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## INTER-OFFICE COMMUNICATION

**DATE:** October 29, 2009

**TO:** Honorable Mayor Hanrahan and Members of the City Commission

**VIA:** Russ Blackburn, City Manager

**FROM:** Fred Murry, Assistant City Manager *FM*

**SUBJECT:** Questions and Responses - Cabot - Koppers Superfund Site

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This memo is a follow-up to the referral from the Joint City of Gainesville and Alachua County Board of County Commission meeting of August 31, 2009 on the Cabot - Koppers Superfund Site. The City Commission requested staff to prepare responses to seven questions. These responses include information from the Alachua County Health Department, Strategic Environmental Analysis (the City's Consultant), and City Staff (Gainesville Regional Utilities, City Attorney's Office, and Public Works Department). The questions and responses are attached as Exhibit A.

Should you have any questions, please feel free to contact me at 334-5010.

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Commission has requested responses to the following questions. The following are preliminary responses for further discussion.

**1. Options for addressing the Koppers contamination issue, including closing Koppers under the City's nuisance provisions.**

Under the City's general police powers, the city has the authority to abate a public nuisance. A public nuisance is one that injuriously affects the public at large versus a private nuisance which violates only private rights and produces damages to one or a limited number of persons. Private parties may seek to enjoin a private nuisance. The city may seek to enjoin a public nuisance.

In order to establish a public nuisance the city must show how the public rights are violated or how the use injures the public health of the community at large. The damage resulting from a public nuisance is common to the whole community. To meet this burden, the City must present clear and satisfactory evidence or testimony of the public nuisance before a tribunal that has the authority to enjoin or prevent the public nuisance from occurring or being maintained. Courts are ordinarily reluctant to interfere by injunction with the use of property unless it is clearly shown that the use is injurious to the public health and safety. Thus, a court will seriously consider any expert testimony and evidence that is placed before the court, especially evidence of harm and injury.

The City Attorney is seeking information about the operation at the site. If any operating permits have been issued by any regulatory agency, is the operation in compliance with the permits? Have any citations or orders been issued against the operator during the previous five years? Are there any studies or data relating, for example, to fugitive dust emanating from the site? Are there any studies or data relating to the water quality of the stormwater runoff emanating from the site? This type of information would be evaluated in determining whether there is sufficient evidence to warrant a nuisance action against the operator.

The City and County are also asking EPA and/or FDEP to take air samples from and around the site and evaluate the health risks associated with the ongoing operation at the site.

## 2. Determine if further tests, such as hair or dust analysis would be useful.

The Alachua County Health Department consulted with the Florida Department of Health Toxicologists and stated that:

Hair analysis is not reliable for the chemicals of concern, only blood analysis would be reliable for biological testing.

The concentrations of dioxin in off-site soil do not support biological testing.

Test results from this sampling would not quantify the health risk for individuals or the neighborhood because enough is not known about levels of dioxin in blood.

For individuals who wish to pursue biological testing on their own we recommend they consult their physician. We can supply a list of the few laboratories who conduct this testing.

## 3. Why not restore to a residential standard?

The property is currently zoned industrial and is in current operation as an industrial site. The EPA is, in the opinion of the City, wrongfully considering the risks associated with the current operation and the particular operator. At a minimum, EPA should consider residential soil clean-up levels in the western and northern areas of the site near the site boundaries; and general non Koppers-specific commercial soil clean-up levels for the remainder of the site. The City Commission, at its meeting on June 23, 2008, adopted Resolution No. 071173 requesting the EPA to require remediation of the site to residential standards in regard to soil and groundwater impacts. The City acknowledges that it may not be economically feasible to require residential standards on the entire site, but the EPA should, in its feasibility study, evaluate additional remedies including soil removal to reduce surface soil concentrations in all areas of the site especially in the western and northern areas of the site to address fugitive dust generation and the migration of soil contaminants

The proposed feasibility study allows soil contamination to remain over half of the area of the site at the surface. Although the FS proposes to cover some of these areas, the EPA should require removal of the impacted soils and consolidate these into areas that need to be capped.

Remediating to residential standards is generally understood to mean that all contaminants are removed from the site, and there is no need for any land use restrictions on the property.

The Koppers site is approximately 90 acres. Industrial use in areas of the site over the past 80 years has resulted in creosote seeping into deeper subsurface soils. Due to the depth and extent of contamination in the surface soils in certain areas of the site, such as the eastern section, it may not be feasible or possible to remove all the contaminated surface soils. In addition, there would also be a risk that remedial actions may further mobilize this material. Therefore, meeting the definition that all contamination is removed such that the site is suitable for unrestricted residential development is likely not possible in these areas. For these areas it is likely necessary to treat and cap, and restrict activities that would result in exposure to the subsurface contamination. Under this condition, soils at the surface would not be contaminated and the area could be used for some activities, however, residential use would not be reasonable.

