by EPA includes the collection of groundwater samples on a quarterly basis for the first year and the analysis of the samples for all TCL VOCs and TAL inorganic compounds. At the conclusion of the first year and after careful review of all Site-related data, modifications to the sampling frequency, analysis for specific compounds and individual well sampling locations will be revisited accordingly. EPA agrees that semi-VOCs need not be part of the groundwater analyses since semi-VOCs have not historically been chemicals of potential concern at the Site.

III. COMMUNITY RELATIONS ACTIVITIES AT THE CURCIO SCRAP METAL, INC. SUPERFUND SITE

- EPA prepared an updated Community Relations Plan in July 1997.
- EPA has established information repositories at the following locations:

Saddle Brook Memorial Library
340 Mayhill Street
Saddle Brook, New Jersey 07662

and

U.S. Environmental Protection Agency
Record Center
290 Broadway - 18th Floor
New York, N.Y. 10007-1866

The repositories contain a comprehensive collection of records relating to the Site which comprise the Administrative Record. The index to the Administrative Record is Attachment 2 of the Record of Decision.

- Throughout the RI/FS process, representatives from EPA and NJDEP attended meetings concerning the Site. The first public meeting was held in February 1991 to brief interested parties and discuss the RI/FS process.

- EPA and NJDEP have participated in subsequent meetings to update the community on the progress at the Site over the course of the RI/FS and remedial activities.
- On August 6, 1997, EPA and NJDEP held a public meeting at the Saddle Brook Memorial Library to discuss the Site investigations and present the Proposed Plan for the No Further Action remedy. Approximately 12 people attended. A transcript of the meeting can be found in the record repositories listed above.
- A public comment period was held from July 30, 1997 to August 28, 1997.



Consolidated Edison Company of New York, Inc.
4 Irving Place, New York, N.Y. 10003

August 28, 1997

BY FACSIMILE AND CERTIFIED MAIL

**Ms. Mary Anne Rosa, Project Manager
U.S. Environmental Protection Agency
Emergency and Remedial Response Division
New Jersey Remediation Branch
290 Broadway - 19th Floor
New York, New York 10007-1866**

**Subject: Comments on
Proposed Plan for the Curcio Scrap Metal, Inc. Site - Operable Unit Two**

Dear Ms. Rosa:

In response to the EPA July 30, 1997 letter, Consolidated Edison Company of New York, Inc. (Con Edison) is herein submitting comments on the EPA Proposed Plan (Plan) for the Curcio Scrap Metal, Inc. (CSMI) Site - Operable Unit Two, Ground Water.

In general, Con Edison agrees with EPA's Plan of a No Further Action Remedy for the CSMI Site. The groundwater well search performed by CH2M Hill, Con Edison's consultant for this site, has indicated that there are no potable water wells located downgradient of the Site which could be impacted or potentially threatened by Site-related contamination. Currently, potable water is provided to the residents in the vicinity of the site from public sources. In addition, there is little, if any, probability that the overburden and upper bedrock water zones in the vicinity of the site would be used for potable water supply purposes in the foreseeable future. The overburden water bearing zone cannot be expected to support residential use due to its low water yield. Any future potable well, if installed in the bedrock formation, would with all likelihood draw water from significantly deeper water-bearing zones rather than the upper bedrock zone, in which limited contamination was detected beneath the Site during the Groundwater Investigation program. Furthermore, only four inorganic compounds were detected in the upper bedrock

Ms. Mary Anne Rosa

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zone at concentrations slightly exceeding drinking water standards. Since contaminated soil, the suspected source of groundwater contamination, was removed from the site, the natural attenuation process should be expected to result in a gradual improvement in the groundwater quality in the vicinity of the site.

Con Edison also concurs with EPA that, on the basis of available groundwater quality data and the results of the EPA Baseline Risk Assessment, some future groundwater monitoring at the site is appropriate. However, Con Edison believes that certain requirements of the long-term groundwater monitoring program should be revised before the Plan is finalized, and the Record of Decision (ROD) for the CSMI Site Operable Unit 2 is issued. These requirements and our concerns are summarized below.

- The Proposed Plan states that, as part of the No Further Action Remedy, a groundwater monitoring program will be required for a minimum of five years and that groundwater samples will be collected on a quarterly basis during the first year. We believe that the frequency of the groundwater sampling during the first year should be decreased from quarterly to semi-annually. CH2M Hill conducted quarterly groundwater sampling during the 1996-1997 Groundwater Investigation program at the Site. Our review of the groundwater data collected during this program indicates slow changes in groundwater quality at the CSMI site. Thus, a frequent data collection (such as every quarter) does not provide any significant additional information to or benefit the monitoring program.
- The Proposed Plan states that groundwater samples collected at the site during the five year groundwater monitoring program will be analyzed for TCL VOCs, semi-VOCs, and TAL inorganic compounds. Semi-VOCs have not been chemicals of potential concern at the CSMI site. In fact, groundwater samples collected at the site during the 1996 - 1997 Groundwater Investigation were not required to be analyzed for semi-VOCs. Thus, we suggest that these compounds not be included in the Final Plan or, if included, only be analyzed for one time per year.
- With respect to the TAL inorganic compounds in the overburden water-bearing zone, we conclude that monitoring for all TAL inorganic compounds is not necessary. The future groundwater monitoring should only include arsenic, manganese, thallium, and (possibly) lead. With the exception of lead, these were the inorganic compounds that EPA selected as chemicals of potential concern in

Ms. Mary Anne Rosa

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its baseline risk assessment of the overburden aquifer. We similarly conclude that future monitoring of the upper bedrock water zone for all TAL inorganic compounds is not appropriate or necessary. The future monitoring program for this water zone should include arsenic, lead, aluminum, and thallium, i.e., the inorganic compounds that were detected in this aquifer at concentrations that exceeded the New Jersey State groundwater quality standards and/or the federal MCLs during the 1996 - 1997 Groundwater Investigation. An alternative could provide for sampling at the end of the first year and, if any compound is detected in excess of the groundwater quality standards, continuing to monitor, if not detected above such levels discontinuing any further analysis.

Con Edison would like to have an opportunity to discuss these comments with you before the Plan for the CSMI site is finalized. Please contact Con Edison's Project Manager, Karel Konrad (212-460-4700), at your convenience.

Very truly yours,



Troy J. Meyer
Director, Remediation Section
Environment, Health & Safety

cc: Garret Austin
Karel Konrad
Michael Wilcken
Scott Vozza - CH2M Hill

ATTACHMENT 5

TABLES

TABLE 1

Curcio Scrap Metal, Inc. Site - Q12
Groundwater Sampling Results
Bedrock Wells (Dr-Site)

SAMPLE NAME SAMPLE DATE NOTES		NCL-FED Federal ARAR	NCL-STATE New Jersey ARAR	BR-1-1-CDM 03/11/96	BR-1-1 03/19/96	BR-1-2-CDM 06/10/96	BR-1-2 06/11/96
Low Detection Volatiles	ug/l			-----	1.00 J	-----	-----
CHLOROMETHANE	ug/l	2.00	2.00	-----	-----	0.20 J	-----
VINYL CHLORIDE	ug/l	5.00	2.00	-----	-----	0.30 J	-----
ETHYLENE CHLORIDE	ug/l	100.00	-----	0.30 J	-----	0.40 J	-----
CHLOROFORM	ug/l	200.00	25.00	0.20 J	-----	0.50 J	-----
1,1,1-TRICHLOROETHANE	ug/l	5.00	2.00	0.40 J	-----	1.10 (2)	-----
CARBON TETRACHLORIDE	ug/l	5.00	1.00	0.60 J	-----	-----	-----
TRICHLOROETHENE	ug/l	5.00	1.00	-----	-----	-----	-----
BENZENE	ug/l	-----	-----	-----	-----	-----	-----
4-METHYL-2-PENTANONE	ug/l	1,000.00	1,000.00	-----	-----	-----	-----
TOLUENE	ug/l	-----	-----	-----	-----	-----	-----
PCBs	ug/l	0.50	0.50	-----	-----	-----	-----
AROCLO-1248	ug/l	-----	-----	-----	44.80 B	-----	-----
Inorganic Analytes	ug/l	-----	-----	-----	-----	-----	-----
ALUMINUM	ug/l	6.00	6.00	-----	-----	-----	-----
ANTHRONY	ug/l	50.00	50.00	-----	-----	243.00	248.00
ARSENIC	ug/l	2,000.00	2,000.00	228.00	244.00	0.41 B	-----
BARIUM	ug/l	4.00	4.00	-----	-----	-----	-----
BERYLLIUM	ug/l	5.00	5.00	-----	-----	-----	-----
CADMIUM	ug/l	-----	-----	84,000.00	80,400.00	87,000.00	91,700.00
CALCIUM	ug/l	-----	-----	-----	-----	-----	-----
CHROMIUM	ug/l	100.00	100.00	-----	1.70 B	-----	-----
COBALT	ug/l	-----	-----	-----	-----	-----	-----
COPPER	ug/l	1,300.00	1,300.00	-----	-----	-----	-----
IRON	ug/l	-----	-----	-----	-----	3.10	1.80 B J
LEAD	ug/l	15.00	15.00	34,000.00	35,400.00	37,000.00	38,400.00
MAGNESIUM	ug/l	-----	-----	-----	9.70 B	-----	7.40 B
MANGANESE	ug/l	-----	100.00	-----	0.79 B	-----	1.10 B
NICKEL	ug/l	-----	-----	-----	3,410.00	-----	3,990.00 B J
POTASSIUM	ug/l	50.00	50.00	17,000.00	17,500.00	16,000.00	18,400.00 J
SELENIUM	ug/l	-----	-----	-----	-----	-----	-----
SODIUM	ug/l	2.00	2.00	-----	3.00 B	-----	3.00 B
THALLIUM	ug/l	-----	-----	-----	3.10 B	-----	6.80 B
VANADIUM	ug/l	-----	-----	-----	-----	-----	-----
ZINC	ug/l	-----	-----	-----	-----	-----	-----

