Signed 9/30/97

4WD-RCRA

SUBJ: Evaluation of Adcom Wire Company's status under the RCRIS Corrective Action Environmental Indicator Event Codes (CA725 and CA750)
EPA I.D. Number: FLD 053 105 821

FROM: Wesley S. Hardegree

THRU: Kent Williams
South Programs Section

TO: Narindar M. Kumar, Chief
RCRA Programs Branch

I. PURPOSE OF MEMO

This memo is written to formalize an evaluation of Adcom's status in relation to the following corrective action event codes defined in the Resource Conservation and Recovery Information System (RCRIS):

1) Human Exposures Controlled Determination (CA725),

2) Groundwater Releases Controlled Determination (CA750).

The applicability of these event codes at Adcom adheres to the event code definitions found in the Data Element Dictionary for RCRIS.

Concurrence by the RCRA Branch Chief is required prior to entering these event codes into RCRIS. Your concurrence with the interpretations provided in the following paragraphs and the subsequent recommendations is satisfied by dating and signing above.

II. HUMAN EXPOSURES CONTROLLED DETERMINATION (CA725)

There are five (5) national status codes under CA725. These status codes are:

1) YE Yes, applicable as of this date.

2) NA Previous determination no longer applicable as of this date.

3) NC No control measures necessary.

4) NO Facility does not meet definition.

5) IN More information needed.

The first three (3) status codes listed above were defined in the January 1995 Data Element Dictionary for RCRIS. The last two (2) status codes were defined in the June 1997 Data Element Dictionary.

Note that CA725 is designed to measure human exposures over the entire facility (i.e., the code does not track SWMU specific actions or success). Every area at the facility must meet the definition before a YE or NC status code can be entered for CA725. The NO status code should be entered if there are current unacceptable risks to humans due to releases of hazardous wastes or hazardous constituents from any SWMU(s) or AOC(s). The IN status code is designed to cover those cases where insufficient information is available to make an informed decision on whether human exposures are controlled. If an evaluation determines that there are both unacceptable current risks to humans (NO) for certain media and insufficient information (IN) for certain media, then the priority for the EI recommendation is the NO status code.

In Region 4's opinion, the previous relevance of NA as a meaningful status code is eliminated by the June 1997 Data Element Dictionary's inclusion of NO and IN to the existing YE and NC status codes. In other words, YE, NC, NO and IN cover all of the scenarios possible in an evaluation or reevaluation of a facility for CA725. Therefore, it is Region 4's opinion that only YE, NC, NO and IN should be utilized to categorize a facility for CA725. No facility in Region 4 should carry a NA status code.

This particular CA725 evaluation is the first evaluation performed by EPA for Adcom. Because assumptions have to be made as to whether or not human exposures to current media contamination are plausible and, if plausible, whether or not controls are in place to address these exposures, this memo first examines each environmental media (i.e., soil, groundwater, surface water, air) at the entire facility including any offsite contamination emanating from the facility rather than from individual areas or releases. After this independent media by media examination is presented, a final recommendation is offered as to the proper CA725 status code for Adcom.

The following discussions, interpretations and conclusions on contamination and exposures at the facility are based on the following reference documents: Final EPA Region 4 RCRA Investigation at Adcom Wire Company dated September 7, 1988; Final Property Investigation Plan dated January 1997 and the Draft Phase I Status Report dated May 1997.

III. FACILITY SUMMARY

The Adcom facility examined in this memo is located in Jacksonville, Florida (see attached Figure 2.4). Adcom manufactures wire products from large diameter wire or rod coils manufactured at other locations. Adcom cleans the rods or coils prior to drawing the wire to the desired diameter. The wire cleaning process generates two separate wastewater effluent: spent pickle liquor (spent acid) and rinse water produced by the subsequent rinsing of the coils with water.

The RCRA regulatory history of this facility is complex. The 1988 Post-Closure Permit expired November 1991, and the facility has failed to respond to a notice of deficiency on the permit application. The facility contends that the two RCRA permitted surface impoundment never managed hazardous waste; therefore, renewal RCRA Post-Closure Permit is not required. In an independent determination of RCRA applicability at Adcom, EPA determined that one of the surface impoundments permitted under the 1988 Post-Closure Permit did manage hazardous waste. Subsequently, a draft HSWA Permit was public noticed in June of 1994; however, the draft HSWA Permit has not been issued. Currently, the facility is addressing HSWA requirements under a draft State RCRA Consent Order.

