



Landfolio Regional User Conference

October 17, 2024

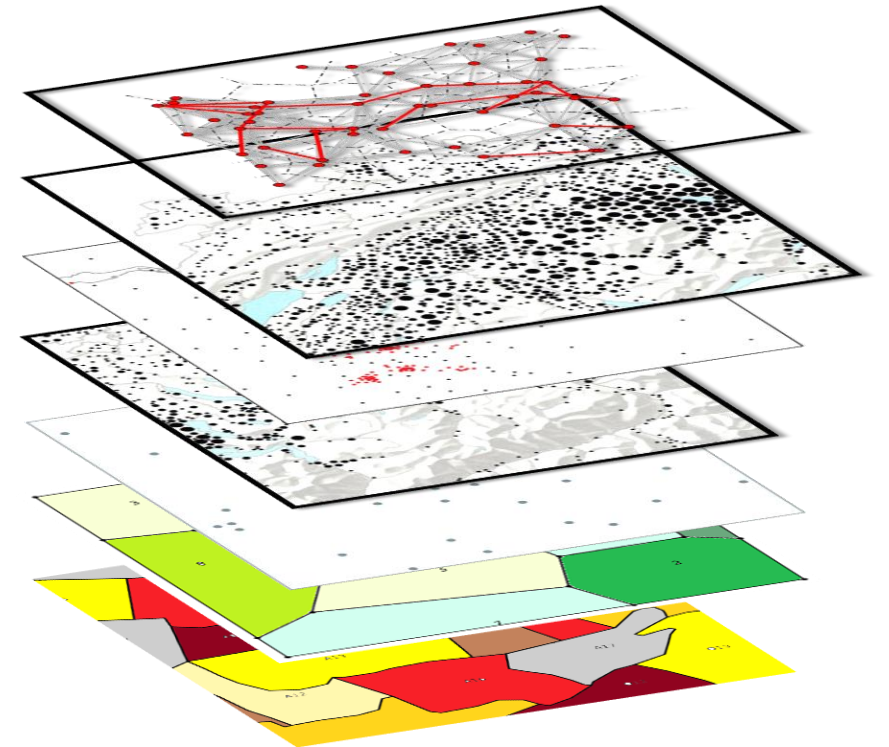
Compliance management for Permits

Mike Baumgartner | Principal Solution Specialist

Mineral and surface rights management is important

... but full land compliance management involves taking care of much more including

- ❖ Environmental Permits (Development and Operations)
- ❖ Exploration Plans & Permits (e.g. in Ontario)
- ❖ Land Use and Land Access Permits (Authorizations)
- ❖ Drilling and Blasting Permits
- ❖ Construction (Engineering) Permits
- ❖ Transportation Permits
- ❖ Water Rights & Permits (see 2022 conference presentations)
- ❖ and many others.



Why should I care about permitting?



Non-compliance

Illegal sand mining threatens environment

Illegal sand mining in focus

October 27, 2017

Larry Bentley 2 minutes read



THE Minister of Water and Sanitation, Nomvula Mokonyane on Friday addressed traditional leaders in Durban during a stakeholder engagement meeting on unlawful water use through sand mining.

Mokonyane said, 'As a country, we need to proactively root out unlawful water use, non-compliance to water use authorisation and water losses and leaks.'

<https://www.citizen.co.za/zululand-observer/news-headlines/2017/10/27/illegal-sand-mining-threatens-environment/>



Tegeta's mines riddled with non-compliance, MPs told

May 30 2018 11:23 Khulekani Magubane

fin24

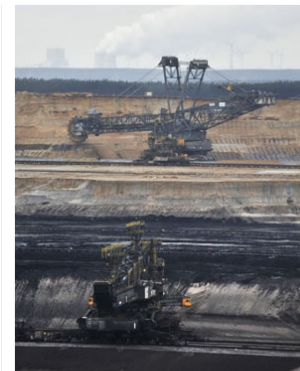


Cape Town – Optimum Coal Mine and the Shiva Uranium Mine, once owned by the Gupta family's Tegeta, were guilty of operational non-compliance – breaking mining regulations and posing risks to workers.

This is according to a submission from the Department of Mineral Resources to Parliament's portfolio committee on mineral resources on Wednesday.

Optimum's operations have been under **business rescue** and the National Union of Mineworkers has cast doubt on the business' ability to pay salaries. **The Bank of Baroda on Tuesday gave the South African Reserve Bank formal notice of its intention to exit SA.** Its earlier attempts to exit left Optimum and other companies with no banking facilities, resulting in 19 Gupta-owned businesses seeking an urgent interdict to prevent the bank from leaving the country.

