U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION REPORT

I. Heading

Date:	May 24, 1991	
Subject:	Nelson Galvanizing Inc., Queens, NY	
From:	Paul Kahn, OSC, U.S. EPA, Region II, Response and Prevention Branch	
To:	K. Callahan, EPA	K. Fradkin, NYCDEP
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POLREP No.:	POLREP 1	

II. Background

Site No.:	6Z
Delivery Order No.:	N/A
Response Authority:	CERCLA
ERNS No.:	N/A
NPL Status:	Non-NPL
State notification:	NYSDEC notified
Action Memorandum Status:	Completed
Start Date:	February 12,1991
Demobilization Date:	
Completion Date:	

III. Site Information

A. Incident Category

CERCLA incident category: Active Production Facility

B. Site Description

1. Site description

Nelson Galvanizing Inc. (NGI), is located at 11-02 Broadway, Queens, New York. The site is an active production facility involved in custom hot dip galvanizing.

The NGI site is a two story building located in a mixed commercial, residential, and light industrial area. Over 15,000 persons live and work within 1/2 mile of NGI. Public housing for perhaps 5,000 to 8,000 persons is within 1/2 mile of the facility. The site is also within 1/2 mile of the north end of Roosevelt Island, home to approximately 12,000 people. The site is located within three blocks of

the East River, which although not a source of drinking water, is a major ship, barge and recreational waterway.

The building is sub-divided; a commercial car leasing business also occupies the premises. Industrial businesses have been at this site since approximately 1849. The previous occupant was a steel fabricating shop. NGI has operated the galvanizing business at this site since approximately 1947.

2. Description of threat

Approximately 10,000 to 15,000 gallons of corrosive acids and caustics are stored on site in open-top drums and large open-top tanks. In addition, tons of contaminated soils and debris are stored on the premises. Standing puddles of acidic liquids are throughout the facility and are believed to be leaking into the environment.

In the event of a fire, it is anticipated that fire fighters would not be able to avoid contamination from acidic runoff and toxic fumes. All runoff produced by fire fighting efforts would go directly into the storm sewer and then directly to the East River. Drums of waste chemicals and piles of debris are stacked in front of doors, which would severely hamper fire fighting efforts.

A potential for direct contact exposure through acts of vandalism or from trespassers exists; direct access to the hazardous chemicals via a number of doorways and holes in the sides of the building is possible. Interior lighting conditions are extremely poor. Numerous holes and openings in the roof allow rainwater to enter the premises, washing the spilled acids and caustic onto the dirt floor.

C. **Preliminary Assessment Results**

In October 1990, the New York City Department of Environmental Protection (NYCDEP) requested that EPA Region II accompany its Haz-Mat inspectors on an inspection of NGI. Two joint EPA-NYCDEP inspections, November 19, 1990 and November 29, 1990, and one EPA inspection on December 13, 1990, revealed that NGI was storing in excess of one hundred drums of spent (used) acids and caustics inside the premises. These drums, many of which are open-top, are stacked four or five rows high without pallets between the rows.

The EPA inspection on December 13, 1990 revealed open drums of acid with pH of 2. In addition to the drummed acids and caustics, there are five large dip tanks on site, three tanks each holding approximately 4,000 gallons of 5% sulfuric acid, one tank holding approximately 2,500 gallons of sodium hydroxide, one tank holding approximately 1,500 gallons of zinc ammonium chloride. In addition, it was observed that the business operates on a dirt floor; only the entrance way and approximately 70 feet into the premises is covered with concrete. Over 23 years of operation the soil has become stained and saturated from numerous chemical spills and leaks.

An officer of the business, Mr. John Sweeney, stated that in the past he neutralized waste acids on site and discharged the material directly into the city sewer system. In 1988, the NYCDEP ordered this practice stopped and required off-site disposal. NGI appears to have ceased the formal practice of on-site neutralization, but is believed to be disposing waste chemicals via dumping into a trench inside the premises, allowing the chemicals to drain into the outside soil. The local utility, Consolidated Edison, has an electrical conduit running under the street adjacent to NGI. Periodically, Con-Ed hires a clean-up contractor to pump accumulated acidic waste water (pH 2 - 4) from its conduit, sometimes as much as 6,000 gallons at a time. Con-Ed has contended that the waste water emanates from NGI, and made the initial complaint to the NYCDEP, resulting in the ban on discharging of neutralized wastes. Because there are no other businesses in the immediate area that use acids or caustics, Con-Ed's contention seems reasonable.

IV. Response Information

A. Planned Removal Actions

NGI has entered into an Administrative Consent Order (ACO) with the USEPA, whereby the company is to perform a removal action at the facility. The company has been allowed to remain in operation, with EPA monitoring the removal action.

In response to the ACO, the company hired Metcalf & Eddy (M&E), Tarrytown, NY, to develop a work plan for removal of acid and process wastes and to dispose of contaminated soils.

A meeting of the USEPA and M&E on February 13, 1991, defined the tasks as follows:

Task 1 -- Prepare a Project Management Work Plan, Health & Safety Plan, Quality Assurance and Quality Control Plan, Site Operations Plan, and an outline of the Operations and Maintenance Plan.

