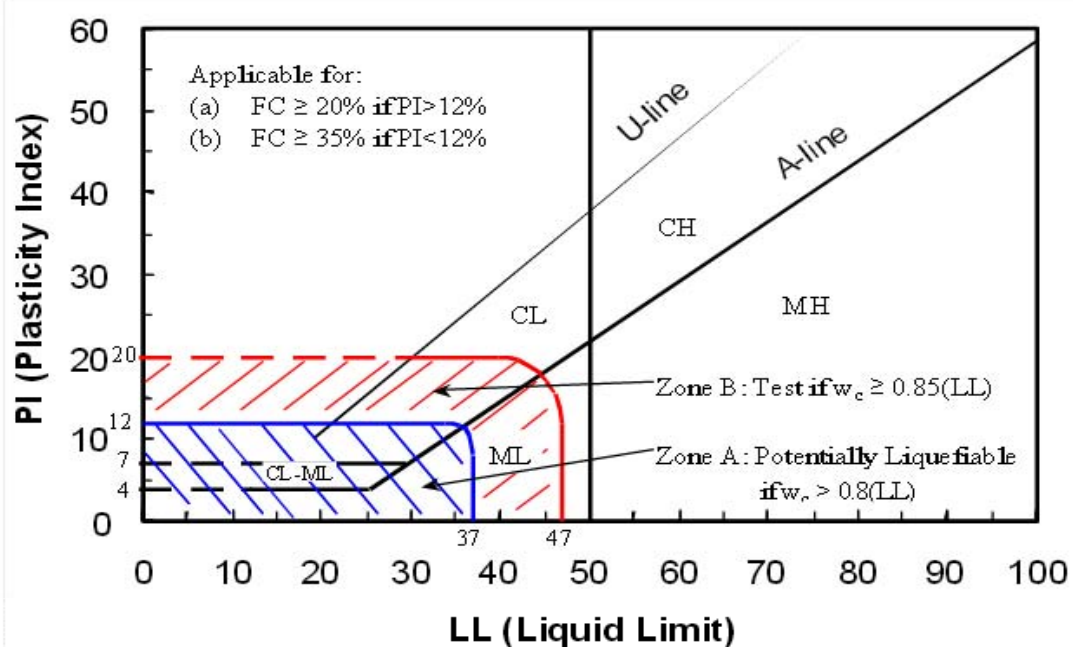


	SOIL ENGINEERING SERVICES (SES) خدمات مهندسی مکانیک خاک	
	PROJ NO: 1347-EE-PEP-GEO-001-B	REV: B
	SUBJECT: GEOTECHNICAL INVESTIGATION, PHASE I, FACTUAL REPORT, SOUTH ALUMINIUM SMELTER (SALCO) IRAN	

Enclosure B

Analyses Results of Liquefaction Potential



TITLE: CRITERIA FOR CLAY LIQUEFACTION

	PROJECT: SOUTH ALUMINUM SMELTER PLANT	FIG. No.: 1
	CLIENT : NFC	PROJ. No. : 1347
SOIL ENGINEERING SERVICES CONSULTING ENGINEERS		

