

Dear Mr. Bebo:

We are writing to inform you that the Friends of Ralston Creek Neighborhoods obtained, through a FOIA request to the US EPA, several historical environmental reports regarding the Kilmer landfill which is the proposed site for the Golden RV Storage. These documents reenforce the concerns we expressed previously to you. The documents also contain new information not previously disclosed by the project Applicant or their technical consultants.

We are transmitting copies of the documents listed as follows with this email. Also, we have provided some excerpts (below) taken from the documents regarding some of our key concerns.

1. Cottonwood West Industrial Park, Phase I Environmental Site Assessment and Preliminary Phase II Analysis, Ogden Environmental and Energy Services Company, Inc, for Leisure Time Management Resources, Inc., January 17, 1991
2. Soil & Foundation Investigation Proposed Bridge Across Ralston Creek Cottonwood Subdivision, (Appendix H of the Ogden Report, pages 135 to 180) Chen and Associates Consulting Geotechnical Engineers, for KKBNA, January 27, 1982
3. Preliminary Assessment Landfill At Cottonwood Park Cerclis ID# CO0000309054, Morrison Knudsen Corporation, for the US EPA Region VIII, January 24, 1995

The following are brief discussions and key excerpts from the documents:

Age of the Landfill:

The applicant's submittals to date have shown that the landfill was operated by Jefferson County from 1939 to 1942 and an unknown entity till possibly the 1960's.

The Ogden and Morrison Knudsen reports both definitively state that the landfill was operated by Jefferson County till about 1972. It was also indicated that the landfill was a major landfill in Jefferson County. These were based on interviews with government agencies and area residents.

“Steve Steigleder, Deputy Fire Marshall at Arvada Fire Station #6, has lived in Arvada for 29 years. He remembers the landfill—described in the Site Reconnaissance Section—**as being the major landfill for Northern Jefferson County at that time.** He recalls that general rubbish and trash from the community was deposited there.” (page 14 Ogden)

“The site was used as a landfill by Jefferson County from 1954 to 1971 or 1972 and covers 13 acres. The site property was annexed by the City of Arvada in 1981 and 1982.” Page 1, Morrison Knudsen).

The Ogden report (page 16) also reported the following regarding the landfill age:

“At various places, refuse is exposed. In one instance, newspapers and magazines were found that date back to 1972. Personal interviews revealed that dumping activity took place well into the 1970s, although the Jefferson county records hinted that the dump was closed in the 1950s.”

Landfill Discharge to Ralston Creek:

The Ogden report indicated that the landfill was discharging contaminants into Ralston Creek.

“Ralston Creek appears to be receiving contamination directly from the landfill. Visual contamination is apparent on the surface of the stream and along the shoreline. Actual refuse is in the stream channel (see photographs), and an oil scum is floating on the surface. There is orange discoloration of the channel bottom materials and submerged algae. This discoloration is possibly caused by oxidizing and/or acidizing fluids that periodically emit from the landfill. The floating oils and probable corrosive fluids that caused the orange discoloration of the stream probably entered Ralston Creek from the exposed landfill refuse that border the flood plain next to the subject property. There is no indication that these potential pollutants migrated onto the property from upstream. There is abundant green algae present in the stream for this time of the year, and it is more prolific adjacent to the landfill. The active growth algae colonies are likely enhanced due to nutrients emitting from the landfill, such as phosphorous and nitrogen.” (page 18 Ogden)

“It is a striking contrast that the upstream portion of Ralston Creek was frozen, in addition to being visually clear, and unfrozen adjacent to the subject landfill. Hydrocarbons, acids, and dissolved solids may provide an “antifreeze” effect that prevents the stream from freezing at the ambient temperatures, which existed during the time of our investigation. All stream pH readings were taken by hand-held equipment. **Values recorded ranged from 5.56 to 7.11 adjacent to the landfill** (refer to Table 1). Floating hydrocarbons could have a buffer effect and thus a broad range of pH measurements are explainable. Other variables that usually affect pH values are variable effluent sources and biologic activity.” (pages 18 and 19 Ogden)

Ogden noted that Ralston Creek upstream of the landfill had a pH of 7.61 while adjacent to the landfill the water had an acidic pH of 5.56.

Landfill Soil and Water Analyses:

We have expressed concerns about the contamination in the landfill and the potential to move offsite. The Ogden report supports these concerns and the need for investigation of the contamination at the site, particularly surface and ground water over at least a one year period.