SAMPLE NAME SAMPLE DATE NOTES		NCL-FED Federal ARAR	NCL-STATE New Jersey ARAR	BR-1-3-CDM 10/01/96	BR-1-3 10/01/96	BR-1-4-CDM 01/09/97	BR-1-4 01/09/97
Low Detection Volatiles	ug/l			-----	-----	-----	-----
CHLOROMETHANE	ug/l	2.00	2.00	-----	-----	-----	-----
VINYL CHLORIDE	ug/l	5.00	2.00	-----	-----	-----	0.20 J
ETHYLENE CHLORIDE	ug/l	100.00	-----	0.30 J	-----	-----	0.23 J
CHLOROFORM	ug/l	200.00	25.00	0.30 J	-----	-----	0.41 J
1,1,1-TRICHLOROETHANE	ug/l	5.00	2.00	1.00 (2)	-----	-----	0.33 J
CARBON TETRACHLORIDE	ug/l	5.00	1.00	0.70 J	-----	-----	-----
TRICHLOROETHENE	ug/l	5.00	1.00	-----	-----	-----	-----
BENZENE	ug/l	-----	-----	-----	-----	-----	-----
4-METHYL-2-PENTANONE	ug/l	1,000.00	1,000.00	-----	-----	-----	3.30 (3)
TOLUENE	ug/l	-----	-----	-----	-----	-----	-----
PCBs	ug/l	0.50	0.50	-----	-----	-----	-----
AROCLO-1248	ug/l	-----	-----	-----	172.00 B	11.30 B (3)	76.40 B
Inorganic Analytes	ug/l	-----	-----	-----	-----	-----	-----
ALUMINUM	ug/l	6.00	6.00	-----	-----	-----	1.60 B
ANTHRONY	ug/l	50.00	50.00	-----	250.00	231.00	248.00
ARSENIC	ug/l	2,000.00	2,000.00	214.00	2.30 B	2.10 B	8.80 B
BARIUM	ug/l	4.00	4.00	-----	-----	1.20 B	-----
BERYLLIUM	ug/l	5.00	5.00	-----	-----	-----	-----
CADMIUM	ug/l	-----	-----	82,000.00	85,500.00	82,300.00	80,600.00
CALCIUM	ug/l	-----	-----	-----	4.00 B J	-----	-----
CHROMIUM	ug/l	100.00	100.00	-----	0.42 B	1.30 B	-----
COBALT	ug/l	-----	-----	-----	-----	-----	-----
COPPER	ug/l	1,300.00	1,300.00	-----	262.00	120.00	-----
IRON	ug/l	-----	-----	-----	2.20 B J	-----	-----
LEAD	ug/l	15.00	15.00	34,000.00	37,900.00	35,000.00	35,900.00
MAGNESIUM	ug/l	-----	-----	-----	9.50 B	7.50 B	6.20 B
MANGANESE	ug/l	-----	100.00	-----	2.40 B	-----	-----
NICKEL	ug/l	-----	-----	-----	3,560.00 B	3,000.00 B	3,290.00 B
POTASSIUM	ug/l	50.00	50.00	16,000.00	18,400.00	14,500.00	17,400.00
SELENIUM	ug/l	-----	-----	-----	3.20 B (3)	-----	-----
SODIUM	ug/l	2.00	2.00	-----	3.10 B	3.30 B	3.20 B
THALLIUM	ug/l	-----	-----	-----	13.30 B	4.10 B	3.90 B
VANADIUM	ug/l	-----	-----	-----	-----	-----	-----
ZINC	ug/l	-----	-----	-----	-----	-----	-----

NOTES: (1) Sample value exceeds Federal ARAR limit value.
(2) Sample value exceeds State ARAR limit value.
(3) Sample value exceeds both Federal and State ARAR limit values.

Data Qualifier
J indicates for all chemicals that the reported concentration is estimated.
B indicates that the reported value is less than the contract required detection limit but greater than the instrument detection limit; integrity of the sample is suspect.

NOTE: The CDM nomenclature next to the Sample Name indicates EPA's split sampling results; the Sample Name without any nomenclature is the Respondent's sampling results

TABLE 1

TABLE 1

Carbie Scrap Metal, Inc. Site - 012
Groundwater Sampling Results
Bedrock Wells (Dr-Size)

SAMPLE NAME SAMPLE DATE NOTES		NCL-FED Federal ARAR	NCL-STATE New Jersey ARAR	BR-2-1-CDM 03/14/96	BR-2-1 03/14/96	BR-5-1 03/14/96 dup of BR-2-1	BR-2-2-CDM 06/12/96
Low Detection Volatiles							
CHLOROMETHANE	ug/l			-----	-----	-----	-----
VINYL CHLORIDE	ug/l	2.00	2.00	-----	-----	-----	-----
METHYLENE CHLORIDE	ug/l	5.00	2.00	-----	-----	-----	-----
CHLOROFORM	ug/l	100.00		0.10 J	-----	-----	-----
1,1,1-TRICHLOROETHANE	ug/l	200.00	26.00	-----	-----	-----	-----
CARBON TETRACHLORIDE	ug/l	5.00	2.00	-----	-----	-----	-----
TRICHLOROETHENE	ug/l	5.00	1.00	0.20 J	-----	-----	0.50 J
BENZENE	ug/l	5.00	1.00	-----	-----	-----	-----
4-METHYL-2-PENTANONE	ug/l			-----	-----	-----	-----
TOLUENE	ug/l	1,000.00	1,000.00	-----	-----	-----	-----
PCBs							
AROCLO-1248	ug/l	0.50	0.50	-----	-----	-----	-----
Inorganic Analytes							
ALUMINUM	ug/l			-----	40.20 B	43.20 B	-----
ANTIMONY	ug/l	6.00	6.00	-----	-----	-----	-----
ARSENIC	ug/l	50.00	50.00	-----	8.50 B	7.00 B	-----
BARIUM	ug/l	2,000.00	2,000.00	270.00	282.00	275.00	236.00
BERYLLIUM	ug/l	4.00	4.00	-----	0.21 B	-----	-----
CADMIUM	ug/l	5.00	5.00	-----	-----	-----	-----
CALCIUM	ug/l			32,000.00	31,200.00	30,400.00	33,000.00
CHROMIUM	ug/l	100.00	100.00	-----	-----	-----	-----
COBALT	ug/l			-----	-----	-----	-----
COPPER	ug/l	1,300.00	1,300.00	-----	-----	-----	-----
IRON	ug/l			-----	-----	35.30 B	-----
LEAD	ug/l	15.00	15.00	-----	-----	-----	-----
MANGANESE	ug/l			14,000.00	13,800.00	13,400.00	15,000.00
NICKEL	ug/l		100.00	-----	-----	-----	-----
POTASSIUM	ug/l			-----	2,100.00 BEJ	2,140.00 BEJ	-----
SELENIUM	ug/l	50.00	50.00	-----	-----	-----	-----
SODIUM	ug/l			9,000.00	8,640.00	8,090.00	9,000.00
THALLIUM	ug/l	2.00	2.00	-----	13.00 B	12.50 B	-----
VANADIUM	ug/l			-----	2.30 B	2.60 B	-----
ZINC	ug/l			-----	-----	-----	-----

SAMPLE NAME SAMPLE DATE NOTES		NCL-FED Federal ARAR	NCL-STATE New Jersey ARAR	BR-2-2 06/12/96	BR-2-3-CDM 10/03/96	BR-2-3 10/03/96	BR-2-4-CDM 01/08/97	BR-2 01/08/97
Low Detection Volatiles								
CHLOROMETHANE	ug/l			-----	-----	-----	-----	-----
VINYL CHLORIDE	ug/l	2.00	2.00	-----	-----	-----	-----	-----
METHYLENE CHLORIDE	ug/l	5.00	2.00	-----	-----	-----	-----	-----
CHLOROFORM	ug/l	100.00		-----	-----	-----	-----	-----
1,1,1-TRICHLOROETHANE	ug/l	200.00	26.00	-----	-----	-----	-----	-----
CARBON TETRACHLORIDE	ug/l	5.00	2.00	-----	-----	-----	-----	-----
TRICHLOROETHENE	ug/l	5.00	1.00	-----	0.30 J	-----	-----	-----
BENZENE	ug/l	5.00	1.00	-----	-----	-----	-----	-----
4-METHYL-2-PENTANONE	ug/l			-----	-----	-----	0.70 J	-----
TOLUENE	ug/l	1,000.00	1,000.00	-----	-----	-----	-----	-----
PCBs								
AROCLO-1248	ug/l	0.50	0.50	-----	-----	-----	-----	-----
Inorganic Analytes								
ALUMINUM	ug/l			-----	-----	161.00 B	-----	90.00 B
ANTIMONY	ug/l	6.00	6.00	-----	-----	-----	-----	-----
ARSENIC	ug/l	50.00	50.00	11.70	-----	7.90 B	12.20	10.50
BARIUM	ug/l	2,000.00	2,000.00	291.00	274.00	301.00	275.00	302.00
BERYLLIUM	ug/l	4.00	4.00	-----	-----	2.30 B	1.70 B	0.91 B
CADMIUM	ug/l	5.00	5.00	-----	-----	-----	-----	-----
CALCIUM	ug/l			34,000.00	32,000.00	31,000.00	31,000.00	32,700.00
CHROMIUM	ug/l	100.00	100.00	0.71	-----	4.10 BJ	-----	-----
COBALT	ug/l			-----	-----	0.01 B	1.10 B	-----
COPPER	ug/l	1,300.00	1,300.00	-----	-----	-----	-----	-----
IRON	ug/l			-----	-----	-----	44.00 B	-----
LEAD	ug/l	15.00	15.00	2.70 BJ	-----	1.40 BJ	13.00	5.70
MANGANESE	ug/l			15,000.00	13,000.00	14,300.00	13,300.00	14,500.00
NICKEL	ug/l		100.00	0.92 B	-----	1.90 B	-----	0.83 B
POTASSIUM	ug/l			2,470.00 BJ	-----	2,330.00 B	1,040.00 B	2,110.00 B
SELENIUM	ug/l	50.00	50.00	-----	-----	-----	-----	-----
SODIUM	ug/l			10,700.00 J	9,000.00	10,100.00	9,020.00	9,000.00
THALLIUM	ug/l	2.00	2.00	-----	-----	-----	-----	-----
VANADIUM	ug/l			13.10 B	-----	12.40 B	11.50 B	12.00 B
ZINC	ug/l			7.40 B	-----	10.60 B	8.20 B	6.10 B

NOTES: (1) Sample value exceeds Federal ARAR limit value.
(2) Sample value exceeds State ARAR limit value.
(3) Sample value exceeds both Federal and State ARAR limit values.

NOTE: The CDM nomenclature next to the Sample Name indicates EPA's split sampling results; the Sample Name without any nomenclature is the Respondent's sampling results.

Data Qualifier

J indicates for all chemicals that the reported concentration is estimated.

B indicates that the reported value is less than the contract required detection limit but greater than the instrument detection limit; the integrity of the sample is suspect.