BH	DEPTH FROM (m)	DEPTH TO (m)	wc% (avg)	LL	PI	0.8LL	0.85LL	CRITERIA 1 (Wc%)	CRITERIA 2 (PI)	Comment
BH-002	5	35	25	44	22	35.2	37.4	NOT susceptible	NOT susceptible	NOT susceptible
BH-008	6	24	26	37	17	29.6	31.45	NOT susceptible	NOT susceptible	NOT susceptible
BH-021	4	24	35	40	17	32	34	Susceptible	NOT susceptible	NOT susceptible
BH-025	3	20	25	37	16	29.6	31.45	NOT susceptible	NOT susceptible	NOT susceptible
BH-031	5	40	25	35	11	28	29.75	NOT susceptible	Susceptible	NOT susceptible
BH-035	5	18	22	40	17	32	34	NOT susceptible	NOT susceptible	NOT susceptible
BH-042	6	40	27	35	11	28	29.75	NOT susceptible	Susceptible	NOT susceptible
BH-044	5	17	26	34	18	27.2	28.9	NOT susceptible	NOT susceptible	NOT susceptible
BH-049	5	23	28	38	17	30.4	32.3	NOT susceptible	NOT susceptible	NOT susceptible
BH-053	5	8	22	39	20	31.2	33.15	NOT susceptible	NOT susceptible	NOT susceptible
BH-058	8	18	25	37	13	29.6	31.45	NOT susceptible	Susceptible	NOT susceptible
BH-059	5	30	25	35	12	28	29.75	NOT susceptible	Susceptible	NOT susceptible
BH-062	9	14	26	45	16	36	38.25	NOT susceptible	NOT susceptible	NOT susceptible
BH-069	4	14	27	33	11	26.4	28.05	Susceptible	Susceptible	Susceptible
BH-078	9	19	20	29	12	23.2	24.65	NOT susceptible	Susceptible	NOT susceptible
BH-086	5	20	25	38	15	30.4	32.3	NOT susceptible	NOT susceptible	NOT susceptible
BH-095	5	18	24	35	13	28	29.75	NOT susceptible	Susceptible	NOT susceptible
BH-104	6	18	24	32	11	25.6	27.2	NOT susceptible	Susceptible	NOT susceptible
BH-107	11	19	26	38	14	30.4	32.3	NOT susceptible	NOT susceptible	NOT susceptible
BH-119	6	21	25	38	16	30.4	32.3	NOT susceptible	NOT susceptible	NOT susceptible

TITLE: CYCLIC FAILURE SUSCEPTIBILITY IN CLAYEY SOILS

	PROJECT : South Aluminium Smelter Plant	FIG. No.: 2
	CLIENT : NFC	PROJ. No.: 1347

SOIL ENGINEERING SERVICES CONSULTING ENGINEERS

BH	DEPTH FROM (m)	DEPTH TO (m)	wc% (avg)	LL	PI	0.8LL	0.85LL	CRITERIA 1 (Wc%)	CRITERIA 2 (PI)	Comment
BH-133	5	17	21	38	17	30.4	32.3	NOT susceptible	NOT susceptible	NOT susceptible
BH-139	6	12	21	33	18	26.4	28.05	NOT susceptible	NOT susceptible	NOT susceptible
BH-143	11	20	25	39	16	31.2	33.15	NOT susceptible	NOT susceptible	NOT susceptible
BH-148	3.5	11	27	42	22	33.6	35.7	NOT susceptible	NOT susceptible	NOT susceptible
BH-151	5	18	25	29	11	23.2	24.65	Susceptible	Susceptible	Susceptible
BH-156	6	11	21	38	18	30.4	32.3	NOT susceptible	NOT susceptible	NOT susceptible
BH-157	10	18	21	30	8	24	25.5	NOT susceptible	Susceptible	NOT susceptible
BH-166	7	17	25	37	15	29.6	31.45	NOT susceptible	NOT susceptible	NOT susceptible
BH-173	10	24	37	30	8	24	25.5	Susceptible	Susceptible	Susceptible
BH-175	6	20	25	38	13	30.4	32.3	NOT susceptible	Susceptible	NOT susceptible
BH-184	5	20	27	37	16	29.6	31.45	NOT susceptible	NOT susceptible	NOT susceptible
BH185	9	22	25	37	17	29.6	31.45	NOT susceptible	NOT susceptible	NOT susceptible
BH-198	6	18	23	38	17	30.4	32.3	NOT susceptible	NOT susceptible	NOT susceptible
BH-199	6.5	20	25	36	15	28.8	30.6	NOT susceptible	NOT susceptible	NOT susceptible
BH273	5	25	26	34	11	27.2	28.9	NOT susceptible	Susceptible	NOT susceptible
BH-288	4	36	25	37	16	29.6	31.45	NOT susceptible	NOT susceptible	NOT susceptible
BH-298	8	16	22	35	14	28	29.75	NOT susceptible	NOT susceptible	NOT susceptible
BH-322	4	20	23	30	7	24	25.5	NOT susceptible	Susceptible	NOT susceptible
BH-337	4	10	25	36	15	28.8	30.6	NOT susceptible	NOT susceptible	NOT susceptible