However, soil contamination in over half of the area of the site, in predominantly the western and northern areas of the site, remains at the surface (approximately the 0 to 2ft depth). The FS proposes to leave these soils uncovered and untreated or at most to impose a cover if needed to meet risk criteria. It is possible and preferred to remove these surficial impacted soils and consolidate these into areas that need to be capped. Although the future land use proposed by USEPA in the FS is commercial-industrial, in removing impacted surface soils, some areas of the site may also meet residential soil clean-up standards.

Therefore, although the entire site may not meet the definition of unrestricted use, it may be possible to meet these criteria in some areas of the site.

#### **4. Assessment of what actions the City of Gainesville would need to engage in to restore the Koppers site to a residential standard if the EPA only restores to an industrial standard.**

The City is properly responding at the public meeting of October 29, 2009 and in written comments to the EPA about the proposed feasibility study. The EPA is required to consider the City's and other comments in its final feasibility study. EPA will also issue the Remediation Plan for the site. EPA is required to schedule one or more public hearings on the proposed remedy and clean-up of the site. EPA will then issue its Record of Decision and provide written responses to all public comments. This is EPA's final administrative decision from which the City may then seek Judicial review.

If the City negotiates for impacted surface soils above Florida's Soil Cleanup Target Levels (SCTLs) to be consolidated into areas where capping is required because of subsurface impacts, incremental costs to meet residential as opposed to commercial SCTLs in some areas of the site may be minor.

However, it is important to also clarify what is meant by “industrial standard” and the proposed technology to address surface soils.

- The risk assessment concludes that none of the surface soils impacts need to be remediated. Areas of the site with surface soil concentrations greater than 100 times the commercial industrial SCTLs would remain.
- Assuming the risk assessment is revised and surface impacts above SCTLs would be addressed, the FS proposes to cover these additional areas with geotextile and one foot of soil rather than remove and consolidate these into other areas of the site. If this occurs, limits on future industrial as well as residential use would be required. Removal of the cover to address the impacted soils beneath the cover in the future would be much more costly.

**5. Provide information on what is the desired contamination remediation plan, as compared to the EPA proposed remediation plan.**

Subsurface Soils and Groundwater:

EPA’s proposed plan for the subsurface and groundwater contamination includes the following main elements:

1. Chemical treatment using “in-situ bio-geochemical stabilization” (ISBS) in the surficial aquifer in an effort to immobilize creosote;
2. Installation of a 65 ft deep slurry wall around the main creosote source areas; and
3. Low-rate pumping in the Floridan Aquifer below the site using existing monitoring wells.

GRU and its consultants working jointly with the Alachua County Environmental Protection Department (ACEPD) are formulating comments on the proposed cleanup plan. At this time, anticipated changes recommended from EPA’s approach include:

1. Evaluate the feasibility of excavation and offsite disposal of creosote contaminated soils in the surficial and intermediate aquifers. We would prefer removal and off-site disposal over the use of ISBS. However, this was not evaluated in the draft FS.
2. Immobilize creosote in the upper Hawthorn group (i.e. the upper part of the intermediate aquifer down to about 65 ft deep). (EPA's approach does not include any measures to prevent on-going downward movement of creosote from the intermediate aquifer);
3. Evaluate additional treatment of contaminants in the Lower Hawthorn Group (the lower part of the intermediate aquifer), and implement if feasible;
4. Implement higher-rate pumping of the Floridan aquifer to contain the contamination in the Floridan. The proposed low-rate pumping of monitoring wells described in the draft FS is not viable and unacceptable.

Another critical component of the site remedy will be the long term monitoring and contingency plans. Regardless of what remedial actions are taken it will be critical to monitor the performance of the remedy, and to establish compliance points that will trigger additional actions if the remedy is not performing as planned. In this regard the site has an extensive network of Floridan Aquifer monitoring wells, and discussions are underway for additional wells to "fill in the gaps" to provide a robust monitoring network. Additional monitoring wells will also be required in the surficial and intermediate aquifers, the location of which is to be proposed as part of the detailed remediation design. EPA has committed to a requirement for long term monitoring and an adaptive management approach in which additional actions will be required if the remedy is not meeting performance criteria. Although additional details will need to be worked out, at this time we are satisfied with EPA's overall approach for compliance monitoring.