Circle Scrap Metal, Inc. Site - 012
Groundwater Sampling Results
Bedrock Well (On-Site)

SAMPLE NAME SAMPLE DATE NOTES		NCL-FED Federal ABAR	NCL-STATE New Jersey ABAR	00-3-1-CBN 03/12/96	00-3-1 03/12/96	00-3-2-CBN 04/11/96
Low Detection Volatiles						
CHLOROBENZENE	ug/l			-----	-----	-----
VINYL CHLORIDE	ug/l	2.00	2.00	-----	-----	-----
NETYLENE CHLORIDE	ug/l	5.00	2.00	-----	-----	-----
CHLOROFORM	ug/l	100.00	-----	-----	-----	-----
1,1,1-TRICHLOROETHANE	ug/l	200.00	20.00	-----	-----	-----
CARBON TETRACHLORIDE	ug/l	5.00	2.00	0.40 J	-----	0.40 J
TRICHLOROETHENE	ug/l	5.00	1.00	0.00 J	-----	0.00 J
BENZENE	ug/l	5.00	1.00	-----	-----	-----
4-METHYL-2-PENTANONE	ug/l	-----	-----	-----	-----	-----
TOLUENE	ug/l	1,000.00	1,000.00	0.30 J	-----	-----
PCBs						
ANALOG-1240	ug/l	0.50	0.50	-----	-----	-----
Inorganic Analytes						
ALUMINUM	ug/l	-----	-----	296.00	306.00	439.00
ANTIMONY	ug/l	4.00	6.00	-----	-----	-----
ARSENIC	ug/l	50.00	50.00	-----	4.40 B	-----
BARIUM	ug/l	2,000.00	2,000.00	507.00	400.00	562.00
BERYLLIUM	ug/l	4.00	4.00	-----	0.37 B	-----
CADMIUM	ug/l	5.00	5.00	-----	-----	-----
CALCIUM	ug/l	-----	-----	45,000.00	41,000.00	50,000.00
CHROMIUM	ug/l	100.00	100.00	-----	-----	23.00
COBALT	ug/l	-----	-----	-----	-----	-----
COPPER	ug/l	1,300.00	1,300.00	-----	-----	-----
IRON	ug/l	-----	-----	270.00	154.00	262.00
LEAD	ug/l	15.00	15.00	19,000.00	17,500.00	21,000.00
MANGANESE	ug/l	-----	-----	-----	3.60 B	-----
NICKEL	ug/l	-----	100.00	-----	1.00 B	-----
POTASSIUM	ug/l	-----	-----	-----	2,120.00 B	-----
SILICON	ug/l	50.00	50.00	-----	-----	-----
SODIUM	ug/l	-----	-----	15,000.00	14,700.00	13,000.00
THALLIUM	ug/l	2.00	2.00	-----	-----	-----
VANADIUM	ug/l	-----	-----	-----	5.00 B	-----
ZINC	ug/l	-----	-----	-----	5.00 DE J	-----

SAMPLE NAME SAMPLE DATE NOTES		NCL-FED Federal ABAR	NCL-STATE New Jersey ABAR	00-3-2 04/11/96	00-3-2 04/11/96 dep of 00-3-2	00-3-3-CBN 10/02/96	00-3-3 10/02/96	00-3-4-CBN 01/07/97	00-3-4 01/07/97	00-3-4 01/07/97 dep of 00-3-4
Low Detection Volatiles										
CHLOROBENZENE	ug/l			-----	-----	-----	-----	-----	0.30 J	0.29 J
VINYL CHLORIDE	ug/l	2.00	2.00	-----	-----	-----	-----	-----	0.31 J	0.32 J
NETYLENE CHLORIDE	ug/l	5.00	2.00	-----	-----	-----	-----	-----	-----	-----
CHLOROFORM	ug/l	100.00	-----	-----	-----	-----	-----	-----	-----	-----
1,1,1-TRICHLOROETHANE	ug/l	200.00	20.00	-----	-----	-----	-----	-----	-----	-----
CARBON TETRACHLORIDE	ug/l	5.00	2.00	-----	-----	0.30 J	-----	-----	-----	-----
TRICHLOROETHENE	ug/l	5.00	1.00	-----	-----	0.00 J	-----	-----	-----	-----
BENZENE	ug/l	5.00	1.00	0.60 J	-----	-----	-----	-----	-----	-----
4-METHYL-2-PENTANONE	ug/l	1,000.00	1,000.00	-----	-----	-----	-----	-----	-----	-----
TOLUENE	ug/l	1,000.00	1,000.00	-----	-----	-----	-----	-----	-----	-----
PCBs										
ANALOG-1240	ug/l	0.50	0.50	-----	-----	-----	-----	-----	-----	-----
Inorganic Analytes										
ALUMINUM	ug/l	-----	-----	120.00 B	124.00 B	-----	193.00 B	416.00	325.00	343.00
ANTIMONY	ug/l	4.00	6.00	-----	-----	-----	-----	-----	1.20 B	-----
ARSENIC	ug/l	50.00	50.00	4.00 B	4.20 B	-----	-----	-----	5.60 B	2.70 B
BARIUM	ug/l	2,000.00	2,000.00	550.00	563.00	490.00	543.00	449.00	406.00	463.00
BERYLLIUM	ug/l	4.00	4.00	-----	-----	-----	2.10 B	1.30 B	0.79 B	0.00 B
CADMIUM	ug/l	5.00	5.00	-----	-----	-----	-----	-----	0.64 J	0.64 J
CALCIUM	ug/l	-----	-----	50,000.00	51,400.00	45,000.00	45,100.00	39,300.00	30,900.00	39,600.00
CHROMIUM	ug/l	100.00	100.00	7.50 B	0.90 B	-----	5.30 B J	2.50 B	7.20 J	5.90 J
COBALT	ug/l	-----	-----	1.30 B	-----	-----	-----	-----	0.52 B	-----
COPPER	ug/l	1,300.00	1,300.00	0.90 B	7.00 B	-----	-----	47.50	42.00	35.20
IRON	ug/l	-----	-----	101.00 J	96.50 B	-----	-----	203.00	212.00	170.00
LEAD	ug/l	15.00	15.00	4.70 J	2.60 B J	-----	1.00 B J	27.50	29.00	25.50
MANGANESE	ug/l	-----	-----	20,700.00	21,000.00	10,000.00	19,900.00	16,500.00 (3)	16,900.00 (3)	17,300.00 (3)
NICKEL	ug/l	-----	100.00	7.40 B	6.90 B	-----	3.70 B	13.20 B	15.20 B	12.50 B
POTASSIUM	ug/l	-----	-----	6.00 B	6.30 B	-----	3.70 B	5.00 B	8.20 B	4.90 B
SILICON	ug/l	50.00	50.00	2,770.00 B J	2,830.00 B J	5,000.00	7,430.00	13,500.00	10,400.00	10,700.00
SODIUM	ug/l	-----	-----	13,200.00 J	13,000.00 J	14,000.00	16,000.00	32,900.00	30,900.00	35,400.00
THALLIUM	ug/l	2.00	2.00	-----	-----	-----	5.60 B (3)	10.60 (3)	3.20 B (3)	-----
-----	ug/l	-----	-----	5.50 B	5.70 B	-----	5.20 B	1.70 B	3.60 B	3.90 B
-----	ug/l	-----	-----	17.00 B	19.50 B	-----	7.00 B	24.00	26.50	22.00

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TABLE 2

Curcio Scrap Metal, Inc. Site - Q12
Groundwater Sampling Results
Upgradient Overburden Wells (On-Site)

SAMPLE NAME SAMPLE DATE NOTES		NCL-FED Federal ARAR	NCL-STATE New Jersey ARAR	MR-18-1-CDM 03/12/96 Upgradient	MR-18-1 03/12/96 Upgradient	MR-18-2-CDM 06/11/96 Upgradient	MR-18-2 06/11/96 Upgradient
Low Detection Volatiles		2.00	2.00	-----	-----	-----	-----
VINYL CHLORIDE	ug/l	100.00	-----	-----	-----	0.50 J	-----
CHLOROPYCN	ug/l	5.00	1.00	0.40 J	-----	-----	-----
TRICHLOROETHENE	ug/l	5.00	1.00	-----	-----	-----	-----
BENZENE	ug/l	1,000.00	1,000.00	0.20 J	-----	-----	-----
TOLUENE	ug/l	-----	-----	-----	-----	-----	-----
PCBs							
Inorganic Analytes	ug/l			718.00	1,110.00	-----	85.00 B
ALUMINUM	ug/l	2,000.00	2,000.00	-----	114.00 B	-----	98.00 B
BARIUM	ug/l	4.00	4.00	-----	0.52 B	-----	-----
BERYLLIUM	ug/l	-----	-----	55,000.00	49,000.00	54,000.00	54,200.00
CALCIUM	ug/l	100.00	100.00	124.00	33.40	-----	2.00 B
CHROMIUM	ug/l	-----	-----	-----	9.80 B	-----	0.87 B
COBALT	ug/l	1,300.00	1,300.00	-----	3.50 B	191.00	2.00 B
COPPER	ug/l	-----	-----	1,450.00	1,930.00	3.00	65.50 B
IRON	ug/l	15.00	15.00	-----	3.30	8,000.00	2.50 B
LEAD	ug/l	-----	-----	8,000.00	7,890.00	51.00	8,350.00
MAGNESIUM	ug/l	-----	-----	154.00	166.00	-----	54.20
MANGANESE	ug/l	-----	100.00	111.00	42.00	-----	34.00 B
NICKEL	ug/l	-----	-----	-----	3.00 B	37,000.00	36,400.00 J
POTASSIUM	ug/l	50.00	50.00	34,000.00	34,500.00	-----	-----
SELENIUM	ug/l	-----	-----	-----	2.70 B	-----	-----
SODIUM	ug/l	2.00	2.00	-----	129.00 B	46.00	71.00
THALLIUM	ug/l	-----	-----	120.00	-----	-----	-----
Vanadium	ug/l	-----	-----	-----	-----	-----	-----
ZINC	ug/l	-----	-----	-----	-----	-----	-----

