

Texas Commission on Environmental Quality
Remediation Division Correspondence Identification Form

SITE & PROGRAM AREA IDENTIFICATION

SITE LOCATION		REMEDIATION DIVISION PROGRAM AND FACILITY IDENTIFICATION	
Site Name: Gladioux Metals Recycling, LLC		Is This Site Being Managed Under A State Lead Contract? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Address 1: 302 Midway Road		Program Area:	IHW CORRECTIVE ACTION ▼
Address 2:		Mail Code:	MC-127
City: Freeport	State: Texas	Is This A New Site To This Program Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Zip Code: 77542	County: Brazoria ▼	TCEQ Facility ID No.:	30952
TCEQ Region: Region 12 - Houston		--Leave This Field Blank--	--Leave This Field Blank--

DOCUMENT(S) IDENTIFICATION

PHASE OF REMEDIATION	DOCUMENT NAME
1. ASSESSMENT ▼	RCRA FACILITY INVESTIGATION/AFFECTED PROPERTY ASSESSMENT WORKPLAN (RFI) ▼
2. ▼	▼
3. ▼	▼
4. ▼	▼
5. ▼	▼

CONTACT INFORMATION

RESPONSIBLE PARTY/APPLICANT/CUSTOMER

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Document No.	TCEQ Database Term	Document No.	TCEQ Database Term
1.	RFI	4.	
2.		5.	
3.			



July 28, 2022

Michael Duffin, Ph.D., P.G VCP-CA Section
Remediation Division, MC 127
Texas Commission on Environmental Quality (TCEQ)
P.O. Box 13087, Austin, Texas 78711-3087

Subject: RFI/APA Workplan for Container Storage Building 1, NOR 050,
Gladieux Metals Recycling, Inc. (GMR)
302 Midway Road, Freeport, Brazoria County
SWR No. 30952, CN60012459, RN10021029
CEC Project: 324-762

Dear Dr Duffin:

Gladieux Metals Recycling, LLC (GMR) is submitting a RFI/APA workplan for Container Storage building 1, NOR 050, which is attached for your review. The workplan includes a summary of the building history and environmental investigations for the Container Storage Building and specified locations for soil borings and temporary groundwater monitoring wells. The field activities outlined in the workplan will be implemented within 90 days after TCEQ approval of the RFI/APA Workplan.

If you have any questions or comments regarding this letter please contact Marcus Macias at

Sincerely,

Tarun Bhatt
CEO

cc: Ms. Alma Jefferson, TCEQ Region 12
GMR.EHS@gladieuxmetals.com

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**RCRA FACILITY INVESTIGATION/AFFECTED PROPERTY
ASSESSMENT WORKPLAN**

NOR 050, CONTAINER STORAGE BUILDING

Prepared For:

GLADIEUX METALS RECYCLING, LLC

Prepared By:

**CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
HOUSTON, TEXAS**

CEC Project 324-829

JULY 2022



Civil & Environmental Consultants, Inc.

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1.0 INTRODUCTION

Civil & Environmental Consultants, Inc. (CEC), on behalf of Gladieux Metals Recycling, LLC (GMR) has prepared this Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI)/ Affected Property Assessment (APA) Workplan (Workplan) for NOR 050. NOR 050 is currently a container storage area; however, it was a storage area for spent catalyst which contains molybdenum, vanadium, cobalt, nickel and aluminum. It previously has been referred to as a catalyst storage building, Containment Storage Building 2 (CB2), and NOR 037. This Workplan has been developed as required in the TCEQ Hazardous Waste Permit (Permit) for GMR, which was issued on March 18, 2022.

The issuance of the Permit triggered the conversion of NOR 050 from a containment building to a container storage area, and the requirement for the development of the RFI/APA. Per the schedule outlined in the May 16 TCEQ letter and approved on June 22, 2022, the Workplan is due to the TCEQ on July 28, 2022, and field activities will begin within 90 days of Workplan approval.

The primary objective of this Workplan is to present the site history and sampling and analysis plan to assess potential soil and groundwater contamination from the release of hazardous constituents associated with NOR 050.