#### On site surface soils:

Consolidate impacted surface soils above commercial SCTLs, placing these beneath areas where capping is required. Optimize the remedy to minimize areas that are capped.

Off site surface soils:

Remove off-site soils which are above Florida default residential SCTLs and expedite implementation of the soil remedy.

Stormwater:

The stormwater discussion in the EPA draft FS appears to not recognize or be cognizant of the alteration of the site permeability characteristics in the various evaluated remedial alternatives. These alternatives propose a low permeability cap over large portions of the site which will generate larger volumes of stormwater runoff than the site currently generates. The result of the oversight is a considerable understatement of the stormwater management element in the FS of this ancillary issue and its related costs. A Department of Public Works analysis of the proposed remedial alternatives concludes that due to changes in permeability, stormwater treatment facilities would be required for the runoff from the altered area as a matter of the Development Review Process within the Land Development Code elements that are triggered by the named alternate proposals.

**6. Recommendations on how water quality should be addressed on the Koppers site and provide an analysis on what is the City and/or County's authority to impose water quality standards on the Koppers site.**

The primary issues of water quality at the Koppers site are related to contaminated groundwater and contaminated stormwater runoff from the site.

Groundwater quality improvement at the Koppers site will ultimately depend upon implementation by USEPA of an effective remedy for the groundwater contamination associated with the historical Superfund contamination. Meeting drinking water standards remains the goal of the Superfund remedy for groundwater on the Koppers site. However, achieving drinking water standards on-site will be a lengthy process, and it may not be possible to fully achieve these in all areas and in aquifer units below the site due to the extent of contamination present. The ability and time required to achieve these standards will depend upon the effectiveness of the groundwater remedy. The City and County are limited in imposing additional water quality standards on groundwater beyond FDEP requirements. The regulatory process for groundwater at the Koppers site is fully under the jurisdiction of the FDEP and the

USEPA Superfund process. The City and County are actively working to influence the preferred remedy proposed by USEPA to assure the most effective and expeditious remedy that will result in meeting drinking water standards and long term protection of the City's Murphree Wellfield.

Compliance with stormwater water quality standards at the Koppers site is under the jurisdiction of the Florida Department of Environmental Protection (FDEP) Northeast district which issues the Koppers plant an NPDES stormwater permit. The County's Water Quality Code cannot impose additional stormwater quality regulations or standards as the Koppers site is under an FDEP NPDES permit. As long as the Koppers plant site complies with the FDEP NPDES stormwater permit, the requirements of the County's Water Quality Code are satisfied.

The FDEP is currently reviewing an application from Koppers plant for a site specific NPDES permit which will require stricter standards on the allowed level of contamination that Koppers will be permitted to discharge. In addition the final Superfund surface soil remedy for the site when implemented will include additional measures to limit the potential for continued transport of contaminated soils from the site although the remedy as proposed may not address stormwater quality runoff issues from the entire site. The City and County are working to influence the stormwater remedy proposed by USEPA and providing input to the FDEP NPDES permitting process to maximize the reduction of contaminant discharge and the degree of stormwater treatment and control.

City staff review of the remedial alternatives proposed by USEPA in the draft FS concludes that a number of the alternatives, as described, appear to change site runoff characteristics sufficiently to merit adding a stormwater management system for the altered area. Several of the alternatives describe creating an area of low permeability (a cap) over the impacted area that ranges from 24 to 37 acres. The intent of the cap is to divert water from rain events away from the contaminated area. The runoff volumes would be similar to those of a parking lot thus triggering a city Development Review Process for any of those possible alternates.

The Development Review Process would require a stormwater management system consisting of basins and piping to achieve the necessary water quality improvements and rate control for the altered portion of the site as prescribed by current State and City water regulations. State water regulations presumptively assume that 80% of the usual stormwater contaminants are removed. However, if there are contaminants of concern from the altered portion of the site being mobilized by flows during storm



events these would appear to merit special consideration. An analysis will be needed to determine removal efficacy of the conventional stormwater treatment and if any special measures are needed to improve the removal efficiency for any contaminants of concern.

**7. Review letter submitted from Environmental Protection Advisory Committee to Florida Power & Light and Koppers and make recommendations and report back to the Commission.**

On the advice of the City Attorney, the letter has not been submitted to FPL or any other Kopper's client at this time. The matter was briefly discussed at the City Commission meeting of Thursday, October 16, 2009. The County Attorney provided the same advice to the Board of County Commissioners at its meeting of October 27, 2009. At the request of the Board, the County Attorney is revising the letter. The Board is expected to discuss this matter at a special meeting on October 29, 2009. The City can consider this matter in the future and take appropriate action.