

MEMORANDUM

TO: Hudson County Chromate Waste Sites Mailing List

FROM: Edward Putnam, Assistant Director
Remedial Response Element
Site Remediation and Waste Management Program
New Jersey Department of Environmental Protection

SUBJECT: Hudson County Chromate Update #32

The following is a summary of significant developments that have occurred between January 2003 and November 2005 regarding the Hudson County Chromate Waste Sites.

Occidental Chemical

Occidental continues to move forward with activities associated with the Administrative Consent Order (ACO). Remedial investigation (RI) reports have been submitted to the Department for all but two sites. For the two remaining sites, RI workplans have been submitted to the Department for review.

At Site 210 (Ace Trucking) in Kearny, interim remedial measure activities were conducted at Area of Concern (AOC) 2 of this site. Large piles of chromite ore processing residue (COPR) and COPR contaminated material generated during site owner activities were disposed at a secure hazardous waste landfill offsite. In addition, a temporary interim remedial measure (IRM) was installed until a more permanent IRM consistent with the development plans for the site can be built. Implementation reports have been submitted for all of the IRM work completed to date.

Remedial construction activities (removal actions) were completed at Site 193 (McWhirter Road #1) and Site 210 AOC 1. Reports documenting these activities have been submitted to the Department for review. Occidental has now completed remedial activities at approximately half of the 40 sites being handled under its ACO.

Honeywell, Inc.

College Towers Apartments NJ Site 154:

College Towers Apartments is a 320-unit apartment complex in Jersey City, New Jersey that houses elderly residents. The complex was built in 1955 in a low-lying area that was

formerly a baseball field. Thirteen adjacent residential properties are associated with this site. COPR, construction debris and other fill material were historically used as backfill at this location. Following the successful removal of the COPR and other cleanup and decontamination activities, the site is now in a periodic inspection program, to ensure that engineering controls put in place are in good working order and function as intended. A periodic groundwater sampling and analysis program has also been put in place. Honeywell has submitted remedial action reports for these properties and they are currently under review.

Bayonne Sewer Pipeline NJ Site 144:

In early fall 2005 a new area of chromium contamination was identified by the NJDEP during an inspection of the Bayonne Environmental Park currently under construction. This new area of contamination was delineated by Honeywell, Inc. and is scheduled for a removal action in late fall 2005.

Foodtown NJDEP Site 155:

Two additional borings were drilled and sampled along Ocean Avenue to complete the delineation in that direction. Groundwater samples were also collected from the onsite wells to evaluate impacts to groundwater from COPR fill. In anticipation of the construction of an elementary school at the property, Honeywell, the NJ School Construction Corporation (NJSCC), and the NJDEP are currently discussing the selection of an appropriate remedy for the site. Honeywell is preparing the Remedial Alternative Analysis Report for the site, to be followed by the Remedial Action Work Plan.

MI Holdings NJDEP Site 184 and Baldwin Steel NJDEP Site 090:

Investigation and delineation have been completed and reports have been submitted to the NJDEP. Honeywell, New Jersey City University and the NJDEP are coordinating on the review and submittal of the final set of remedial investigation documents, in order that the construction activities for the expansion of the college facilities can proceed uninterrupted.

Study Area 7 (Roosevelt Drive In NJDEP Site 115, Trader Horn NJDEP Site 120, and Clean Machine Car Wash NJDEP Site 157):

Pursuant to a Federal Court Order issued on June 30, 2003, Honeywell is proceeding with investigation and remediation activities at Study Area 7 (Roosevelt Drive In – NJDEP Site 115, Trader Horn – NJDEP Site 120, and Clean Machine Car Wash – NJDEP Site 157). A 100% Design has been completed for remediation of the Chromium Ore Processing Residue (COPR) on site. Per the Court-ordered decision, a subsurface hydraulic barrier wall is currently under construction around the perimeter of the site to isolate the site ground water from the neighboring properties and the Hackensack River. The site will then be dewatered, with the effluent treated in a temporary wastewater treatment plant to be constructed. Following dewatering, approximately 1-1.5 million tons of COPR and soil containing hexavalent chromium levels above 240 mg/kg will be excavated and the material transported to off-site Treatment, Storage, and Disposal Facilities (TSDFs). This means that COPR and soil containing COPR contaminated material will be removed from depths of 15-20 feet throughout the entire 34-acre site. The excavation will be backfilled with clean fill. Full scale excavation of the COPR is

currently scheduled to begin in Fall 2005, and will take approximately four years to complete.