1.1 NOR 050 SITE HISTORY AND ENVIRONMENTAL INVESTIGATIONS

The NOR 050 building was placed in service in May 2001, and was originally used for bulk storage and blending of spent catalyst, and currently is utilized as a container storage area for ignitable waste. The spent catalyst contains aluminum, cobalt, molybdenum, nickel, and vanadium. The building was originally 140 ft by 240 ft, and was expanded in October 2005 with a 79 ft x 200 ft addition on the north side of the building (bay 5). The building has a 18-inch concrete floor and 6-inch secondary slab with a gravel layer between the floor and slab. In addition, thirteen sumps with perforated stainless steel casings were installed at the perimeter of the building to detect fluids between the two slabs.

1.1.1 2006-2008

In June of 2006, a release of oily water was observed in an on-site stormwater drainage ditch west of the NOR 050 building from the construction joint between the old and new sections of the floor. Corrective measures included removal of soil from both ends of the construction joint, and installation of an oil recovery sump to collect and contain the mobile oil on the east side of CJ4. Approximately 225 tons of soil and 2,000 gallons of water was removed from the ditch; the water was processed through the onsite wastewater treatment plant. Additional details are included in the 2008 APAR prepared by Environmental Resource Management, Inc. (ERM APAR).

The construction joint was permanently repaired in May 2007, and subsequent soil and groundwater sampling and analysis are documented in the ERM APAR. As of October 2008, no NAPL had been detected since November 2007 in the oil recovery sump at the east end of the construction joint. Constituents of Concern (COCs) for the assessment included Total Petroleum Hydrocarbons (TPH), aluminum, arsenic, molybdenum, nickel, and vanadium. Angled borings beneath the building on the east and west sides of the construction joint did not exhibit detections of TPH or exceedances of critical Protective Concentration Levels (cPCLs) for aluminum, arsenic, molybdenum, nickel, and vanadium. Removal of additional soil in two areas to delineate cPCL exceedances of molybdenum and vanadium resulted in concentrations below cPCLs in surface soils for the above metals. In addition, two monitoring wells installed in the uppermost water bearing zone on the east and west sides of the building in close proximity to the construction joint had no detections of TPH and no exceedances of cPCLs for aluminum, arsenic, molybdenum, nickel, and vanadium. The February 9, 2009 TCEQ approval letter stated that groundwater in the area of the facility is Class 3, and TRRP Remedy Standard A Commercial/Industrial PCLs were achieved, indicating that these cPCLs should be utilized in future investigations for NOR 050.

1.1.2 2011-2014

In 2011, cracking of the primary containment slab of the building was observed, and oil and water were detected in the perimeter sumps. A resin sealer was applied to the building floor in September and October of 2012 and September of 2013. During the sealing of the floor, the construction joints in the original portion of NOR 050 were discovered to be damaged, and were repaired. A certification report was submitted to TCEQ in October 2013 which provided notification of repairs

to the original construction joints, which was acknowledged in January 2014, and an addendum was submitted in February 2014 which documented waste disposal from the floor sealing repair and repairs to the expansion joints.

1.1.3 2017-2022

All bulk catalyst was removed from the building in the first quarter of 2017. Weekly monitoring of perimeter sumps since January 2017 indicates that oil has not been observed in any sump since June 12, 2020. As part of the conversion of NOR 050 from a bulk storage to a containment building, the floor was power washed in March 2020 to remove dust and other debris from the slab, and the two trenches in the building were capped in May 2020. A sample of the rinsate was collected after the third round of power washing to evaluate the effectiveness of the cleaning. The rinsate was analyzed for select metals, volatile organic compounds, and semi-volatile organic compounds and compared to TRRP Tier 1, Class 3 Commercial Industrial PCLs. There were no exceedances of PCLs for any parameter.

In addition, as NOR 050 is no longer being used to store uncontainerized waste, monitoring of the gravel layer is no longer necessary. The thirteen sumps at the building perimeter will be used to pump cement grout at high pressure to fill the voids in the gravel layer and encapsulate material that may be present within the pores of the gravel layer. The grouting will occur prior to commencement of the RFI/AFA field activities.

2.0 RFI/APA FIELD ACTIVITIES

The following sampling and analysis tasks are proposed at the soil-boring and temporary monitoring well locations identified on **Figure 1** in order to determine the areal extent of impact (if any) to the soil and groundwater in NOR 050: The rationale for each soil boring and temporary monitoring well location is listed in **Table 1**.