Ahead of his recent budget vote, Minister of Public Enterprises Pravin Gordhan told reporters that during a site visit to Optimum Coal Mine, he learned that



The Nochten open pit lignite (brown coal) mine serving the Boxberg lignite-fired power station run by Swedish energy giant Vattenfall. (John Macdougall, AFP)

U.S. Gold Mining Company Violated Environmental Law more than 3,000 Times

Published: 28 October 2022



In an order issued October 18, U.S. District Court Judge Mary Dimke found Crown Resources liable for pollution of waters in and around the Buchhorn Mountain Mine which flows into the Kettle River. (Photo: Rawpixel, License)

By Vinicius Madureira

The Star Edition
CHANGE LOCATION

THE STAR

LOCAL CANADA POLITICS WORLD OPINION LIFE SPORTS ENTERTAINMENT BUSINESS STAR INVESTIGATIONS

Ontario British Columbia Alberta Quebec Nova Scotia

CANADA

Environmentalists allege De Beers failed to report on mercury in water

By Tanya Talaga Global Economics Reporter
Tues., Dec. 6, 2016 | 5 min. read

Mine Closures / Suspensions

Violation of environmental regulations leads to closure of eleven limestone mines in Chhattisgarh

Partha Sarathi Behera / TNN / Feb 3, 2024, 16:59 IST

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Raipur: In response to repeated complaints from affected villagers and intervention by the [Chhattisgarh](#) High Court for violations of environmental regulations, eleven limestone mines in Masturi, Bilaspur district of Chhattisgarh, have been closed.

INTERNATIONAL · PHILIPPINES

The Philippines Will Suspend More Mines Over Environmental Violations

BY REUTERS

September 5, 2016 at 10:22 AM GMT+2



A worker hammers gold ore inside a mine in Itogon north of Manila, 26 March 2006. Workers walk through a mine tunnel in Itogon north of Manila, 26 March 2006. The Philippine government was urged 27 March to improve safety measures for tens of thousands of mining industry workers after the sector was opened up to foreign investors. FP PHOTO Joel NITO (Photo credit should read JOEL NITO/AFP/Getty Images)
JOEL NITO/ AFP/ GETTY IMAGES

State closes four mines in Pike and Perry, citing permit violations

By Nicole Ziege @NicoleZiege Jan 25, 2020 0

f t e p b

Four coal mines in Pike County and Perry County, all owned by American Resources Corporation, have been ordered to close after the Kentucky Division of Mine Safety removed the company's mining permits, citing permit violations.

Loss of Social License to Operate

Fines, Complaints, Reputation damage

Anglo fined \$6.2m for environmental breaches at Los Bronces mine in Chile

Cecilia Jamaisme | May 5, 2016 | 10:45 am Base Metals Top Companies Europe Latin America Cooper



Los Bronces mine is perched 3,500 meters high up in the Andes, 65km north-east of Chile's capital, Santiago.

Chile's environmental watchdog imposed Tuesday a US\$6.2 million fine to Anglo American's (LON:AAL), Los Bronces copper mine in Chile related to breaches that

Acacia Mining fined for breaching environmental regulations

INTERNATIONAL / 10 JANUARY 2019, 6:30PM / REUTERS



File picture: Carl De Souza

INTERNATIONAL – Acacia Mining said on Thursday the Tanzanian government has fined the miner 300 million Tanzanian shillings (R1.8 mn), two days after the government appointed a new mining minister, over allegations of breaching environmental regulations at its North Mara mine.

Lumina Copper faces charges, up to \$55m fine for environmental breaches in Chile

Cecilia Jamaisme | February 19, 2019 | 9:55 am Base Metals Precious Metals Suppliers & Equipment Asia Canada Latin America Copper Gold



Caserones is located at an altitude of 4,200m to 4,600m above sea-level in the Atacama Desert region, close to the border with Argentina. (Image courtesy of SMA)

New Hope fined for breach at Acland coal mine

Steven Trask

31 Jul 2019, 9:04 a.m.

News



Work carried out at the New Acland mine site on Queensland's Darling Downs.

CEO of defunct northwest B.C. mining company found guilty of environmental violations

Judge finds Benjamin Mossman was 'actively or passively involved' in a spill at the Yellow Giant mine



Akshay Kulkarni - CBC News - Posted: Jul 13, 2023 9:27 PM EDT | Last Updated: July 14, 2023



The Yellow Giant mine, overseen by Banks Island Gold Ltd., began commercial production in January 2015, and was ordered to cease operations in July 2015. In January 2016, the company filed for bankruptcy. (Submitted by Ian McAllister)

Mining directors face R10m fine, jail time for pollution

COMPANIES / 11 MARCH 2017, 2:41PM / SHEREE BEGA



The No 6 tailings pile at the Blyvooruitzicht Gold Mine. Pictures: Mark Olalde

Johannesburg - The Green Scorpions have hauled three directors of Blyvooruitzicht and Village Main Reef gold mining companies to court for alleged significant pollution and environmental degradation.