The Court Order also requires investigation and remediation of sediment and groundwater in the vicinity of Study Area 7. Honeywell is proceeding with investigations of the nature and extent of deep overburden and bedrock groundwater plumes and their potential discharge to the Hackensack River. A sediment investigation program is also underway to delineate total chromium contamination above 370 mg/kg in the River. On completion of the investigations, Honeywell is scheduled to complete Remedial Alternative Analyses followed by 60% and 100% designs and remedial action implementation, as appropriate.

PPG Industries, Incorporated

Group 1 - Chrome site # 156: In June 2001 PPG submitted the final Remedial Investigation Report for this site. Meetings with the new owner of this site, Metrovest Properties, are still ongoing. Metrovest plans on renovating the central mall of the apartment complex, including the construction of additional towers. Metrovest Properties has submitted a Remedial Action Workplan that is currently under review by the Department.

Groups 2,3,4,5 - Chrome site #s 008, 112,112A, 016 (portion), 002,003,004,005 & 066: All these sites combined are also known as the Liberty National Development Site or Tankport Site. The soils only NFA for this site was issued in August of 2004. Petroleum product was found in one of the sentinel wells outside the slurry wall of the site. The developer has submitted a report delineating that product plume, which is currently under review by the Department.

Group 7 - Chrome site #114 (Garfield Avenue) and Portion of Group 8 - Chrome site #132 (Town & Country Linen Warehouse): Demolition of Buildings has been completed on the site. The field work for the Chromium Remedial Investigation has also been completed. PPG is "holding off" on submitting this Remedial investigation report due to the recent debate on chromium cleanup numbers. A remedial investigation has also been conducted by PSE&G for coal gas contaminants at this site. The Department sent comments out on the Coal Gas Remedial Investigation Report in August 2004. PSE&G is still in the process of addressing these comments. In July 2004 PSE&G submitted a supplemental Remedial Investigation, which the Department is currently reviewing.

Group 11 - Chrome site #147: PPG and the Township of Weehawken are in a debate as to certain NFA requirements for the property. Weehawken, the property owners of this site, will not give consent to PPG until the Department gives final approval of the remediation. The Department cannot give final approval of the remediation until the property owner gives consent. PPG may seek relief through legal channels in order to settle the dispute. The Department is awaiting response to a September 2004 letter requesting a meeting to discuss the NFA issues.

Droyer's Point (Site #119)

The Droyer's Point site is a planned 300+-townhouse development. K. Hovnanian has begun construction of the townhouses and is seeking a sitewide soils-only NFA.

The remedial action phase for this project began in April 2003 and was completed in October 2003. The remedial action consisted of removal of COPR from two areas (the Marina and the Ballfields), site wide capping and deed notice, installation of an upgradient vertical barrier wall, removal of fuel oil USTs, and the installation of sub-slab vapor mitigation systems.

The COPR in the Marina was excavated to below 100 mg/kg. The area was then capped with a minimum of two feet of clean fill.

The COPR in the Ballfields was excavated to between 100 mg/kg and 240 mg/kg above the groundwater table, while COPR below the groundwater table remains at concentrations above 240 mg/kg. This area was then covered by a twelve-inch capillary break, a 30 mil low-density polyethylene liner, and a minimum of 3.5 feet of clean fill. No townhouses were constructed in this area pending further ground water investigations.

Due to the presence of historic fill related contaminants, the entire site was also capped with an [additional](#) minimum of two feet of clean fill.

The vapor mitigation systems were installed sitewide as a precaution due to the presence of vinyl chloride (77 ppb) in one of the groundwater samples collected from the site.