2.1 DRILLING, SAMPLING AND ANALYSIS

- A Health and Safety Plan or Job Hazard Assessment will be completed prior to the commencement of field activities.
- CEC and/or a Texas-licensed drilling contractor will notify Texas811 (the statewide dig notification center) to inform them of the proposed activities in advance of site activities. Site personnel will also evaluate the soil boring locations and advise CEC if the locations need to be moved as a result of the presence of subsurface utilities.
- Non-dedicated drilling and sampling equipment will be decontaminated prior to commencement of drilling activities, between samples, and after work is completed. Soil cuttings and groundwater will be containerized in drums or containers for disposal by GMR.
- At each proposed soil-boring location shown in **Figure 1**, the boring will be advanced using a direct-push technology rig (Geoprobe® or equivalent).
- Each soil boring will advanced to a total depth of 15 feet below ground surface (ft bgs), and will be plugged with bentonite pellets.
- A field geologist working under the direction of a Texas registered Professional Geologist, or a Texas registered Professional Geologist will characterize the soil in accordance with the Unified Soil Classification System and prepare soil boring logs and well completion diagrams.
- The temporary monitoring wells will be surveyed so that a groundwater gradient map can be developed for NOR 050.;
- The driller will develop and submit a State of Texas Well Report for each boring and monitoring well.
- Samples will be screened visually for indications of contamination (staining, discoloration, etc.) and a photoionization detector (PID) will be used to detect the presence of volatile organics. The results of the field screening will be used as one criteria to guide the selection of samples for laboratory analysis.

- Soil samples for laboratory analysis will include a sample between 0 and 1 ft bgs and a sample between 1 and 2 ft bgs. Additional samples will be collected at 5-foot intervals and held for potential laboratory analysis, unless an elevated PID reading is detected, in which case a sample will be submitted for laboratory analysis.
- The selected soil samples will be placed in containers provided by the analytical laboratory. Sample containers will be labeled and placed in insulated coolers on ice. Chain-of-custody documentation will be completed. The samples will be submitted for laboratory analysis of the parameters listed in **Table 2**;
- One-inch temporary monitoring wells with prepacked screen will be installed in the uppermost water bearing zone in soil boring boreholes at the locations indicated on Figure 1.
- Bentonite pellets/granules will be placed into the annular space on top of the filter-pack material to form a seal with a thickness of two feet.
- The temporary monitoring wells will be sampled as described below and will be removed within 48 hours of installation as required by Texas regulations. Once the well materials are removed, the borings will be plugged using bentonite chips.
- A peristaltic pump will be used to sample the temporary wells in general accordance with low flow sampling techniques. The sample will be filtered in the field or laboratory with a 0.45-micron filter if groundwater turbidity is above 10 Nephelometric Turbidity Units (NTUs).
- If TPH is detected in soil or groundwater samples, additional speciation or semivolatile organic compound (SVOC) analysis may be required.
- In addition to the samples identified above, quality assurance/quality control (QA/QC) samples will be collected in the field. The field QA/QC samples will consist of one duplicate sample for every ten groundwater samples (collected to assess the quality reproducibility of the analytical data), one field blank sample per sampling day (collected to assess the effectiveness of decontamination of sampling equipment), and one trip blank per sample shipment (provided by the laboratory to identify potential cross-contamination of samples during shipment).
- The field QA/QC samples will be prepared as follows:
 - Duplicate samples will be collected by splitting a single groundwater sample between two separate containers for the purpose of evaluating sampling and analytical reproducibility (precision). The decision of where

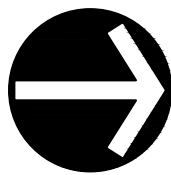
duplicate samples will be collected will be made in the field at the time of sampling. These samples will be submitted as blind “duplicates” to the laboratory;

- Field (equipment) blanks will be prepared to assess the possible cross-contamination), potential errors in sampling, and the thoroughness of equipment decontamination. Field blanks will be prepared by rinsing decontaminated equipment with distilled water and then collecting the rinsate. These samples will be submitted as identified “field blanks” to the laboratory; and
- A trip blank will be included to assess possible cross-contamination during shipping. The trip blank will be prepared by the laboratory. One trip blank consisting of organic-free water will be included along with each daily shipment of groundwater samples.

