

## EXECUTIVE SUMMARY

*CINKARNA Metalurško-kemična industrija Celje, d.d. (hereafter 'Cinkarna' or the client) retained URS to perform a Phase I Vendor Due Diligence Assessment (an "assessment") of the two Cinkarna sites in Celje and Mozirje, Slovenia.*

*The so-called "Level of Materiality" defines the required scope and depth of the assessment. A Level of Materiality of 100,000 EUR (100 kEUR) per individual material issue identified was agreed for this assessment.*

*This is a short executive summary describing the key facts of the conducted assessment. For further details, please contact the Cinkarna management board in Celje where the full report can be reviewed.*

### Site Description

*The site is located within an industrial zone of the city Celje around 80 km NE of the Slovenian capital city of Ljubljana. The site address is Kidričeva 26, SI-3001 Celje, Slovenia.*

*The property covers an area of 46.4 hectares [ha], whereof approximately 10.3 ha is built up area and 12.6 ha represent paved outdoor areas around the buildings used as traffic and parking areas. All onsite facilities, including the property, are 100% ownership of Cinkarna.*

*In addition to the main site in the City of Celje, Cinkarna operates two landfills. The Bukovžlak landfill is located 1.2 km E of the site, occupying a total area of approximately 36 ha. This landfill is owned by the Municipality of Celje but is operated by Cinkarna. The Za Travnik landfill is located 2.1 km E of the site, occupying a total area of about 50.6 ha. This landfill is owned and operated by Cinkarna and is entirely organized as a tailing pond.*

*The site of Cinkarna Celje is organized as a multipurpose production site. The main operation represents the production of titanium-dioxide, supported with production of sulphuric acid. Since its establishment, the site was involved in zinc processing and production of zinc and titan-zinc products, including: sheets, wire, anodes and alloys. Cinkarna is also a manufacturer of graphic materials, including offset printing plates, offset and flexo printing inks and various chemicals used in the graphic industry. One part of the site is organized for the preparation and re-packing of agro-chemical products. Also, the site has developed a production of building materials, including mortars, plasters, screeds and others. Cinkarna has also developed the processing of fluorinated polymers (PTFE, FEP, PFA, PVDF, ECTFE) and elastomers, as well as coating of metal parts with vulcanized rubber linings.*

### Permit status

*The site holds a valid environmental permit dated 28 October 2010, covering Cinkarna's operations in Celje, including the production site and both landfills. The environmental permit was issued by the Ministry of Environment and Spatial Planning and the Environmental Agency (ARSO), in accordance with Slovenian Law on Environmental Protection (ZVO-1) and the IPPC Directive (Directive 2008/1/EC).*

Key findings

The following material environmental non-compliance or liability issues were identified:

- In order to reduce air emission and odour from the H<sub>2</sub>SO<sub>4</sub> production, Cinkarna is planning to equip the pits used for elemental sulphur melting with a filter system. Costs related to the installation of this system are estimated at 120,000 EUR, which appears realistic.
- In order to eliminate further incompliance with regard to particulate matters emitted into ambient air, the site management is planning to invest in an upgrade of the current equipment. Related costs for equipment upgrades were estimated at 240,000 EUR by the management, which appears realistic.
- Future material issues due to required technical upgrades may occur with regard to potential changes in the legal framework (EID) associated to new limit values for the wastewater discharges to surface water.
- No material issues/concerns with regards to waste management within the production site were identified.  
All material issues rest with the two landfills. According to the Cinkarna management, cost for recultivation of the Bukovžlak landfill used for solid waste is estimated at 5 M EUR while cost for ensuring stability of the dam at the Za Travnik landfill is estimated at 7 M EUR by the management.
- Estimated cost for proper removal and final disposal of the mentioned 30,000 m<sup>2</sup> of onsite ACMs is 450,000 EUR.
- Potential liabilities associated with the former site in the City of Celje, which was donated to the Municipality of Celje (1995) cannot be fully ruled out. However, this is currently considered a remote risk. The site contacts assured that Cinkarna has not received any requirements for further investigation or remediation since the site has been sold.
- The cost for transport and incineration of weak radioactive waste within the EU and final disposal of the radioactive waste residues in Slovenia is estimated at 5 M EUR by the management. In case of a future site closure, the management expects additional costs in the range of 7.5 M EUR for the recycling of approximately 600 t of scrap iron and weak radioactive rubber linings in the USA.

The following known soil and groundwater issue was identified:

- Based on the information received, it can be concluded that the topsoil within Cinkarna's production site is affected with heavy metals. However, no investigation assessing the environmental status of deeper soil strata and groundwater was ever conducted. URS recommends an intrusive investigation in the areas identified with known topsoil contamination in order to define potential impact on subsoil and groundwater and to possibly delineate the contamination spread. The investigation should consider the installation of monitoring wells to enable sampling of subsoil and groundwater. URS estimates the costs for this intrusive investigation to 100,000 – 150,000 EUR.

*The following potential areas of concern (PAOC) were identified during this assessment based on current on-site activities and past off-site activities:*

- Underground Storage Tanks at the Graphic materials production unit – area at the central-north part of the site. There is one group of 15 half-buried tanks outside the production building containing 20 m<sup>3</sup> and 30 m<sup>3</sup> each used for organic solvents, i.e. oil, light aromatic oil, isopropanol, ethyl-acetate, etc. This area is identified as a PAOC due to the long industrial use;
- Underground pipeline transporting “red gypsum” slurry from the production site to the landfills. As the pipeline is very old and fragile, this may result in leaks/loss of the transported slurry, causing impacts to soil and groundwater. Also, given that the pipeline is passing below land properties owned by individual third parties, future spills may lead to legal claims;
- Area in the zone/beneath of the metallurgical division. Substantial quantities of oils and lubricants were used historically at this location, which may have resulted in impacts to soil and groundwater. This area was identified as PAOC due to the long industrial use.
- Potential liabilities associated with the donated (1995) former site in the City of Celje, now owned by the Municipality of Celje cannot be fully ruled out. However, due to the fact that it is no longer owned by Cinkarna this is currently considered a remote risk. For final clarification of his topic, legal advice is recommended. The site contacts assured that Cinkarna has not received any requirements for further investigation or remediation since the site was donated.

*The company has recorded the following incidents/sources of environmental impacts on site or in the vicinity of current/past activities*

- Leakage of pyrite leachates from a damaged pipeline which connects the neutralization process in the TiO<sub>2</sub> plant with the solid waste landfill Bukovžlak, resulting in minor soil impacts;
- Leakage of red gypsum from the pipeline at landfill Za Travnikom, resulting in minor soil and water impacts;
- Damage of Bukovžlak dam resulted in uncontrolled release of gypsum sludge and pyrites through the dam drain. As remediation measure, the drain was injected by concrete. Impacts to soil and groundwater were reported by the site as a consequence of this release. This is known to the authorities but they have not required any remedial activities and none are pending according to the management;
- Leaching associated to pyrite residuals from the solid waste landfill Bukovžlak used partly for the construction of Bukovžlak and the Za Travnik landfill earth dam. Leachates from the solid waste landfill Bukovžlak are collected via a draining system and are diverted to and treated at Cinkarna’s wastewater treatment plant. However, a part of the leachate on both locations (Bukovžlak

and Za Travnik) could potentially reach the groundwater and impact the quality of nearby streams;

- Leakage of sulphuric acid from a damaged pipeline connecting the sulphuric acid plant with the TiO<sub>2</sub> production facilities; and
- Release of sodium hypochloride from the barium sulphide production plant.