IV. MEDIA BY MEDIA DISCUSSION OF CONTAMINATION AND THE STATUS OF PLAUSIBLE HUMAN EXPOSURES

SOIL - Contaminant Distribution

Releases from SWMUs and/or AOCs have contaminated soil at concentrations above relevant action levels. Lead is the main constituent of concern, but arsenic is also present above its action level. The action levels used to determine if soil contamination exists are as follows: lead - 400 ppm, arsenic - 0.4 ppm. Both of these risk-based levels are based on a residential land use setting. Generic industrial risk-based numbers for lead and arsenic are 1,000 ppm and 3.7 ppm, respectively.

Although Phase I onsite soil sampling has occurred at every SWMU/AOC identified as requiring Confirmatory Sampling (see attached Figure 2.4), information on the extent of soil contamination is insufficient or lacking in certain areas of the facility. These uncharacterized portions of the facility correspond to locations where some surficial soil contamination (upper 0 to 2 feet) has been detected (i.e., Former Discharge Line (maximum lead detected: 14,200 ppm), Storage Tank/Former CARS Area - maximum lead detected: 598 ppm)). Although some lead contamination has been noted underneath a storage pad which now covers the Former Discharge Line, the extent of contamination in this area has not been determined. Phase II soil sampling will

determine the horizontal and vertical extent of metal contamination.

Arsenic concentrations detected in the recent Phase I soil sampling have ranged from nondetect to 1.7 ppm. Arsenic is a metal which is frequently detected in Florida. Many pesticides, fungicides etc. have widespread use in Florida, and arsenic has been or is a constituent in many of these products. Therefore, it is frequently difficult to determine whether or not low concentrations like those reported in the draft Phase I Report represent a release. The draft Phase I Report also states that control samples for arsenic indicate a maximum expected control level[1] for arsenic of 1.7 ppm. Therefore, the arsenic concentrations, although likely not representative of natural background, are below the calculated maximum expected control level for arsenic. Note that the state has yet to determine whether or not this comparison is acceptable.

In addition to the onsite soil contamination at some SWMUs/AOCs, there is also onsite sediment contamination by lead at levels above the lead action level in soil. The onsite drainage ditch parallels Adcom's eastern facility boundary. The two sediment samples collected during the 1997 Phase I sampling have a lead concentration of 278 ppm and 970 ppm. Another ditch which also parallels the earlier property boundary, but offsite, has also been sampled. EPA RCRA sampling in 1988 detected even higher lead concentrations in this ditch (AS8 - 820 ppm; AS13 - 2,800 ppm; AS14 - 2,900 ppm).

EPA Region 4 sampling performed on the southern drainage ditch indicated an average lead concentration of approximately 2,700 ppm. The southern drainage ditch, which separates Adcom from their neighbor Florida Wire and Cable (FWC), underwent cleanup in 1996 per a Florida Consent Order with FWC. Six hundred and seventy-three cubic yards were excavated from the ditch. After the sediment removal from the southern ditch separating Adcom from FWC, the ditch was concreted to prevent both stormwater discharge out of the ditch and to groundwater and groundwater discharge into the ditch.

SOIL - Human Exposures to Contamination

Although the facility is fenced to prevent unauthorized access by non-employees thereby limiting plausible exposures to contamination from non-employee, facility operations do require frequent trips outside the main manufacturing building to obtain wire rods/coils or other raw materials (e.g., acid). Some of the soil contamination at Adcom is near entrances and exits from the main building to the rods/coils and near the raw material storage

[1] median sample data + 3(standard deviation)

areas. Therefore, the opportunity for exposure to existing soil contamination present in the upper two feet of soil at concentrations above residential standards, and in some cases above industrial standards, exists.

The only lead contamination currently known to be above the industrial risk-based levels are at the Former Discharge Line and in the onsite eastern drainage ditch. The area of elevated lead at the Former Discharge Line is currently covered with an intact concrete pad. Therefore, human exposures to lead contamination detected to date is controlled. The limited soil sampling to date indicates that the maximum arsenic detection in soil, 1.7 ppm, is well below the industrial risk-based level for arsenic (3.7 ppm). Therefore, the risk level for arsenic under the current land use is less than 10^{-6}.

From the location of the onsite eastern drainage ditch, it appears that the ditch is well away from facility operations. An EPA visit to the site also noted that access to this ditch is limited due to overgrown vegetation. For these reasons, it is concluded that human access to this ditch is unlikely.

With offsite contamination like the sediment contamination in the offsite eastern ditch, EPA views human exposures to be possible unless controls exist to prevent access. Currently, there are no such controls in place to prevent exposure to this sediment contamination.