3.0 PREPARATION OF APAR

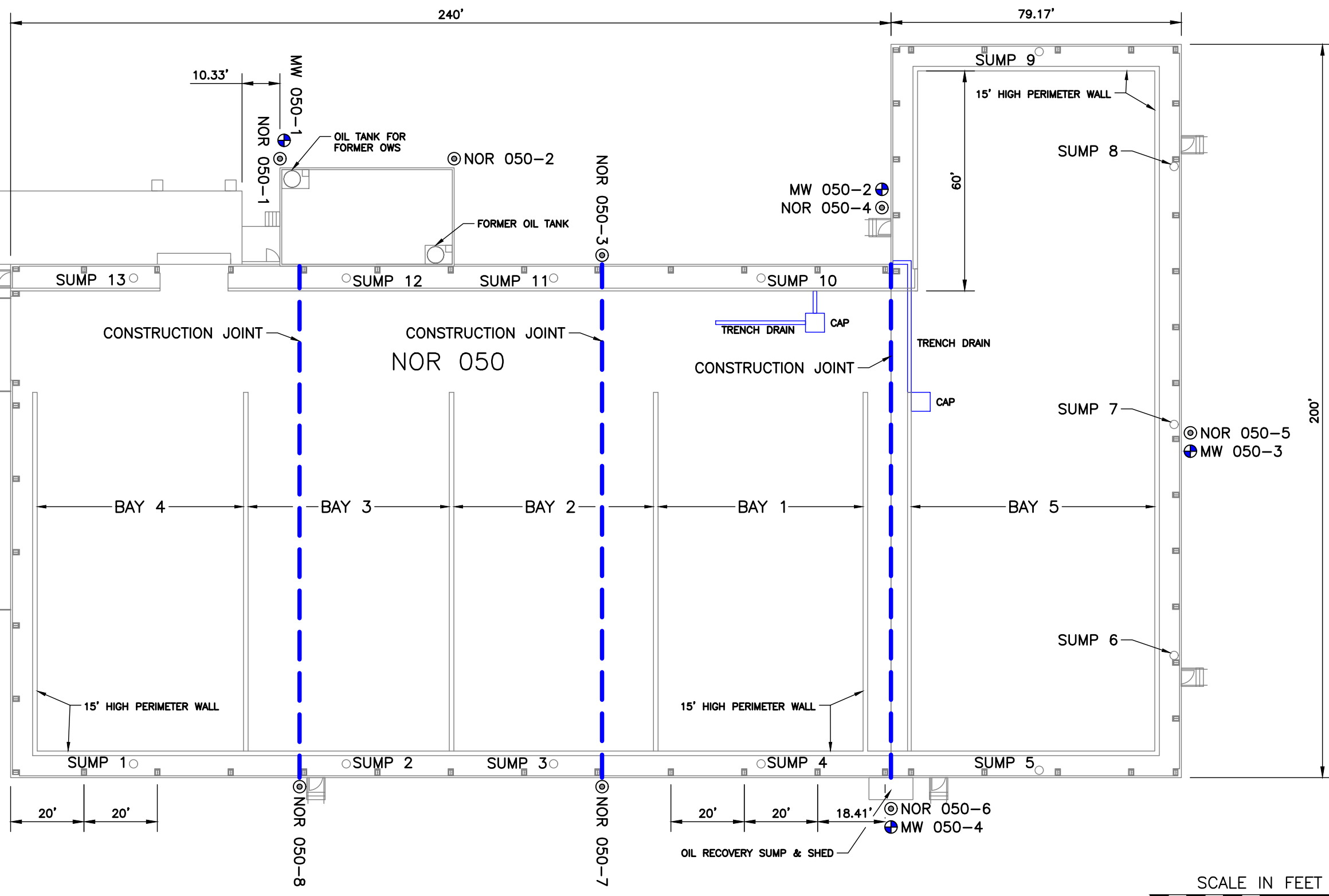
In accordance with the June 22, 2022 TCEQ letter, an Affected Property Assessment Report (APAR) will be prepared for TCEQ submittal within 90 days after the completion of the RFI/APA field activities. It will include a description of field procedures, boring logs, well completion diagrams, a groundwater gradient map, tabulated laboratory data and reports, and State of Texas Water Well Reports.