The RAR detailing the remediation activities was submitted to the NJDEP in March 2004. The Department provided comments in a letter dated May 27, 2004 requiring additional information and revisions to the RAR. A revised RAR was submitted by K. Hovnanian in August 2004 and is currently under NJDEP review. The Department commented on the revised RAR in a letter dated November 10, 2004.

After the Department issued the November 10, 2004 comments, there were several rounds of comments and responses to comments between the Department and K. Hovnanian. Once all of the comments were addressed, K. Hovnanian submitted a final RAR dated August 16, 2005. The final approved RAR was a compilation of all of the approved reports and comment letters.

K. Hovnanian is in the process of filing the Deed Notice with the county. After the Deed Notice is filed and K. Hovnanian provides the recording information to the Department, the soils only NFA letter can be issued. In addition, the Department has prepared a CEA/WRA (classification exception area/well restriction area) for the entire site.

July 2, 1993 Allied Signal Directive Sites and Orphan Sites Groups 1 & 2

The Preliminary Site Characterization (PSC) soil investigations have been completed at all twenty-three (23) sites in the Allied Directive group. These sites are numbered 007, 015, 019, 067, 068, 069, 070, 091, 092, 093, 094, 097, 098, 099, 100, 101, 130, 165, 172, 175, 178, 183 and 185. All of the PSC analytical data from these investigations have been validated. The results and recommendations will be presented in the PSC Remedial Investigation (RI) reports. Monitor wells have been installed at sites 007, 015, 019, 068, 070, 091, 092, 093, 094, 099, 100, 101, 130, 165, 172, 175, 183 and 185. All building inspections have been completed (19 sites). PSC surface water and sediment sampling has been completed at sites 015, 068, 091 and 165. Initial PSC soil sampling has been completed at all twenty-three (23) sites under the Allied Directive category. PSC Remedial Investigation Reports have been completed for sites numbered 015, 067, 091, 094, 165, 172, 175, 178, 183 & 185. The Final Site Characterization (FSC) proposal was received from the contractor during May 2002. During September 2002, all work regarding the Allied Directive Sites were placed on hold, pending RPR negotiations. The contract with the contractor was terminated during early 2003. Removal actions have been initiated at three sites: Site 175 (Morris Canal No. 2); Site 165 (Tempesta); and, Site 15 (Liberty State Park). No additional work has been performed on these sites.

The Orphan 1 group of sites consists of ten chromium sites. Preliminary and Final Site Characterization investigations were conducted at all Orphan 1 sites except for site 139. The following is a status of each of the ten sites.

Site 017 (Exxon Station): Confirmed hexavalent chromium along curb and underneath pavement. NJDEP extended sampling across street during FSC and found nothing. No further sampling is needed. Final FSC Report completed October 2004. Department of Transportation (DOT) has notified NJDEP that this site will be included in DOT's road improvement project for the Route 1&9 corridor. Currently DOT and DEP have a Memorandum of Understanding (MOU) that outlines how DOT should handle contaminants at DEP known contaminated sites.

Site 020 (NJ Turnpike Property): Hexavalent chromium confirmed throughout site. Exceedances of ground water quality standards for total chromium found. Installation and sampling of additional upgradient monitor wells will be conducted early 2006. Final FSC report delayed until additional ground water data is evaluated.

Site 021 (NJ Turnpike Property): Contains visible surface chromate slag with no confirmed hexavalent/total chromium hits. Final PSC Report issued in June 2001.

Site 077 (Eighth Street): Hexavalent chromium found underneath commercial building during PSC. FSC fieldwork to further delineate site contamination completed during summer of 2002. Final FSC Report was completed in January 2004.

Site 086 (Nicholas Trucking): Hexavalent chromium detected along riverfront. FSC sampling during the Spring of 2002 confirmed that onsite hexavalent chromium contamination is limited to riverfront area. Final FSC Report was completed in 2004.

Site 138 (Bayonne Sewage Treatment Plant): Only one hit of hexavalent chromium found at 10-15 ft. during the PSC. NJDEP agreed to do no further sampling since the chromium exceedances were marginally above the NRDSCC and located along a subsurface sewer line.