SAMPLE NAME SAMPLE DATE NOTES		NCL-FED Federal ARAR	NCL-STATE New Jersey ARAR	MR-18-3-CDM 10/02/96 Upgradient	MR-18-3 10/02/96 Upgradient	MR-18-3 10/02/96 Dup of MR-18-3	MR-18-4-CDM 01/07/97 Upgradient	MR-18-4 01/07/97 Upgradient
Low Detection Volatiles		2.00	2.00	0.30 J	-----	-----	-----	0.25 J
VINYL CHLORIDE	ug/l	100.00	-----	2.70	-----	-----	-----	-----
CHLOROPYCN	ug/l	5.00	1.00	0.40 J	-----	-----	-----	-----
TRICHLOROETHENE	ug/l	5.00	1.00	-----	-----	-----	-----	-----
BENZENE	ug/l	1,000.00	1,000.00	-----	-----	-----	-----	-----
TOLUENE	ug/l	-----	-----	-----	-----	-----	-----	-----
PCBs								
Inorganic Analytes	ug/l			-----	170.00 B	177.00 B	135.00 B	116.00 B
ALUMINUM	ug/l	2,000.00	2,000.00	-----	99.00 B	100.00 B	75.00 B	77.50 B
BARIUM	ug/l	4.00	4.00	-----	2.20 B	2.20 B	1.40 B	0.99 B
BERYLLIUM	ug/l	-----	-----	49,000.00	49,500.00	49,500.00	46,800.00	46,300.00
CALCIUM	ug/l	100.00	100.00	-----	2.90 B	3.20 B	-----	-----
CHROMIUM	ug/l	-----	-----	-----	0.60 B	-----	-----	-----
COBALT	ug/l	1,300.00	1,300.00	-----	-----	-----	26.30 B	-----
COPPER	ug/l	-----	-----	-----	-----	-----	-----	-----
IRON	ug/l	15.00	15.00	-----	7,930.00	7,970.00	7,120.00	7,240.00
LEAD	ug/l	-----	-----	7,000.00	30.40	30.00	33.70	32.10
MAGNESIUM	ug/l	-----	-----	30.00	19.10 B	19.10 B	24.70 B	25.70
MANGANESE	ug/l	-----	100.00	-----	4,040.00 B	4,040.00 B	2,740.00 B	3,450.00
NICKEL	ug/l	-----	-----	-----	3.90 B	3.70	7.40	4.40
POTASSIUM	ug/l	50.00	50.00	40,000.00	38,000.00	39,000.00	38,100.00	40,400.00
SELENIUM	ug/l	-----	-----	-----	3.10 B	-----	-----	-----
SODIUM	ug/l	2.00	2.00	-----	13.70 B	14.90 B	52.40	51.00
THALLIUM	ug/l	-----	-----	-----	-----	-----	-----	-----
Vanadium	ug/l	-----	-----	-----	-----	-----	-----	-----
ZINC	ug/l	-----	-----	-----	-----	-----	-----	-----

Data Qualifier

J indicates for all chemicals that the reported concentration is estimated.
B indicates that the reported value is less than the contract required detection limit but greater than the instrument detection limit; the integrity of the sample is suspect.

NOTES: (1) Sample value exceeds Federal ARAR limit value.
(2) Sample value exceeds State ARAR limit value.
(3) Sample value exceeds both Federal and State ARAR limit values.

NOTE: The CDM nomenclature next to the Sample Name indicates EPA's split sampling results; the Sample Name without any nomenclature is the Respondent's sampling results.

TABLE 2

TABLE 2

Curcio Scrap Metal, Inc. Site - 002
Groundwater Sampling Results
Overburden Wells (On-Site)

SAMPLE NAME SAMPLE DATE NOTES		NCL-FED Federal ARAR	NCL-STATE New Jersey ARAR	RM-2-1-CDM 03/14/96	RM-2-1 03/14/96	RM-2-2-CDM 06/12/96	RM-2-2 06/12/96
PCBs AROCLOK-1242	ug/l	0.50	0.50	-----	-----	-----	-----
Inorganic Analytes							
ALUMINUM	ug/l			-----	48.40 B	-----	91.40 B
ANTHRACENE	ug/l	6.00	6.00	-----	-----	-----	-----
ARSENIC	ug/l	50.00	50.00	-----	-----	-----	-----
BARIUM	ug/l	2,000.00	2,000.00	-----	151.00 B	-----	170.00 B
BERYLLIUM	ug/l	4.00	4.00	-----	0.36 B	-----	-----
CADMIUM	ug/l	5.00	5.00	-----	-----	-----	-----
CALCIUM	ug/l			153,000.00	150,000.00	152,000.00	157,000.00
CHROMIUM	ug/l	100.00	100.00	-----	-----	12.00	9.70 B
COBALT	ug/l			-----	2.60 B	-----	7.30 B
COPPER	ug/l	1,300.00	1,300.00	-----	4.30 B	-----	6.30 B
IRON	ug/l			145.00	216.00	701.00	540.00 J
LEAD	ug/l	15.00	15.00	-----	-----	43.00	32.00
MANGANESE	ug/l			30,000.00	29,000.00	28,000.00 (3)	28,400.00
NICKEL	ug/l			7,700.00	7,800.00	8,420.00	8,530.00
POYADIUM	ug/l		100.00	-----	10.10 B	-----	19.40 B
SELENIUM	ug/l	50.00	50.00	-----	5,310.00 EJ	-----	5,930.00 J
SODIUM	ug/l			27,000.00	28,000.00	26,000.00	28,000.00 J
THALLIUM	ug/l	2.00	2.00	-----	7.30 B (3)	-----	9.00 B (3)
THALLIUM	ug/l			-----	0.53 B	-----	-----
ZINC	ug/l			-----	5.70 B	-----	9.10 B

SAMPLE NAME SAMPLE DATE NOTES		NCL-FED Federal ARAR	NCL-STATE New Jersey ARAR	RM-2-1-CDM 03/14/96	RM-2-1 03/14/96	RM-2-2-CDM 06/12/96	RM-2-2 06/12/96
Low Detection Volatiles							
VINYL CHLORIDE	ug/l	2.00	2.00	-----	-----	-----	-----
CHLOROETHANE	ug/l			-----	-----	-----	-----
METHYLENE CHLORIDE	ug/l	5.00	2.00	-----	-----	-----	-----
ACETONE	ug/l			-----	-----	-----	-----
CARBON DISULFIDE	ug/l			-----	-----	-----	-----
1,1-DICHLOROETHANE	ug/l	7.00	2.00	-----	-----	-----	-----
1,1-DICHLOROETHANE	ug/l			-----	-----	-----	-----
cis 1,2-DICHLOROETHANE	ug/l	70.00	10.00	-----	-----	-----	-----
trans 1,2-DICHLOROETHANE	ug/l	100.00	10.00	-----	-----	-----	-----
CHLOROFORM	ug/l	100.00		-----	-----	-----	-----
1,2-DICHLOROETHANE	ug/l	5.00	2.00	-----	-----	-----	-----
2-BUTANONE	ug/l			-----	-----	-----	-----
1,1,1-TRICHLOROETHANE	ug/l	200.00	26.00	-----	-----	-----	-----
BROMODICHLOROETHANE	ug/l	100.00		-----	-----	-----	-----
TRICHLOROETHANE	ug/l	5.00	1.00	-----	-----	0.30 J	-----
DIBROMOCHLOROETHANE	ug/l	100.00		-----	-----	-----	-----
BENZENE	ug/l	5.00	1.00	-----	-----	-----	-----
4-METHYL-2-PENTANONE	ug/l			-----	-----	-----	-----
TOLUENE	ug/l	1,000.00	1,000.00	-----	-----	-----	-----
CHLOROBENZENE	ug/l	0.10	4.00	-----	-----	-----	-----
ETHYLBENZENE	ug/l	700.00	700.00	-----	-----	-----	-----
XYLENES (TOTAL)	ug/l	10,000.00	44.00	-----	-----	-----	-----
p-XYLENE	ug/l			-----	-----	-----	-----
m-XYLENE	ug/l			-----	-----	-----	-----
ISOPROPYLBENZENE	ug/l			-----	-----	-----	-----
n-PROPYLBENZENE	ug/l			-----	-----	-----	-----
1,3,5-TRIMETHYLBENZENE	ug/l			-----	-----	-----	-----
1,2,4-TRIMETHYLBENZENE	ug/l			-----	-----	-----	-----
NAPHTHALENE	ug/l			-----	-----	-----	-----

Data Qualifier

J indicates for all chemicals that the reported concentration is estimated.

B indicates that the reported value is less than the contract required detection limit but greater than the instrument detection limit; the integrity of the sample is suspect.

NOTES: (1) Sample value exceeds Federal ARAR limit value.
(2) Sample value exceeds State ARAR limit value.
(3) Sample value exceeds both Federal and State ARAR limit values.

NOTE: The CDM nomenclature next to the Sample Name indicates EPA's split sampling results; the Sample Name without any nomenclature is the Respondent's sampling results.

TABLE 2

Circle Scrap Metal, Inc. Site - GJ2
Groundwater Sampling Results
Overburden Wells (On-Site)

SAMPLE NAME SAMPLE DATE NOTES		RCL-FED Federal ARAR	RCL-STATE New Jersey ARAR	RM-2-3-P-CDM 10/03/96	RM-2-3 10/03/96	RM-2-4-CDM 01/08/97	RM-2-4 01/08/97
Low Detection Volatiles							
VINYL CHLORIDE	ug/l	2.00	2.00	-----	-----	-----	-----
CHLOROETHANE	ug/l			-----	-----	-----	-----
METHYLENE CHLORIDE	ug/l	5.00	2.00	-----	-----	-----	-----
ACETONE	ug/l			-----	-----	-----	-----
CARBON DISULFIDE	ug/l			-----	-----	-----	-----
1,1-DICHLOROETHANE	ug/l	7.00	2.00	-----	-----	-----	-----
1,1-DICHLOROETHANE	ug/l			-----	-----	-----	-----
cis 1,2-DICHLOROETHANE	ug/l	70.00	10.00	-----	-----	-----	-----
Trans 1,2-DICHLOROETHANE	ug/l	100.00	10.00	-----	-----	-----	-----
CHLOROFORM	ug/l	100.00		-----	-----	-----	-----
1,2-DICHLOROETHANE	ug/l	5.00	2.00	-----	-----	-----	-----
2-BUTANONE	ug/l			-----	-----	-----	-----
1,1,1-TRICHLOROETHANE	ug/l	200.00	26.00	-----	-----	-----	-----
ISODICHLOROETHANE	ug/l	100.00		-----	-----	-----	-----
TRI CHLOROETHANE	ug/l	5.00	1.00	-----	-----	-----	-----
DIBROMOCHLOROETHANE	ug/l	100.00		-----	-----	-----	-----
BENZENE	ug/l	5.00	1.00	-----	-----	-----	-----
4-METHYL-2-PENTANONE	ug/l			-----	-----	-----	-----
TOLUENE	ug/l	1,000.00	1,000.00	-----	-----	-----	-----
CHLOROBENZENE	ug/l	0.10	4.00	-----	-----	-----	-----
ETHYLBENZENE	ug/l	700.00	700.00	-----	-----	-----	-----
XYLENES (TOTAL)	ug/l	10,000.00	44.00	-----	-----	-----	-----
p-x XYLENE	ug/l			-----	-----	-----	-----
m-XYLENE	ug/l			-----	-----	-----	-----
ISOPROPYLBENZENE	ug/l			-----	-----	-----	-----
n-PROPYLBENZENE	ug/l			-----	-----	-----	-----
1,3,5-TRIETHYLBENZENE	ug/l			-----	-----	-----	-----
1,2,4-TRIETHYLBENZENE	ug/l			-----	-----	-----	-----
NAFTHALENE	ug/l			-----	-----	-----	-----