Task 2 -- Inventory drums and waste. M&E will identify and inventory all drums.

Task 3 -- Consolidate waste. Bulk compatible wastes in Department of Transportation approved containers.

Task 4 -- Ensure that contractors follow all requirements of the contract documents; evaluate construction and remediation activities in progress and develop a detailed daily report; review all contractor submittals (e.g. analytical results, waste profiles, etc.).

Task 5 -- Test bulk waste streams

Task 6 -- Stage waste materials

Task 7 -- Oversee disposal

Task 8 -- Prepare a Post Removal Report. M&E will submit a Post Removal Report to USEPA along with any additional information to illustrate that the removal was completed in the manner prescribed in the Administrative Consent Order.

Task 9 -- Finalize the Operations and Maintenance Plan. M&E will develop an Operations and Maintenance Plan to comply with all local, state and federal regulations.

B. Situation

1. Current situation

The galvanizing process at this site involves the precleaning of base metal in either sulfuric acid or sodium hydroxide to remove dirt, rust and other surface contamination. The cleaned metal is dipped into zinc ammonium chloride, which acts as a surface conditioner. The parts are then dipped

into a tank of molten zinc (temperature approximately 800° F). After immersion in the molten zinc the parts are removed and allowed to cool. NGI is a job-shop business, i.e., it does not have a dedicated production line, but instead processes parts made by others on a piece-work basis.

2. Removal actions to date

TAT has conducted site visits to NGI two times per week since April 23, 1991, to ensure all health and safety protocols are followed, and that site work is performed as outlined in the M&E workplan.

During the week of April 27, 1991, M&E personnel set up the decon area and completed the inventory of accessible drums. The owner of NGI made the hoist available to facilitate drum staging, and arranged to move a rolloff containing construction debris off site, enabling M&E personnel to inventory some inaccessible drums. Construction of a plywood safety wall separating the M&E work area from the molten zinc dip tank began.

During the week of May 3, 1991, a 22 cu. yd. rolloff, which will be used to bulk the ferrous sulfate (salt) crystals, arrived. M&E estimated that salts comprise 80% of the waste stream on site. NGI employees then began emptying previously identified salt drums into the roll off. Emptying the drums was slow because the crystal had compacted, and some was in plastic drums with closed tops. Many open top salt drums contain free standing liquid due to rain water coming in through the numerous holes in the roof. These liquids are pumped off and bulked in the weak acid tank on site. M&E personnel continued to inventory and identify drums on site.

During the week of May 10, 1991, the plywood barrier between the galvanizing and cleanup area was completed. A drum decon station to rinse emptied drums, was constructed by M&E. Rinsed drums will be disposed of or recycled depending on their condition. Rinseate from the washing operation was checked for pH and combined with spent acid wastes on site. The bulking of salt drums continued. M&E began cutting the plastic drum heads off to facilitate disposal into the rolloff.

On May 13, 1991, a second rolloff was delivered to the site, to be used for salt bulking. Both rolloffs on site are double poly lined and hold approximately 40,000 lbs of material when full. A composite sample from the full rolloff was sent for analysis. The salts will be sent to a recycler pending analytical results. On April 16, 1991, TAT tested the pH of various materials in the M&E work area and observed the following: weak acid vat, pH 4; liquid removed from salt drums, pH 1; salt (with three drops of potable water added prior to test), pH 3. During the week of May 17, 1991, work continued on staging the salt drums and emptying them into the rolloff. Work also continued on inventorying and identifying unknown drums. To date, both rolloffs have been filled with salt and are awaiting analytical results and EPA approval before shipment off site.

3. Enforcement

The NYCDEP has issued an order to NGI with respect to cleaning up the site and/or disposing of waste materials. As of January 30, 1991, NGI had only performed some excavation of contaminated soil. NYCDEP filed a complaint in January 1991 to enforce this order. NGI also conducted groundwater sampling in 1988 in response to a NYCDEP order.

C. Next Steps

Bulking and inventorying the other waste streams on site will continue. The salt will be sent to a recycler pending receipt of analytical results. The empty metal drums will be sent for refinishing or disposal depending on their condition. The empty plastic drums will be sent to a shredder for disposal. EPA and TAT will continue to monitor site activities during the PRP contractor removal operations.

D. **Key Issues**

No key issues have been identified at this time.

V. Cost Information

Because the Nelson Galvanizing site is a PRP removal, only the EPA and TAT charges are tracked in this report.

		Cost To Date
EPA (Salary/Travel)	65 hrs @ $30/hr Direct	$ 1,950
(As of 5/24/91)	65 hrs @ $68/hr Indirect	$ 4,420
TAT (Salary/Travel) (As of 5/24/91)		$ 4,100
Total EPA & TAT Costs		$ 10,470

FINAL POLREP____ FURTHER POLREPS FORTHCOMING__X__ SUBMITTED BY Paul L. Kahn

Paul L. Kahn, OSC
Response and Prevention Branch

DATE RELEASED 6-7-91