TITLE: CYCLIC FAILURE SUSCEPTIBILITY IN CLAYEY SOILS

	PROJECT : South Aluminium Smelter Plant	FIG. No.: 3
	CLIENT : NFC	PROJ. No.: 1347

SOIL ENGINEERING SERVICES CONSULTING ENGINEERS

BH	DEPTH FROM (m)	DEPTH TO (m)	W (%)	LL	PI	0.8LL	0.85LL	CRITERIA 1 (Wc%)	CRITERIA 2 (PI)	Comment
BH21	6.5	14	25	46	15	36.8	39.1	NOT susceptible	NOT susceptible	NOT susceptible
BH25	3	5.1	19	37	16	29.6	31.45	NOT susceptible	NOT susceptible	NOT susceptible
BH27	11.5	14	22	23	8	18.4	19.55	Susceptible	Susceptible	Susceptible
BH31	12	14	26	35	10	28	29.75	NOT susceptible	Susceptible	NOT susceptible
BH31	20	23	26	33	9	26.4	28.05	NOT susceptible	Susceptible	NOT susceptible
BH42	24	30	26	35	10	28	29.75	NOT susceptible	Susceptible	NOT susceptible
BH42	30	34	20	48	20	38.4	40.8	NOT susceptible	NOT susceptible	NOT susceptible
BH44	12	14.5	26	34	10	27.2	28.9	NOT susceptible	Susceptible	NOT susceptible
BH58	7.5	10	26	31	8	24.8	26.35	Susceptible	Susceptible	Susceptible
BH59	20	24	22	34	12	27.2	28.9	NOT susceptible	Susceptible	NOT susceptible
BH59	35.5	37.5	26	33	9	26.4	28.05	NOT susceptible	Susceptible	NOT susceptible
BH100	8	10	27	33	9	26.4	28.05	NOT susceptible	Susceptible	NOT susceptible
BH107	4	9	27	45	19	36	38.25	NOT susceptible	NOT susceptible	NOT susceptible
BH107	14	19	27	34	7	27.2	28.9	NOT susceptible	Susceptible	NOT susceptible
BH109	7	11.5	27	31	7	24.8	26.35	Susceptible	Susceptible	Susceptible
BH133	17	19	23	38	13	30.4	32.3	NOT susceptible	Susceptible	NOT susceptible
BH148	13.5	14	26	32	8	25.6	27.2	Susceptible	Susceptible	Susceptible
BH161	13	18	21	55	24	44	46.75	NOT susceptible	NOT susceptible	NOT susceptible
BH164	13.5	17.5	21	31	8	24.8	26.35	NOT susceptible	Susceptible	NOT susceptible
BH166	7	9	26	31	9	24.8	26.35	Susceptible	Susceptible	Susceptible
BH185	7.5	13.5	25	33	9	26.4	28.05	NOT susceptible	Susceptible	NOT susceptible
BH249	24	25	28	34	8	27.2	28.9	Susceptible	Susceptible	Susceptible
BH251	12	22	24	31	8	24.8	26.35	NOT susceptible	Susceptible	NOT susceptible
BH262	6	8	25	40	13	32	34	NOT susceptible	Susceptible	NOT susceptible
BH284	6	12	26	39	13	31.2	33.15	NOT susceptible	Susceptible	NOT susceptible
BH286	23.5	27.5	21	51	21	40.8	43.35	NOT susceptible	NOT susceptible	NOT susceptible
BH329	4	12	20	42	12	33.6	35.7	NOT susceptible	Susceptible	NOT susceptible
BH337	26	30	21	26	5	20.8	22.1	NOT susceptible	Susceptible	NOT susceptible

TITLE: CYCLIC FAILURE SUSCEPTIBILITY IN SILTY SOILS

	PROJECT : South Aluminium Smelter Plant	FIG. No.: 4
	CLIENT : NFC	PROJ. No.: 1347

SOIL ENGINEERING SERVICES CONSULTING ENGINEERS