SAMPLE NAME SAMPLE DATE NOTES		RCL-FED Federal ARAR	RCL-STATE New Jersey ARAR	RM-2-3-P-CDM 10/03/96	RM-2-3 10/03/96	RM-2-4-CDM 01/08/97	RM-2-4 01/08/97
PCBs							
ARCLOR-1242	ug/l	0.50	0.50	-----	-----	-----	-----
Inorganic Analytes							
ALUMINUM	ug/l			-----	161.00 B	88.20 B	96.00 B
ANTHRONY	ug/l	6.00	6.00	-----	-----	6.30 B (3)	-----
ARSENIC	ug/l	50.00	50.00	-----	-----	-----	2.10 B
BARIUM	ug/l	2,000.00	2,000.00	-----	135.00 B	120.00 B	139.00 B
BERYLLIUM	ug/l	4.00	4.00	-----	2.30 B	1.50 B	1.10 B
CADMIUM	ug/l	5.00	5.00	-----	-----	-----	-----
CALCIUM	ug/l			150,000.00	148,000.00	138,000.00	147,000.00
CHROMIUM	ug/l	100.00	100.00	-----	2.30 B	-----	-----
COBALT	ug/l			-----	3.20 B	2.50 B	2.00 B
COPPER	ug/l	1,300.00	1,300.00	-----	-----	-----	-----
IRON	ug/l			-----	54.20 B	315.00	240.00
LEAD	ug/l	15.00	15.00	-----	-----	-----	-----
MANGANESE	ug/l			26,000.00	26,000.00	23,700.00	27,100.00
NICKEL	ug/l			4,400.00	4,330.00	5,340.00	5,040.00
POTASSIUM	ug/l		100.00	-----	12.00 B	4.40 B	4.70 B
SELENIUM	ug/l	50.00	50.00	-----	4,190.00 B	5,090.00	5,040.00
SILICON	ug/l			-----	-----	8.70	3.20 J
TIN	ug/l			26,000.00	27,400.00	27,300.00	30,400.00
TITANIUM	ug/l	2.00	2.00	-----	7.70 B (3)	15.10 (3)	5.70 B (3)
Vanadium	ug/l			-----	8.70 B	-----	-----
ZINC	ug/l			-----	6.10 B	2.00 B	-----

Data Qualifier

J indicates for all chemicals that the reported concentration is estimated.

B indicates that the reported value is less than the contract required detection limit but greater than the instrument detection limit; the integrity of the sample is suspect.

NOTES: (1) Sample value exceeds Federal ARAR limit value.
(2) Sample value exceeds State ARAR limit value.
(3) Sample value exceeds both Federal and State ARAR limit values.

NOTE: The CDM nomenclature next to the Sample Name indicates EPA's split sampling results; the Sample Name without any nomenclature is the Respondent's sampling results.

TABLE 2

Carroll Scrap Metal, Inc. Site - GJ2
Groundwater Sampling Results
Overburden Wells (Dr-Site)

SAMPLE NAME SAMPLE DATE NOTES		NCL-FED Federal ARAR	NCL-STATE New Jersey ARAR	HW-30-1-P-CDM 03/12/96	HW-30-1-P 03/12/96	HW-30-2-CDM 06/10/96	HW-30-2 06/11/96
PCBs ANDCLOR-1242	ug/l	0.50	0.50	-----	0.11 J	-----	-----
Inorganic Analytes	ug/l			12,700.00	5,710.00	696.00	821.00
ALUMINUM	ug/l	6.00	6.00	-----	-----	-----	-----
ANTIMONY	ug/l	50.00	50.00	95.40	(3) 104.00	(3) 182.00	(3) 207.00
ARSENIC	ug/l	2,000.00	2,000.00	490.00	412.00	433.00	422.00
BARIUM	ug/l	4.00	4.00	-----	0.67 B	-----	-----
BERYLLIUM	ug/l	5.00	5.00	-----	-----	5.00	-----
CADMIUM	ug/l	-----	-----	103,800.00	89,500.00	85,000.00	87,000.00
CALCIUM	ug/l	-----	-----	176.00	(3) 128.00	(3) 29.00	4.90 B
CHROMIUM	ug/l	100.00	100.00	-----	11.00 B	-----	9.00 B
COBALT	ug/l	-----	-----	85.00	35.70	-----	9.00 B
COPPER	ug/l	1,300.00	1,300.00	38,700.00	26,900.00	25,300.00	26,500.00 J
IRON	ug/l	15.00	15.00	47.00	(3) 11.10	3.40	2.30 B
LEAD	ug/l	-----	-----	33,800.00	29,600.00	31,000.00	31,400.00
MAGNESIUM	ug/l	-----	-----	4,490.00	4,120.00	2,540.00	2,570.00
MANGANESE	ug/l	-----	100.00	134.00	(2) 95.10	-----	9.20 B
NICKEL	ug/l	-----	-----	82,000.00	83,300.00	104,000.00	93,700.00 J
POTASSIUM	ug/l	-----	-----	-----	-----	-----	-----
SELENIUM	ug/l	50.00	50.00	54,800.00	57,800.00	58,000.00	57,900.00 J
SODIUM	ug/l	-----	-----	-----	6.30 B	(3) -----	-----
THALLIUM	ug/l	2.00	2.00	-----	17.20 B	-----	2.50 B
Vanadium	ug/l	-----	-----	186.00	42.60 B	-----	16.10 B
ZINC	ug/l	-----	-----	-----	-----	-----	-----

SAMPLE NAME SAMPLE DATE NOTES		NCL-FED Federal ARAR	NCL-STATE New Jersey ARAR	HW-30-1-P-CDM 03/12/96	HW-30-1-P 03/12/96	HW-30-2-CDM 06/10/96	HW-30-2 06/11/96
Low Detection Volatiles	ug/l	2.00	2.00	-----	5.20	(3) 6.20	(3) 7.30
VINYL CHLORIDE	ug/l	-----	-----	-----	-----	-----	-----
CHLOROETHANE	ug/l	5.00	2.00	0.30 J	-----	0.30 J	-----
METHYLENE CHLORIDE	ug/l	-----	-----	-----	-----	7.50	-----
ACETONE	ug/l	-----	-----	-----	-----	0.60 J	-----
CARBON DISULFIDE	ug/l	7.00	2.00	-----	-----	-----	-----
1,1-DICHLOROETHANE	ug/l	-----	-----	-----	-----	-----	-----
1,1-DICHLOROETHANE	ug/l	-----	-----	-----	-----	-----	-----
cis 1,2-DICHLOROETHANE	ug/l	70.00	10.00	-----	3.50 J	4.40	-----
trans 1,2-DICHLOROETHANE	ug/l	100.00	10.00	-----	-----	1.00 J	0.90 J
CHLOROPHEN	ug/l	100.00	-----	51.00	-----	-----	-----
1,2-DICHLOROETHANE	ug/l	5.00	2.00	-----	-----	-----	-----
2-BUTANONE	ug/l	-----	-----	-----	-----	2.00	-----
1,1,1-TRICHLOROETHANE	ug/l	200.00	26.00	0.30 J	-----	-----	-----
BROMOCHLOROETHANE	ug/l	100.00	-----	3.00	-----	-----	-----
TRICHLOROETHANE	ug/l	5.00	1.00	0.00 J	-----	0.00 J	-----
DIBROMOCHLOROETHANE	ug/l	100.00	-----	0.30 J	-----	-----	-----
BENZENE	ug/l	5.00	1.00	-----	2.90	(2) 8.10	(3) 8.00
4-METHYL-2-PENTANONE	ug/l	-----	-----	-----	0.00 J	-----	-----
TOLUENE	ug/l	1,000.00	1,000.00	0.30 J	1.50	2.30	2.00
CHLOROBENZENE	ug/l	0.10	4.00	-----	-----	1.20	(1) 1.20
ETHYLBENZENE	ug/l	700.00	700.00	-----	1.20	2.90	2.50
XYLENES (TOTAL)	ug/l	10,000.00	44.00	-----	4.60	-----	4.30
p-XYLENE	ug/l	-----	-----	-----	-----	3.00	-----
m-XYLENE	ug/l	-----	-----	-----	-----	1.00	-----
ISOPROPYLBENZENE	ug/l	-----	-----	-----	-----	0.60 J	-----
n-PROPYLBENZENE	ug/l	-----	-----	-----	-----	0.50 J	-----
1,3,5-TRIMETHYLBENZENE	ug/l	-----	-----	-----	-----	1.00	-----
1,2,4-TRIMETHYLBENZENE	ug/l	-----	-----	-----	-----	3.50	-----
NAFTHALENE	ug/l	-----	-----	-----	-----	2.50	-----

Data Qualifier

J indicates for all chemicals that the reported concentration is estimated.

B indicates that the reported value is less than the contract required detection limit but greater than the instrument detection limit; the integrity of the sample is suspect.

NOTES: (1) Sample value exceeds Federal ARAR limit value.
(2) Sample value exceeds State ARAR limit value.
(3) Sample value exceeds both Federal and State ARAR limit values.

NOTE: The CDM nomenclature next to the Sample Name indicates EPA's split sampling results; the Sample Name without any nomenclature is the Respondent's sampling result.