The Ogden report (page 24) summarized water and soil sample analyses as follows:

- “The property that borders the south bank of Ralston Creek appears to be polluted by discharges from the landfill. Visible hydrocarbons are on the water surface.”
- “Groundwater samples from the landfill contain lead at concentrations of .0065 mg/L, which is above the EPA drinking water standard of .0050 mg/L.”
- “Soil samples from the landfill contain volatile organic compounds. Offending analytes are methylenechloride, acetone, tetrachloroethane, toluene, and total xylenes.”
- “A composite soil sample demonstrated an excessive concentration of lead in the amount of 54 mg/kg.”

Ogden also performed a magnetic site survey and found the following:

“Ogden conducted a magnetic survey to determine the distribution of buried refuse that is present on the property. This survey was accomplished by physically walking a controlled grid shown on the aerial photograph in Appendix B. The equipment employed was a Fisher model TW6, which is capable of detection to a depth of 30 ft below surface. Such magnetic induction devices respond to most iron metals. The assumption that some metal objects would be distributed ubiquitously within

the landfill proved to be correct. It was determined that no landfill refuse is present on the subject property north of Ralston Creek, which is basically raw agricultural land. However, the 13 acres south of the creek is completely covered by landfill material. **Some local spots indicated high magnetic responses (anomalies) that may signify large metal objects (e g., drums). Future Phase II intrusive activities will need to clear these anomalies.”**

The Ogden magnetic survey indicated a potential concern for buried drums or other large metal objects and a need for further investigation of the metal anomalies.

Combustible Gas

Chen and Associates performed a geotechnical investigation of the site for a proposed bridge.

Their investigation (page 5) detected combustible gas in several boreholes, in potentially hazardous quantities, similar to the results of the later Terracon investigations. Combustible gas testing on four of the six boreholes drilled by Chen and Associates in the landfill indicated the presence of gas at the 85% to 100% lower explosive limit and a combustible gas composition of 3% to 28%.

The Chen report (page 5) also states the following in regard to excavating within or near the landfill:

“Care should be taken when excavating within or adjacent to the landfill mass. Venting of excavations will be required. Any structures built over the landfill will require special methane gas controls. There are 2 basic approaches to controlling the migration of methane into structures. These include barriers separating the proposed structure from the landfill and ventilation systems. **Access roads, parking areas, underground utilities and other facilities constructed on landfill materials will be subjected to large differential movements and as corrosive environment. The owner should be aware of the high risk of distress associated with construction on landfills.”**

As communicated previously, we do not believe the applicant has the appropriate geotechnical information nor has considered the geotechnical problems in their proposed designs to date.

Ogden Recommendations:

The Ogden Report (page 25) contains a list of recommendations, as follows, which echo most the recommendations made by Terracon, the applicant's environmental and geotechnical consultant, that have not been addressed particularly for further site investigations.

“Based on the evaluation of prior data and data collected during the Preliminary Phase II site assessment, it is probable that contaminants are present on the site and that the potential for migration to offsite localities exists. Therefore, we would recommend the following activities to more clearly define the extent and nature of contamination on the LTMR site.

- **Excavate spot locations of high magnetic response to determine if leaking drums are present.**
- **Design a statistically-based random soil sampling program.**
- **Design a statistically-based groundwater sampling program.**
- Install deeper auger drilled monitoring wells at 30 to 50 ft depth.
- Case with large enough PVC for retrieving samples by bailing or the bladder pump method.
- **Selectively screen below landfill in permanent water table at low aquifer confining elevations to test for heavy compounds. Determining permanent water table and, if possible, the lower base confining depth.**
- **Schedule interval time sampling for surface water monitoring of Ralston Creek.**
- Identify flora/fauna kill mechanisms.
- Screen shallow groundwater monitoring wells in the landfill material and schedule sampling to be collected to allow for seasonal flux of contaminants.
- **Landfill area should not be developed for commercial or residential construction.**
- **Monitor contemporary methane presence.”**

We have significant concerns regarding the proposed RV storage project on the Kilmer landfill that have not been addressed and the documents found through the EPA FOIA request causes greater concern about the proposed project.

Sincerely;

Richard Bohling, P.E.

Rainer Gerbatsch, RRC, PRC, LEED

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3 Attachments