SOIL - Conclusion

Human exposures to known onsite contaminated soil are controlled and exposure to onsite sediment contamination is viewed as unlikely. However, a final decision on human exposure to soil contamination cannot be made because there is uncertainty regarding the extent of soil contamination (i.e., characterization incomplete). In addition, plausible human exposure to known offsite contaminated sediment is not controlled.

GROUNDWATER - Contaminant Distribution

Historic (1986 to 1996) Point of Compliance groundwater monitoring around the Former Rubber-Lined Surface Impoundment and the Former Unlined Surface Impoundment has detected lead above the lead action level (0.015 ppm). The contamination detected to date is in the discontinuous layers of sandy marine sediments. A Limestone Aquifer exists beneath the sandy marine sediments but above the Floridan Aquifer. As a check on vertical migration of contaminants, this aquifer is set for sampling during Phase II of the property investigation. The Floridan Aquifer, which is approximately 500 feet below land surface, has not been sampled.

Historic sampling of MW2 and MW3 has detected lead as high as approximately 570 ppm and approximately 700 ppm, respectively. These wells are just off of the property boundary dividing Adcom from Florida Wire and Cable (FWC). Except for possibly MW-3, sampling from 1988 to 1996 at MW-2 and the other five monitoring wells near the impoundments has generated a data base which strongly suggest that the lead concentrations in these wells today is below 15 ppm. The earlier elevated lead detections in wells before 1988 may have been due to poor sampling technique (i.e., high turbidity). Another possibility is that the past concentrations do accurately represent groundwater contamination which was occurring before the cap was installed and which has subsequently migrated away from the monitoring wells.

In addition to the lead detections, groundwater sampling and analysis around the impoundments has detected chromium above its MCLs. For example, chromium concentrations in MW-6 and MW-8 have consistently exceeded the chromium MCL of 100 ppm. This includes the most recent sampling events in 1996. One offsite well installed by FWC, FWC-5-d, has detected chromium above its MCL. No opinion on the source of this offsite chromium contamination has been made, but it should be noted that FWC-5-d is downgradient of the two RCRA surface impoundments and very close to MW-6. Groundwater sampling of new onsite wells beyond the impoundments is planned for Phase II of the site investigation.

Downgradient groundwater flow at Adcom is apparently south/southeast at Adcom's southern property boundary (see attached Figure 3.1). With this groundwater flow direction, groundwater from Adcom flows to the FWC property; however, groundwater flow around the two closed surface impoundments has been and remains difficult to interpret. Groundwater near the impoundments could be flowing in more of an easterly direction as is the case just north of the two impoundments.

Based on the Draft Phase I Status Report, groundwater wells on FWC directly south of Adcom have not shown groundwater contamination; therefore, the western portion of Adcom does not appear at this time to be releasing contamination offsite. However, note that EPA and the State RCRA Program have not reviewed the reports from FWC. It may be that Adcom's summary of FWC's work has left out important pieces of information which could aid in development of a conceptual site model.

Internal groundwater quality beyond the area immediately surrounding the two RCRA surface impoundments on the Adcom property has yet to be investigated. Therefore, an important piece of the assessment, the overall quality of onsite groundwater, is unfinished.

Although characterization of groundwater is incomplete, there are no onsite drinking water wells used by Adcom; therefore, there is no plausible human exposure to any onsite groundwater contamination which exists or might exist onsite. Because of the close proximity of contaminated wells MW3, MW6 and MW8 to the property boundary, it is assumed that some offsite chromium (and possibly lead) contamination is either presently occurring or has occurred in the past. Therefore, human exposures to offsite groundwater contamination are assumed to exist because there are no control measures in place to prevent access to contaminated offsite groundwater. Note that although there are no institutional controls in place to prevent access to the offsite groundwater contamination, there are no known drinking water wells in the contaminated aquifer on the adjoining properties downgradient of Adcom (i.e., FWC and Lift Power). In addition, the Limestone Aquifer is used locally for potable drinking water. Sampling of this aquifer has not occurred yet; therefore, an opinion on its quality must be withheld.

Based on the above discussion, plausible human exposures to offsite groundwater contamination are not controlled. In addition, information on the water quality of the Limestone Aquifer is unavailable at this time. Reassessment should occur once more current groundwater data are obtained from Phase II of the site investigation.