TABLE 2

Circle Scrap Metal, Inc. Site - QJ2
Groundwater Sampling Results
Overburden Wells (Qr-Site)

SAMPLE NAME SAMPLE DATE NOTES		RCL-FED Federal ARAR	RCL-STATE New Jersey ARAR	HW-30-3-CDM 10/01/96	HW-30-3 10/01/96	HW-30-4-CDM 01/09/97	HW-30-4 01/09/97
PCBs AROCLOH-1242	ug/l	0.50	0.50	-----	-----	-----	-----
Inorganic Analytes							
ALUMINUM	ug/l	4.00	6.00	414.00	473.00	147.00 B	449.00
ANTIMONY	ug/l	50.00	50.00	225.00	(3) 243.00	(3) 191.00	(3) 211.00
ARSENIC	ug/l	2,000.00	2,000.00	506.00	524.00	533.00	583.00
BARIUM	ug/l	4.00	4.00	-----	2.20 B	1.90 B	1.00 B
BERYLLIUM	ug/l	5.00	5.00	-----	-----	-----	-----
CADMIUM	ug/l	100.00	100.00	67,000.00	64,900.00	76,500.00	76,100.00
CALCIUM	ug/l	-----	-----	-----	4.20 BJ	-----	-----
CHROMIUM	ug/l	100.00	100.00	-----	4.30 B	5.60 B	3.60 B
COPPER	ug/l	1,300.00	1,300.00	-----	27.90	25,300.00	29,400.00
COBALT	ug/l	-----	-----	-----	1.90 BJ	17.70	1.80 B
LEAD	ug/l	15.00	15.00	26,000.00	27,900.00	28,500.00	31,200.00
MAGNESIUM	ug/l	-----	-----	1,360.00	1,320.00	1,980.00	1,990.00
MANGANESE	ug/l	-----	100.00	-----	9.20 B	10.40 B	7.00 B
NICKEL	ug/l	-----	-----	114,000.00	102,000.00	96,100.00	99,200.00
POTASSIUM	ug/l	50.00	50.00	43,000.00	61,400.00	64,500.00	83,800.00
SELENIUM	ug/l	-----	-----	-----	7.70 B	-----	2.70 B
SODIUM	ug/l	2.00	2.00	-----	1.70 B	1.10 B	1.60 B
THALLIUM	ug/l	-----	-----	-----	9.00 B	27.00	4.80 B
VANADIUM	ug/l	-----	-----	-----	-----	-----	-----
ZINC	ug/l	-----	-----	-----	-----	-----	-----

SAMPLE NAME SAMPLE DATE NOTES		RCL-FED Federal ARAR	RCL-STATE New Jersey ARAR	HW-30-3-CDM 10/01/96	HW-30-3 10/01/96	HW-30-4-CDM 01/09/97	HW-30-4 01/09/97
Low Detection Volatiles							
VINYL CHLORIDE	ug/l	2.00	2.00	4.30 (3)	5.70 (3)	3.00 (3)	-----
CHLOROETHANE	ug/l	-----	-----	-----	-----	-----	-----
ETHYLENE CHLORIDE	ug/l	5.00	2.00	0.20 J	-----	-----	-----
ACETONE	ug/l	-----	-----	-----	-----	-----	-----
CARBON DISULFIDE	ug/l	-----	-----	-----	-----	-----	-----
1,1-DICHLOROETHANE	ug/l	7.00	2.00	-----	-----	-----	-----
1,1-DICHLOROETHANE	ug/l	-----	-----	-----	-----	-----	-----
cis 1,2-DICHLOROETHANE	ug/l	70.00	10.00	5.20	4.30	4.00	-----
Trans 1,2-DICHLOROETHANE	ug/l	100.00	10.00	1.00 J	0.75 J	-----	-----
CHLOROPHEN	ug/l	100.00	-----	-----	-----	-----	-----
1,2-DICHLOROETHANE	ug/l	5.00	2.00	-----	-----	-----	-----
2-BUTANONE	ug/l	-----	-----	-----	-----	-----	-----
1,1,1-TRICHLOROETHANE	ug/l	200.00	25.00	-----	-----	-----	-----
BROMOCHLOROETHANE	ug/l	100.00	-----	-----	-----	-----	-----
TRICHLOROETHANE	ug/l	5.00	1.00	1.00 J	-----	-----	-----
DIBROMOCHLOROETHANE	ug/l	100.00	-----	-----	-----	-----	-----
PERCHLOROPOLYETHYLENE	ug/l	5.00	1.00	8.50 (3)	6.60 (3)	13.00 (3)	-----
4-METHYL-2-PENTANONE	ug/l	-----	-----	-----	-----	1.00 J	-----
TOLUENE	ug/l	1,000.00	1,000.00	-----	0.75 J	1.00	-----
CHLOROBENZENE	ug/l	0.10	4.00	2.50 (1)	1.60 (1)	1.00 (1)	-----
ETHYLBENZENE	ug/l	700.00	700.00	2.10	1.90	4.00	-----
STYRENE (TOTAL)	ug/l	10,000.00	44.00	-----	0.42 J	1.00	-----
p-XYLENE	ug/l	-----	-----	0.70 J	-----	-----	-----
m-XYLENE	ug/l	-----	-----	0.90 J	-----	-----	-----
ISOPROPYLBENZENE	ug/l	-----	-----	0.30 J	-----	-----	-----
n-PROPYLBENZENE	ug/l	-----	-----	-----	-----	-----	-----
1,3,5-TRIMETHYLBENZENE	ug/l	-----	-----	0.20 J	-----	-----	-----
1,2,4-TRIMETHYLBENZENE	ug/l	-----	-----	-----	-----	-----	-----
NAPHTHALENE	ug/l	-----	-----	-----	-----	-----	-----

Data Qualifier

J indicates for all chemicals that the reported concentration is estimated.

B indicates that the reported value is less than the contract required detection limit but greater than the instrument detection limit; the integrity of the sample is suspect.

NOTES: (1) Sample value exceeds Federal ARAR limit value.
(2) Sample value exceeds State ARAR limit value.
(3) Sample value exceeds both Federal and State ARAR limit values.

NOTE: The CDM nomenclature next to the Sample Name indicates EPA's split sampling results; the Sample Name without any nomenclature is the Respondent's sampling results.

TABLE 2

Curcio Scrap Metal, Inc. Site - QJ2
Groundwater Sampling Results
Overburden Wells (On-Site)

SAMPLE NAME SAMPLE DATE NOTES		NCL-FED Federal ARAR	NCL-STATE New Jersey ARAR	RM-42-1-COM 03/11/96	RM-42-1 03/11/96	RM-42-2-COM 06/10/96	RM-42-2 06/11/96
PCBs ANCLOR-1242	ug/l	0.50	0.50	-----	-----	-----	-----
Inorganic Analytes	ug/l						
ALUMINUM	ug/l	6.00	6.00	-----	79.70 B	691.00	541.00
ANTIMONY	ug/l	50.00	50.00	-----	-----	-----	-----
ARSENIC	ug/l	2,000.00	2,000.00	-----	89.20 B	-----	77.20 B
BARIUM	ug/l	4.00	4.00	-----	0.43 B	-----	-----
BERYLLIUM	ug/l	5.00	5.00	-----	-----	-----	-----
CADMIUM	ug/l	-----	-----	143,000.00	153,000.00	148,000.00	152,000.00
CALCIUM	ug/l	100.00	100.00	-----	26.00	-----	49.00
CHROMIUM	ug/l	-----	-----	-----	2.60 B	-----	2.80 B
CORALY	ug/l	-----	-----	-----	2.00 B	-----	8.10 B
COPPER	ug/l	1,300.00	1,300.00	-----	158.00	787.00	1,100.00 J
IRON	ug/l	15.00	15.00	-----	-----	18.00	4.40 J
LEAD	ug/l	-----	-----	34,000.00	34,000.00	31,000.00	31,100.00
MAGNESIUM	ug/l	-----	-----	1,930.00	1,940.00	1,680.00	1,740.00
MANGANESE	ug/l	-----	100.00	-----	9.10 B	-----	40.40
NICKEL	ug/l	-----	-----	9,000.00	12,700.00 B	8,000.00	10,700.00 J
POTASSIUM	ug/l	50.00	50.00	67,800.00	68,800.00	57,000.00	56,600.00 J
SELENIUM	ug/l	-----	-----	-----	-----	-----	-----
SODIUM	ug/l	2.00	2.00	-----	1.50 B	-----	3.00 B
THALLIUM	ug/l	-----	-----	-----	12.60 B	-----	14.50 B
VANADIUM	ug/l	-----	-----	-----	-----	-----	-----
ZINC	ug/l	-----	-----	-----	-----	-----	-----

SAMPLE NAME SAMPLE DATE NOTES		NCL-FED Federal ARAR	NCL-STATE New Jersey ARAR	RM-42-1-COM 03/11/96	RM-42-1 03/11/96	RM-42-2-COM 06/10/96	RM-42-2 06/11/96
Low Detection Volatiles	ug/l	2.00	2.00	4.30 (3)	1.20	0.90 J	1.00
VINYL CHLORIDE	ug/l	-----	-----	4.90	2.20	2.10	1.00
CHLOROBENZENE	ug/l	5.00	2.00	-----	-----	0.30 J	-----
METHYLENE CHLORIDE	ug/l	-----	-----	-----	-----	-----	-----
ACETONE	ug/l	-----	-----	-----	-----	-----	-----
CARBOXYLACETONE	ug/l	7.00	2.00	0.80 J	-----	0.50 J	-----
1,1-DICHLOROETHYLENE	ug/l	-----	-----	29.00	22.00	17.00	16.00
1,1-DICHLOROETHANE	ug/l	70.00	10.00	8.00	0.20 J	5.10	-----
1,2-DICHLOROETHYLENE	ug/l	100.00	10.00	0.60 J	-----	0.40 J	0.30 J
1,2-DICHLOROETHANE	ug/l	100.00	-----	-----	-----	-----	-----
1,2-DICHLOROETHANE	ug/l	5.00	2.00	0.50 J	-----	0.30 J	-----
2-BUTANONE	ug/l	-----	-----	-----	-----	-----	-----
1,1,1-TRICHLOROETHYLENE	ug/l	200.00	26.00	0.30 J	-----	0.40 J	-----
BROMOCHLOROBENZENE	ug/l	100.00	-----	-----	-----	-----	-----
TRICHLOROETHYLENE	ug/l	5.00	1.00	21.00 (3)	15.00 (3)	17.00 (3)	14.00 (3)
DIBROMOCHLOROBENZENE	ug/l	100.00	-----	-----	-----	-----	-----
BENZENE	ug/l	5.00	1.00	0.30 J	-----	-----	-----
4-METHYL-2-PENTANONE	ug/l	-----	-----	-----	-----	-----	-----
TOLUENE	ug/l	1,000.00	1,000.00	-----	-----	-----	-----
CHLOROBENZENE	ug/l	0.10	4.00	-----	-----	-----	-----
ETHYLBENZENE	ug/l	700.00	700.00	-----	-----	-----	-----
XYLENES (TOTAL)	ug/l	10,000.00	44.00	-----	-----	-----	-----
p-XYLENE	ug/l	-----	-----	-----	-----	-----	-----
m-XYLENE	ug/l	-----	-----	-----	-----	-----	-----
o-XYLENE	ug/l	-----	-----	-----	-----	-----	-----
1,3,5-TRIMETHYLBENZENE	ug/l	-----	-----	-----	-----	-----	-----
1,2,4-TRIMETHYLBENZENE	ug/l	-----	-----	-----	-----	-----	-----
NAPHTHALENE	ug/l	-----	-----	-----	-----	-----	-----

Data Qualifier

J indicates for all chemicals that the reported concentration is estimated.

B indicates that the reported value is less than the contract required detection limit but greater than the instrument detection limit; the integrity of the sample is suspect.

NOTES: (1) Sample value exceeds Federal ARAR limit value.
(2) Sample value exceeds State ARAR limit value.
(3) Sample value exceeds both Federal and State ARAR limit values.