Dimension

Delays



In this file photo from June 25, 2019, Judy Cavanaugh stands with others at a rally against the Pebble Mine in front of U.S. Sen. Lisa Murkowski's Juneau office. (Michael Penn | Juneau Empire File)

Final impact statement for Pebble Mine delayed for three months

Army Corps of Engineers says it will take the time to review public comments



Vladimir Nenezic

Major Issues Causing Delays in Mining Project Permits in Canada

Minnesota Court Rejects Major Permits for PolyMet Mine

By The Associated Press

Jan. 13, 2020



ST. PAUL, Minn. — The Minnesota Court of Appeals on Monday rejected some of the most important permits for the planned PolyMet copper-nickel mine in northeastern Minnesota, giving a major victory to environmentalists.

Ramp-up for Anglo American's Minas Rio mine likely delayed to 2021

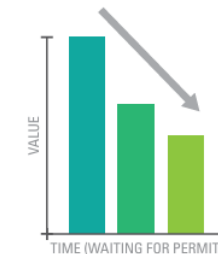
16th October 2018 BY: REUTERS



DELAYS IN THE U.S. MINE PERMITTING PROCESS IMPAIR AND DISCOURAGE MINING AT HOME

OF ALL THE DEVELOPED NATIONS, THE UNITED STATES IS AFFLICTED MOST SEVERELY BY PROTRACTED DELAYS IN OBTAINING MINING PERMITS.

Meanwhile, the demand for minerals to supply the defense, advanced energy, high-tech electronics, medical, and transportation industries is rising. While the U.S. has a leading role in developing technologies, it is lagging in the production of the minerals required for high-tech manufacturing.



DECREASED VALUE OF MINE PROJECT OVER TIME

IMPACT OF DELAYS ON VALUE OF U.S. MINING PROJECTS

Mining companies accept that there will always be some element of delay during the development period and will build appropriate contingency and mitigation measures into their business plans. However, protracted delays are a real problem for the industry, and by extension, the U.S. economy as a whole.

A typical mining project **loses more than one-third of its value**, as a result of bureaucratic delays in receiving the numerous permits needed to begin production. The higher costs and increased risk that often arise from a prolonged permitting process can **cut the expected value of a mine in half** before production even begins. The combined impact of open-ended delays can lead to mining projects becoming altogether financially unviable.

So how can Landfolio help?

- Leverage investment in Landfolio, by extending its use for Permit Management
- Integrate with specialized environmental data management tools – e.g. EnviroSys
- Permits can be related to one or more existing rights and agreements
- Create new objects in Landfolio for many types of permits -
 - ❖ Environmental Permits
 - ❖ Land Use Permits
 - ❖ Land Access Permits
 - ❖ Etc

Permit Management in Landfolio

Many of the same requirements for land & mineral rights are needed for permits -

- Ability to manage key dates, and assign responsibility to users
- Regulatory workflow management (applications, approvals, payments, renewals, expiries)
- Conditions, Actions and Approvals
- GIS Integration
- Automated reporting
- Email & SMS notifications
- Document Management
- Audit history

The screenshot displays the Landfolio web application interface. The left sidebar contains a navigation menu with categories like Licenses, Environment, Exploration, Mining (highlighted), Property, Agreements, Projects, and Reports. The main content area shows the details for license M 2900209, including its name (Highway 99), parties (Down Under Resources Ltd), type (Mining Lease), and application status. A map view shows a red polygon representing the license boundary and a green polygon representing a specific part (P 2901366). The right sidebar provides technical details such as the coordinate system (GCS GDA 1994), official area (901.43 Hectare), and a table of vertices for the license boundary.

Latitude	Longitude
1 29° 48' 20.17" S	121° 04' 48.15" E
2 29° 48' 32.17" S	121° 04' 19.03" E
3 29° 48' 21.46" S	121° 04' 13.22" E
4 29° 48' 35.03" S	121° 03' 40.40" E
5 29° 48' 29.53" S	121° 03' 37.42" E
6 29° 48' 06.27" S	121° 03' 24.80" E
7 29° 48' 10.44" S	121° 03' 10.27" E
8 29° 47' 33.44" S	121° 02' 56.09" E
9 29° 46' 55.86" S	121° 02' 41.70" E
10 29° 46' 18.59" S	121° 02' 27.42" E

Permit Conditions

P-EA-100322183

Name: EA Dawson
 Parties: Anglo Coal (Dawson) Limited (100%)
 Official Area: 3 sb