FIGURES



NORTH

F:\320-000\324-829\CADD\Dwg\Drawing for RFI\195686-Facility Layout.dwg LS:(7/28/2022 - opez) - LP: 7/28/2022 1:44 PM



NOR 050-10

TRUCK ENTRANCE

CONSTRUCTION JOINT

CONSTRUCTION JOINT

NOR 050

TRENCH DRAIN

CONSTRUCTION JOINT

TRENCH DRAIN

CAP

SUMP 7

NOR 050-5

MW 050-3

BAY 4

BAY 3

BAY 2

BAY 1

BAY 5

NOR 050-9

MW 050-5

LEGEND

	SOIL BORING LOCATION
	TEMPORARY MONITORING WELL LOCATION
	CONSTRUCTION JOINTS
	CROSSWALL

15' HIGH PERIMETER WALL

15' HIGH PERIMETER WALL

SUMP 1

SUMP 2

SUMP 3

SUMP 4

SUMP 5

20'

20'

NOR 050-8

NOR 050-7

20'

20'

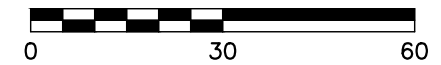
18.41'

NOR 050-6

MW 050-4

OIL RECOVERY SUMP & SHED

SCALE IN FEET



NOTES

- LOCATIONS OF SOIL BORINGS AND TEMPORARY MONITORING WELLS ARE APPROXIMATE AND MAY BE ADJUSTED DUE TO FIELD CONDITIONS.



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GLADIEUX METALS RECYCLING, LLC
FREEPORT TEXAS

NOR 050 RFI/APA

PROPOSED SOIL BORING &
TEMP MONITORING WELL LOCATIONS

DRAWN BY: AEP	CHECKED BY: JRM	APPROVED BY: LRL	FIGURE NO.: 1
DATE: 7/26/2022	DWG SCALE: 1" = 30'	PROJECT NO: 324-829	

TABLES

Table 1
Proposed Soil Boring and Monitoring Well Locations for RFI/APA
NOR 050

Soil-Boring ID	Temporary Monitoring Well ID	Rationale for Boring and Well Locations
NOR 050-1	MW NOR 050-1	Adjacent to construction joint and oil tank from former oil water separator
NOR 050-2		West of former oil collection tank
NOR 050-3		West of construction joint
NOR 050-4	MW-050-2	West of construction joint between original building and Bay 5 addition
NOR 050-5	MW 050-3	North of building
NOR 050-6	MW 050-4	East of construction joint between original building and Bay 5 addition, and oil recovery sump
NOR 050-7		East of construction joint
NOR 050-8		East of construction joint
NOR 050-9	MW 050-5	South of building in gravel area
NOR 050-10		South of building entrance ramp

Note: Soil boring and temporary monitoring well locations are approximate and may be adjusted due to field conditions.

Table 2
Proposed Constituents of Concern (COCs) for RFI/APA
NOR 050

COC Group	COC
Metals (EPA Method 6010/6020)	Aluminum
	Arsenic
	Cadmium
	Cobalt
	Lead
	Molybdenum
	Nickel
	Vanadium
Total Petroleum Hydrocarbons (TPH) (TX Method 1005/1006)	Not applicable

APPENDIX A

REFERENCES

REFERENCES

Engineering Certification Report Addendum, Maintenance Repairs to Floor, Containment Building CB-2, NOR-037, Gulf Chemical and Metallurgical Corporation, Freeport, Texas, Kleinfelder, February 7, 2014.

Notification of Repairs to Expansion Joints in Containment Building 2 (NOR-037) Related to Floor Repair, Gulf Chemical & Metallurgical Company – Freeport, TCEQ Response Letter, January 13, 2014

Engineering Certification Report, Maintenance Repairs to Floor, Containment Building CB-2, NOR-037, Gulf Chemical and Metallurgical Corporation, Freeport, Texas, Kleinfelder, October 16, 2013.

Affected Property Assessment Report, TCEQ SWR No. 30952, Freeport, Texas, Environmental Resource Management, October 20, 2008.