NOTE: The CDM nomenclature next to the Sample Name indicates EPA's split sampling results; the Sample Name without any nomenclature is the Respondent's sampling results.

TABLE 2

Curcio Scrap Metal, Inc. Site - 012
Groundwater Sampling Results
Overburden Wells (On-Site)

SAMPLE NAME SAMPLE DATE NOTES		NCL-FED Federal ARAR	NCL-STATE New Jersey ARAR	MS-40-3-CDM 10/01/96	MS-40-3 10/01/96	MS-40-4-CDM 01/09/97	MS-40-4 01/09/97
Low Detection Volatiles							
VINYL CHLORIDE	ug/l	2.00	2.00	1.30	-----	-----	0.42 J
CHLOROETHANE	ug/l	-----	-----	2.00	-----	-----	0.61 J
METHYLENE CHLORIDE	ug/l	5.00	2.00	-----	-----	-----	-----
ACETONE	ug/l	-----	-----	-----	-----	-----	-----
CARBON DISULFIDE	ug/l	-----	-----	-----	-----	-----	-----
1,1-DICHLOROETHANE	ug/l	7.00	2.00	0.30 J	-----	-----	0.27 J
1,1-DICHLOROETHANE	ug/l	-----	-----	13.00	11.00	10.00	9.00
cis 1,2-DICHLOROETHANE	ug/l	70.00	10.00	4.40	4.30	5.00	4.30
Trans 1,2-DICHLOROETHANE	ug/l	100.00	10.00	0.30 J	-----	-----	0.26 J
CHLOROPHEN	ug/l	100.00	-----	-----	-----	-----	-----
1,2-DICHLOROETHANE	ug/l	5.00	2.00	0.30 J	-----	-----	-----
2-BUTANONE	ug/l	-----	-----	-----	-----	-----	-----
1,1,1-TRICHLOROETHANE	ug/l	200.00	26.00	-----	-----	-----	0.44 J
BROMOCHLOROETHANE	ug/l	100.00	-----	-----	-----	-----	-----
TRICHLOROETHANE	ug/l	5.00	1.00	12.00 (3)	9.20 (3)	-----	10.00 (3)
DIBROMOCHLOROETHANE	ug/l	100.00	-----	-----	-----	-----	-----
BENZENE	ug/l	5.00	1.00	0.40 J	-----	-----	-----
4-METHYL-2-PENTANONE	ug/l	-----	-----	0.30 J	-----	-----	-----
TOLUENE	ug/l	1,000.00	1,000.00	-----	-----	-----	0.69 J
CHLOROBENZENE	ug/l	0.10	4.00	-----	-----	-----	-----
ETHYLBENZENE	ug/l	700.00	700.00	-----	-----	-----	-----
XYLENES (TOTAL)	ug/l	10,000.00	44.00	-----	-----	-----	-----
p-XYLENE	ug/l	-----	-----	-----	-----	-----	-----
m-XYLENE	ug/l	-----	-----	-----	-----	-----	-----
ISOPROPYLBENZENE	ug/l	-----	-----	-----	-----	-----	-----
n-PROPYLBENZENE	ug/l	-----	-----	-----	-----	-----	-----
1,3,5-TRIMETHYLBENZENE	ug/l	-----	-----	-----	-----	-----	-----
1,2,4-TRIMETHYLBENZENE	ug/l	-----	-----	-----	-----	-----	-----
NAPHTHALENE	ug/l	-----	-----	-----	-----	-----	-----

SAMPLE NAME SAMPLE DATE NOTES		NCL-FED Federal ARAR	NCL-STATE New Jersey ARAR	MS-40-3-CDM 10/01/96	MS-40-3 10/01/96	MS-40-4-CDM 01/09/97	MS-40-4 01/09/97
PCBs							
AROCLO-1242	ug/l	0.50	0.50	-----	-----	-----	-----
Inorganic Analytes							
ALUMINUM	ug/l	-----	-----	-----	167.00 B	96.60 B	85.30 B
ANTIMONY	ug/l	6.00	4.00	-----	-----	5.10 B	-----
ARSENIC	ug/l	50.00	50.00	-----	-----	-----	-----
BARIUM	ug/l	2,000.00	2,000.00	-----	96.50 B	61.60 B	46.70 B
BERYLLIUM	ug/l	4.00	4.00	-----	2.30 B	1.50 B	0.96 B
CADMIUM	ug/l	5.00	5.00	-----	-----	-----	-----
CALCIUM	ug/l	-----	-----	143,000.00	142,000.00	128,000.00	132,000.00
CHROMIUM	ug/l	100.00	100.00	-----	2.60 B	-----	-----
COBALT	ug/l	-----	-----	-----	2.00 B	1.60 B	1.40 B
COPPER	ug/l	1,300.00	1,300.00	-----	-----	-----	-----
IRON	ug/l	-----	-----	100.00	157.00	140.00	27.70 B
LEAD	ug/l	15.00	15.00	-----	-----	-----	-----
MAGNESIUM	ug/l	-----	-----	29,000.00	31,600.00	25,000.00	28,100.00
MANGANESE	ug/l	-----	-----	1,300.00	1,330.00	1,270.00	1,320.00
NICKEL	ug/l	-----	100.00	-----	7.20 B	2.10 B	2.30 B
POTASSIUM	ug/l	-----	-----	11,000.00	13,700.00	8,370.00	8,480.00
SELENIUM	ug/l	50.00	50.00	-----	-----	6.70	-----
SODIUM	ug/l	-----	-----	67,000.00	65,100.00	66,300.00	50,900.00
THALLIUM	ug/l	2.00	2.00	-----	7.00 B (3)	12.70 (3)	3.00 B (3)
VANADIUM	ug/l	-----	-----	-----	1.00 B	1.20 B	1.60 B
ZINC	ug/l	-----	-----	-----	14.60 B	3.10 B	2.30 B

Data Qualifier

J indicates for all chemicals that the reported concentration is estimated.

B indicates that the reported value is less than the contract required detection limit but greater than the instrument detection limit; the integrity of the sample is suspect.

NOTES: (1) Sample value exceeds Federal ARAR limit value.
(2) Sample value exceeds State ARAR limit value.
(3) Sample value exceeds both Federal and State ARAR limit values.

NOTE: The CDM nomenclature next to the Sample Name indicates EPA's split sampling results; the Sample Name without any nomenclature is the Respondent's sampling re

Table 3
Summary of Potential Contaminants of Concern
Upper Bedrock Aquifer zone

		Range of Detected Concentrations (ppb)	
Chemicals	Frequency of Detection	Minimum	Maximum
Volatile Organic Compounds			
Chloromethane	2/24	0.30 J	1.00 J
Vinyl Chloride	1/24	0.32 J	0.32 J
Methylene Chloride	1/24	0.20 J	0.20 J
Chloroform	5/24	0.10 J	0.30 J
1,1,1-Trichloroethane	4/24	0.20 J	0.40 J
Carbon Tetrachloride	7/24	0.30 J	0.50 J
Trichloroethene	10/24	0.20 J	1.90
Benzene	2/24	0.55 J	0.70 J
4-Methyl-2- Pentanone	1/24	0.70 J	0.70 J
Toluene	1/24	0.30 J	0.30 J
PCBs			
Arochlor 1248	1/24	3.20	3.20

Data Qualifiers

- J indicates for all chemicals that the reported concentration is estimated.
- B indicates for inorganics that the reported value is less than the contract required detection limit but greater than the instrument detection limit.

Table 3 -- continued			
Inorganics			
Aluminum	13/24	41.7 B	439
Antimony	2/24	0.90 B	11.5 B
Arsenic	9/24	1.60 B	12.2
Barium	24/24	214	562
Beryllium	12/24	0.16 B	2.30 B
Cadmium	2/24	0.75 J	1.20 B
Calcium	24/24	30,800	91,700
Chromium	8/24	0.71	23.0
Cobalt	7/24	0.35 B	1.70 B
Copper	3/24	8.90 B	47.5
Iron	9/24	21.9 B	270
Lead	12/24	1.00 BJ	27.7
Magnesium	24/24	13,000	38,400
Manganese	13/24	0.83B	13.2 B
Nickel	9/24	0.79 B	7.55 B
Potassium	16/24	1,840 B	13,500
Selenium	2/24	5.30	9.20
Sodium	24/24	8,765	33,150
Thallium	4/24	2.25 B	10.6
Vanadium	15/24	1.70 B	13.1 B
Zinc	15/24	2.45 B	24.8

Data Qualifiers

J indicates for all chemicals that the reported concentration is estimated.

B indicates for inorganics that the reported value is less than the contract required detection limit but greater than the instrument detection limit.

Table 4 - continued			
Inorganics			
Aluminum	19/24	48.4 B	12,700
Antimony	3/24	5.10 B	11.8 B
Arsenic	9/24	2.10 B	243
Barium	18/24	61.6 B	583
Beryllium	12/24	0.36 B	2.30 B
Cadmium	1/24	5.00	5.00
Calcium	24/24	150	163,000
Chromium	11/24	2.30 BJ	176
Cobalt	15/24	1.40 B	11.0 B
Copper	9/24	1.40 B	85.0
Iron	21/24	27.7 B	38,700
Lead	11/24	1.80 B	47.0
Magnesium	24/24	24.0	34,000
Manganese	24/24	1,270	8,620
Nickel	16/24	2.10 B	124 B
Potassium	21/24	4,190 B	114,000
Selenium	4/24	3.20 J	8.70
Sodium	24/24	26.0	83,800
Thallium	11/24	2.70 B	15.1
Vanadium	12/24	0.53 B	17.2 B
Zinc	15/24	2.10 B	106

Data Qualifiers J indicates for all chemicals that the reported concentration is estimated.

B indicates for inorganics that the reported value is less than the contract required detection limit but greater than the instrument detection limit.

N indicates for organics that there is only presumptive evidence for their presence.

U indicates for chemicals that the chemical was not detected at the reported detection limit.