Site 139 (IMTT): Large active chemical storage facility. NJDEP conducted in-house surface sampling effort confirming widespread chromium contamination during November 2001. Further RI work and/or remedial action deferred indefinitely due to ongoing negotiations with PRPs and re-evaluation of chromium standards.

Site 150 (Coastal Oil): PSC fieldwork completed during Summer of 2002. Hexavalent chromium was found along oil pipeline gallery. Widespread free phase oil product was discovered during PSC soil boring work. This situation was reported to NJDEP's Hotline for case assignment. Final FSC Report was issued in September 2003. No further action anticipated at this site except for recommendations that a deed notice be placed on this site.

Site 152 (Kenrich Petrochemicals): PSC fieldwork conducted during the Spring of 2002. No hexavalent chromium discovered. Widespread free phase oil product discovered during the soil boring work. The situation was reported to NJDEP's Hotline for case assignment. Final PSC was issued in February 2003.

Site 162 (Conrail Spur): Final PSC Report issued August 2000. No hexavalent chromium found.

Site 174 (Collins Park): Only one hexavalent chromium hit discovered at approximately 5-7 ft. depth. NJDEP conducted additional FSC work during the Summer of 2002 and confirmed that hexavalent chromium is limited to one location. Final FSC Report issued in October 2003. This location is currently under an impermeable liner and asphalt.

Site 177 (Bayonne Municipal Lot): PSC fieldwork during the Summer of 2002 did not find any hexavalent chromium contamination onsite. High levels of petroleum hydrocarbon were detected in two soil borings. This was reported to NJDEP's Hotline for case assignment. A FSC Report was issued in September 2003.

Site 180 (Eastern Oil): Hexavalent chromium found along Jersey City sewer line. FSC fieldwork during Spring/Summer of 2002 confirmed that hexavalent chromium contamination is limited to immediate area around sewer line. Draft RI report submitted May 2005.

Site 186 (JM Towing): PSC fieldwork discovered hexavalent chromium found underneath IRM liner and under hardtop. FSC fieldwork completed during Spring of 2002 confirmed that the hexavalent chromium is limited to the area underneath the IRM. The Final FSC Report was issued in November 2003.

The Orphan 2 group of sites consists of fifteen sites. L. ROBERT KIMBALL and Associates (LRK) are currently investigating the two highest priority sites. Potential exposure and size determined priority. Those sites are Site 192 (Turnpike Authority Pier 10S); and Site 206 (Polarome).

The phase 2 field investigations for Sites 192, and 206 were completed during January 2004. The draft RI reports were received in June 2004 and are currently being reviewed by NJDEP. Reports will be finalized pending the completion of the chromium cleanup criteria evaluation.

General Chromium Site Status

Below is the Chromite Ore Processing Residue Sites Status table, which summarizes the phase of all known chromium sites, sorted by responsible party. A copy of the updated Chrome Sites list is attached.

Chromite Ore Processing Residue Sites Status November 2005

Organization	Active Sites RI or RA Phase	NFA *	Total Sites
Honeywell	20	2	22
Occidental Chemical	22	18	40
PPG Industries	14	47	61
Exxon	2	0	2
Developer/Owner	1	3	4
Sub-Total Responsible Party	59	70	129
Allied Directive	24	0	24
NJDEP	0	1	1
NJDEP Orphan Site #1	14	0	14
NJDEP Orphan Site #2	15	0	15
New Unassigned Sites	1	0	1
Sub-Total Publicly Funded	54	1	55
Sites Investigated and Not Contaminated	0	0	27
<u>SUBTOTAL</u>	113	71	184
<u>TOTAL</u>	113	71**	211

* Sites Cleaned-Up with "**Entire Site - No Further Action (NFA-E) Determinations**" (37 Residential and 34 Non-Residential). Approximately 39% of all confirmed Hudson County Chromium Sites have been investigated and cleaned-up.

** Remedy Selection Summary:

- ◆ 48 - Excavation
- ◆ 6 – Alternative Remediation Standard developed & No RA necessary
- ◆ 13 - Cap and Deed Notice
- ◆ 2 - FeSO₄ & Portland Cement Treatment
- ◆ 2 - No RA necessary
- ◆ 1 - Deed Notice only