SURFACE WATER

There are no permanent surface water bodies onsite. Therefore, surface water associated with the facility is not contaminated. The drainage ditches along Adcom's property lines only contain water during storm events. Because there is no contamination in surface water, **there are no plausible human exposures which must be controlled due to contaminated surface water.**

AIR

Releases to air from soil, groundwater and/or surface water contaminated by SWMUs and/or AOCs at the facility is not expected to be occurring above relevant action levels. **Therefore, there is no human exposure to contamination via an air route.**

V. STATUS CODE RECOMMENDATION FOR CA725:

As more fully explained in Section IV, human exposures to contamination are not currently controlled for offsite groundwater and offsite sediment (i.e., a NO recommendation). In addition, comparing the collected onsite soil data with plausible human exposures results in a determination that human exposure to onsite soil contamination is controlled, but further

characterization of onsite soil contamination is needed before a final decision on human exposure to onsite soil contamination can be made (i.e., an IN recommendation). Per Region 4's hierarchy of status codes, when an evaluation results in dual applicability of differing status codes, the NO status code takes precedent. Therefore, it is recommended that CA725 NO be entered into RCRIS.

VI. GROUNDWATER RELEASES CONTROLLED DETERMINATION (CA750)

There are five (5) status codes listed under CA750:

1) YE Yes, applicable as of this date.

2) NA Previous determination no longer applicable as of this date.

3) NR No releases to groundwater.

4) NO Facility does not meet definition.

5) IN More information needed.

The first three (3) status codes listed above were defined in the January 1995 Data Element Dictionary for RCRIS. The last two (2) status codes were defined in the June 1997 Data Element Dictionary.

The status codes for CA750 are designed to measure the adequacy of actively (e.g., pump and treat) or passively (e.g., natural attenuation) controlling the physical movement of groundwater contaminated with hazardous constituents above relevant action levels. The designated boundary (e.g., the facility boundary, a line upgradient of receptors, the leading edge of the plume as defined by levels above action levels or cleanup standards, etc.) is the point where the success or failure of controlling the migration of hazardous constituents is measured. Every contaminated area at the facility must be evaluated and found to have the migration of contaminated groundwater controlled before a "YE" status code can be entered.

If contaminated groundwater is not controlled in any area(s) of the facility, the NO status code should be entered. If there is not enough information at certain areas to make an informed decision as to whether groundwater releases are controlled, then the IN status code should be entered. If an evaluation determines that there are <u>both</u> uncontrolled groundwater releases for certain units/areas and insufficient information (IN) for certain units/areas of groundwater contamination, then the priority for the EI recommendation should be the NO status code.

In Region 4's opinion, the previous relevance of NA as a meaningful status code is eliminated by the June 1997 inclusion of NO and IN to the existing YE and NR status codes. In other

words, YE, NR, NO and IN cover of the scenarios possible in an evaluation or reevaluation of a facility for CA750. Therefore, it is Region 4's opinion that only YE, NR, NO and IN should be utilized to categorize a facility for CA725. No facility in Region 4 should carry a NA status code.

This evaluation for CA750 is the first formal evaluation performed for Adcom. Please note that CA750 is based on the adequate control of contaminated groundwater at the facility.

The following discussions, interpretations and conclusions on contaminated groundwater at the facility are based on the following reference documents: Final Property Investigation Plan dated January 1997 and the Draft Phase I Status Report dated May 1997.

VII. STATUS CODE RECOMMENDATION FOR CA750:

Based on data contained in the documents referenced in Section V and summarized in the groundwater portion of Section III, contaminated groundwater exists at concentrations above relevant action levels for chromium in MW-6 and MW-8 and possibly lead in MW-3.

Although groundwater is contaminated above relevant action levels, control measures have not been implemented. Because groundwater contamination at or emanating from the facility is not currently controlled, it is recommended that CA750 NO be entered.

VIII.SUMMARY OF FOLLOW-UP ACTIONS

In order to complete assessment of the extent of onsite soil contamination, onsite and offsite groundwater contamination, onsite and offsite sediment contamination, a Phase II Work Plan has been submitted and is under review. Once the extent of contamination is determined, a decision will be made as to what, if any, remedial actions are necessary to eliminate human exposures to unprotective levels of contaminants.

Because the investigation to date has been performed without a signed Consent Order, EPA will reemphasize to the state of the need to finalize the draft Consent Order.

(DAVID, IS THIS CORRECT (I.E., VEGATATION AROUND DITCH)? I COULD NOT FIND MY PHOTOS, BUT THIS IS WHAT I REMEMBER. HOPE I AM NOT CONFUSING THE ONSITE DITCH WITH THE OFFSITE DITCH - David concurred, 9/22/97)