Table 4 - Continued			
VOCs Continued			
Trichloroethene	11/24	0.30 J	21.0
Dibromochloromethane	1/23	0.30 J	0.30 J
Benzene	8/24	0.30 J	13.0
4-Methyl-2-pentanone	3/24	0.50 J	1.00 J
Toluene	7/24	0.30 J	2.30
Chlorobenzene	5/24	1.00	2.50
Ethylbenzene	6/24	1.20	4.00
Xylenes (Total)	4/16	0.42 J	4.60
P + M Xylenes	2/9	0.70 J	3.00
O-Xylene	2/9	0.90 J	1.80
Isopropylbenzene	2/9	0.30 J	0.40 J
n-Propylbenzene	1/9	0.50 J	0.50 J
1,3,5-Trimethylbenzene	2/9	0.20 J	1.80
1,2,4-Trimethylbenzene	1/9	3.50	3.50
Naphthalene	1/9	2.50	2.50
PCBs			
Arochlor 1248	1/23	0.11 JN	0.11 JN
Data Qualifier J indicates for all chemicals that the reported concentration is estimated. N indicates for organics that there is only presumptive evidence for their presence			

Table 4.
Summary of Potential Contaminants of Concern
Overburden Water Bearing zone

		Range of Detected Concentrations (ppb)	
Chemicals	Frequency of Detection	Minimum	Maximum
Volatile Organic Compounds			
Vinyl Chloride	12/24	0.42 J	7.30
Chloroethane	6/24	0.61 J	4.90
Methylene Chloride	4/22	0.20 J	0.30 J
Acetone	1/7	7.50	7.50
Carbon Disulfide	1/24	0.60 J	0.60 J
1,1-Dichloroethene	4/24	0.27 J	0.80 J
1,1-Dichloroethane	8/24	9.00	29.0
Cis 1,2-Dichloroethene	12/24	3.50 J	8.00
Trans 1,2-Dichloroethene	9/24	0.26 J	1.00 J
Chloroform	1/24	51.0	51.0
1,2-Dichloroethane	3/24	0.30 J	0.50 J
2-Butanone	1/12	2.0	2.0
1,1,1-Trichloroethane	4/24	0.30 J	0.44 J
Bromodichloromethane	1/21	3.0	3.0
Data Qualifier J indicates for all chemicals that the reported concentration is estimated			

Table 5**Summary of Potential Chemicals of Concern (Off-Site- Residential Well)**

		Range of Detected Concentrations (ppb)	
Chemicals	Frequency of Detection	Minimum	Maximum
VOCs			
Carbon Tetrachloride	1/1	0.40 J	0.40 J
SVOCs			
None Detected	None Detected		
Pesticides/PCBs			
None Detected	None Detected		
Inorganics			
Barium	1/1	212	212
Calcium	1/1	54,000	54,000
Magnesium	1/1	18,000	18,000
Sodium	1/1	11,000	11,000

Data Qualifier

J indicates for all chemicals that the reported concentration is estimated.

Table 6
Summary of Potential Contaminants of Concern
Overburden Water Bearing zone - (upgradient on-Site well)

		Range of Detected Concentrations (ug/l)	
Chemicals	Frequency of Detection	Minimum	Maximum
Volatile Organic Compounds			
Vinyl Chloride	1/8	0.30 J	0.30 J
Chloroform	1/8	0.24 J	0.24 J
Trichloroethene	3/8	0.40 J	2.70
Benzene	1/8	0.40 J	0.40 J
Toluene	1/8	0.20 J	0.20 J
PCBs			
None Detected	None Detected		
Data Qualifiers			
J indicates for all chemicals that the reported concentration is estimated.			

Table 6 - Continued			
Inorganics			
Aluminum	6/8	85.0 B	1,110
Barium	5/8	75.0 B	114 B
Beryllium	4/8	0.52 B	2.20 B
Calcium	8/8	46,300	56,200
Chromium	4/8	2.00 B	124
Cobalt	3/8	0.39 B	9.80 B
Copper	2/8	2.00 B	3.50 B
Iron	5/8	26.3 B	1,930
Lead	3/8	2.50 BJ	3.30
Magnesium	8/8	7,000	8,550
Manganese	8/8	30.0	166
Nickel	6/8	19.1 B	111
Potassium	4/8	2,740 B	4,340 BJ
Selenium	4/8	3.00 B	7.40
Sodium	8/8	34,500	40,400
Thallium	1/8	2.33 B	2.33 B
Vanadium	1/8	2.70 B	2.70 B
Zinc	7/8	14.3 B	129 EJ

Data Qualifiers

- J indicates for all chemicals that the reported concentration is estimated.
- B indicates for inorganics that the reported value is less than the contract required detection limit but greater than the instrument detection limit.
- E indicates for inorganics that the value is estimated due to matrix interferences.
- U indicates for all chemicals that the chemical was not detected at the reported detection limit.

Table 7

Chemicals of Concern in Aquifer zones

	BEDROCK WELLS	OVERBURDEN WELLS	RESIDENTIAL WELL
VOCs	Vinyl Chloride	Vinyl Chloride	Carbon Tetrachloride
PCBs/Pesticides	Aroclor 1248	None Selected	None Detected
Inorganics	Antimony	Antimony	Barium
	Arsenic	Arsenic	
	Barium	Beryllium	
	Beryllium	Manganese	
	Thallium	Thallium	

Table 8
Summary of Weight of Evidence Classification and
Cancer Slope Factors for Chemicals of Concern.

Chemical	Weight of Evidence	Cancer Slope Factor Inhalation (mg/kg-day)⁻¹	Cancer Slope Factor Oral (mg/kg-day)⁻¹	Source of Data
VOCs				
Vinyl Chloride	A	0.3	1.9	HEAST Annual FY '95
Carbon Tetrachloride	B2	0.053	0.13	IRIS 3/97
PCBs				
Aroclor 1248	B2	0.4	0.4	IRIS 3/97
Inorganics				
Antimony	-			
Arsenic	A	15	1.5	IRIS 3/97
Barium	-			
Beryllium	B2	8.4	4.3	IRIS 3/97
Manganese	D	-	-	IRIS 3/97
Thallium chloride	D	-	-	IRIS 3/97

Table 9 — Potential Cancer Risks Across Pathways

Media	Receptors	Exposure Route Pathway	Potential Cancer Risk	Chemicals Contributing to Cancer Risks
Groundwater				
Upper Bedrock Aquifer zone (On-Site)	Residents - Adults	Ingestion	1.9×10^{-4}	No chemicals individually exceed the target risk range.
		Dermal (shower)	8.4×10^{-7}	
		Inhalation of VOCs in Shower	1.0×10^{-6}	
		TOTAL	1.9×10^{-4}	
	Children (0-6 years old)	Ingestion	1.1×10^{-4}	No chemicals individually exceed the target risk range.
		Dermal(Shower)	2.9×10^{-7}	
		Inhalation of VOCs in Shower	1.2×10^{-6}	
		TOTAL	1.1×10^{-4}	
Overburden Water Bearing zone (On-Site) <i>Note: the water in this zone is not currently being used for potable purposes nor is it expected to be used for potable purposes in the future.</i>	Residents - Adults	Ingestion	3.6×10^{-3}	Arsenic
		Dermal (shower)	1.6×10^{-3}	
		Inhalation of VOCs in Shower	1.1×10^{-3}	
		TOTAL	3.6×10^{-3}	
	Children (0-6 years old)	Ingestion	2.1×10^{-3}	Arsenic
		Dermal(Shower)	5.5×10^{-4}	
		Inhalation of VOCs in Shower	1.3×10^{-3}	
		TOTAL	2.1×10^{-3}	
Off-Site Well	Area Residents: Adults	Ingestion	4.9×10^{-7}	-----
		Dermal(Shower)	NA	
		Inhalation of VOCs in Shower	2.2×10^{-7}	
		TOTAL	7.1×10^{-7}	
	Children (0-6 years old)	Ingestion	2.8×10^{-7}	-----
		Dermal(Shower)	NA	
		Inhalation of VOCs in Shower	2.6×10^{-7}	
		TOTAL	5.4×10^{-7}	

Table 10
Summary of Inhalation and Oral Reference Doses
for Chemicals of Concern.

Chemical	Inhalation Reference Dose (mg/kg-day)	Oral Reference Dose (mg/kg-day)	Source of Data
VOCs			
Vinyl Chloride	-	-	
Carbon Tetrachloride	0.00057	0.0007	NCEA for inhalation IRIS 3/97 for oral
PCBs			
Aroclor 1248	0.00002		IRIS 3/97
Inorganics			
Antimony		0.0004	IRIS 3/97
Arsenic		0.0003	IRIS 3/97
Barium	0.00014	0.07	HEAST FY'95 inh. IRIS 3/97 for oral
Beryllium		0.005	IRIS 3/97
Manganese	0.000014	0.024	IRIS 3/97
Thallium chloride	-	0.00008	IRIS 3/97

Table 11
Combined Hazard Index Values Across Pathways

Media	Receptors	Exposure Route Pathway	Non-Cancer Hazard Index	Chemicals Contributing Most to non-Cancer Hazard Index
Groundwater				
Upper Bedrock Aquifer zone (On-Site)	Residents - Adults	Ingestion	2.2	No chemicals individually exceed the target level of 1.
		Dermal (shower)	0.01	
		Inhalation of VOCs in Shower	NA	
		TOTAL	2.2	
	Children (0-6 years old)	Ingestion	5.1	Arsenic and Thallium
		Dermal(Shower)	0.014	
		Inhalation of VOCs in Shower	NA	
		TOTAL	5.1	
Overburden Water Bearing zone (On-Site) <i>Note: the water in this zone is not currently being used for potable purposes nor is it expected to be used for potable purposes in the future.</i>	Residents - Adults	Ingestion	30	Arsenic, Manganese and Thallium
		Dermal (shower)	0.14	
		Inhalation of VOCs in Shower	NA	
		TOTAL	30	
	Children (0-6 years old)	Ingestion	71	Arsenic, Manganese and Thallium
		Dermal(Shower)	0.19	
		Inhalation of VOCs in Shower	NA	
		TOTAL	71	
Off-Site Well	Area Residents: Adults	Ingestion	0.099	-----
		Dermal(Shower)	0.00038	
		Inhalation of VOCs in Shower	NA	
		TOTAL	0.099	
	Children (0-6 years old)	Ingestion	0.23	-----
		Dermal(Shower)	0.00052	
		Inhalation of VOCs in Shower	NA	
		TOTAL	0.23	

ROD FACT SHEET

SITE

Name : Curcio Scrap Metal, Inc. Site
Location/State : 416 Lanza Avenue, Saddle Brook, New Jersey
EPA Region : 2
HRS Score (date): 34.54 (July 1987)
EPA Site ID # : NJD011717584

ROD

Date Signed: September 30, 1997
Remedy: No Further Action, with long term groundwater
monitoring
Operating Unit Number: OU-2
Capital cost: 0
Construction Completion: N/A
O & M in 1997: \$45,586 (in 1997 dollars)
Present worth: \$200,000 (7% discount rate and 5 years O & M)

LEAD

Remdial/Enforcement: Remedial
EPA/State/PRP: PRP
Primary contact: Mary Anne Rosa 212-637-4407
Secondary contact: Kimberly O'Connell 212-637-4399
Main PRP : Consolidated Edison Company of NY
PRP Contact: Karel Konrad 212-460-4700

WASTE

Type: VOCs, metals
Medium: Groundwater
Origin: Scrap metal recycling
Est. quantity: N/A