Type: Environment Authority
 Status: Active
 Jurisdiction: Queensland

Application Date:
 Grant Date: 01-Dec-2022
 Expiry Date: 30-Nov-2027

General						
Parties (1)						
Conditions						
EnviroSys AOC (4)						
EA Monitoring (10)						
Regulations (1)						
Shape (1)						
Documents (2)						
Agreements						
Related Licenses (1)						
Actions Open (3)						
Actions Closed						
User Roles (6)						
Discussions						
Audit						
There are 32 conditions in the list. ☰ ☰						
1						
All	Number	Condition Type	Condition Description	Condition Value	Condition Unit	Actions
<input type="checkbox"/>	A3	Air Quality	The holder of the environmental authority must not cause an unreasonable release of dust.			0
<input type="checkbox"/>	B4	Campsites	When establishing a campsite, the holder of the environmental authority must ensure that the area and duration of disturbance to land, vegetation and watercourses is minimised.			0
<input type="checkbox"/>	B3	Campsites	The holder of the environmental authority must consult with the landowner prior to establishing any campsites.			0
<input type="checkbox"/>	B1	Campsites	The holder of the environmental authority must consult with the landowner prior to establishing any new roads and tracks.			0
<input type="checkbox"/>	B12	Drilling, Excavating and Sampling	B12: The holder of the environmental authority must ensure: 1. all marker pegs are marked with contrasting colour so as to be clearly visible; 2. all marker pegs are removed from the tenement at the completion of exploration activities; 3. all permanent markers (example, concrete plugs or steel plates) are installed at ground level and made safe.			0
<input type="checkbox"/>		Environmental Authority	Non-Scheduled - Mining Activity - Exploration Permit Coal (EPC)			0
<input type="checkbox"/>		Environmental Authority	An EA authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the EA specifically authorises environmental harm. A person carrying out an ERA must also be a registered suitable operator under the Environmental Protection Act 1994 (EP Act).			0
<input type="checkbox"/>		Environmental Authority	All reasonable steps must be taken to ensure the activity complies with the eligibility criteria.			0
<input type="checkbox"/>		Environmental Protection Act	In addition to the EA, the holder must comply with the following provisions of the Act: general environmental duty (section 319); duty to notify environmental harm (section 320-320G); offence of causing serious or material environmental harm (sections 437-439); offence of causing environmental nuisance (section 440); offence of depositing prescribed water contaminants in waters and related matters (section 440ZG); offence to place contaminant where environmental harm or nuisance may be caused (section 443)			0
<input type="checkbox"/>	A6	Erosion & Sediment Control Plans (ESCP's)	The holder of the environmental authority must design, install and maintain adequate erosion and sediment control structures wherever necessary to prevent or minimise erosion of disturbed areas and the sedimentation of any watercourse, waterway, wetland or lake.			0
<input type="checkbox"/>	A5	Erosion & Sediment Control Plans (ESCP's)	The holder of the environmental authority must design, install and maintain adequate banks and/or diversion drains to minimise the potential for storm water runoff to enter disturbed areas.			1

Permit Conditions – Related Actions

P-EA-100322183

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General

Parties (1)

Conditions

EnviroSys AOC (4)

EA Monitoring (10)

Regulations (1)

Shape (1)

Documents (2)

Agreements

Related Licenses (1)

Actions Open (3)

Actions Closed

User Roles (6)

Discussions

Audit

There are 32 conditions in the list.

All	Number	Condition Type	Condition Description	Condition Value	Condition Unit	Actions
<input type="checkbox"/>	A3	Authority	environmental harm. A person carrying out an ERA must also be a registered suitable operator under the Environmental Protection Act 1994 (EP Act).			0
<input type="checkbox"/>	B4	Environmental Authority	All reasonable steps must be taken to ensure the activity complies with the eligibility criteria.			0
<input type="checkbox"/>	B3	Environmental Protection Act	In addition to the EA, the holder must comply with the following provisions of the Act: general environmental duty (section 319); duty to notify environmental harm (section 320-320G); offence of causing serious or material environmental harm (sections 437-439); offence of causing environmental nuisance (section 440); offence of depositing prescribed water contaminants in waters and related matters (section 440ZG); offence to place contaminant where environmental harm or nuisance may be caused (section 443)			0
<input type="checkbox"/>	B1	Erosion & Sediment Control Plans (ESCP's)	The holder of the environmental authority must design, install and maintain adequate erosion and sediment control structures wherever necessary to prevent or minimise erosion of disturbed areas and the sedimentation of any watercourse, waterway, wetland or lake.			0
<input type="checkbox"/>	B12	Erosion & Sediment Control Plans (ESCP's)	The holder of the environmental authority must design, install and maintain adequate banks and/or diversion drains to minimise the potential for storm water runoff to enter disturbed areas.			0
<input type="checkbox"/>	A6	Erosion & Sediment Control Plans (ESCP's)	The holder of the environmental authority must submit the required amount of financial assurance to the administering authority prior to carrying out			0
<input type="checkbox"/>	A5	Erosion & Sediment Control Plans (ESCP's)				1

Condition Details [OK]

General | Shape | **Actions**

There are 1 actions linked to this condition.

All	Type	Status	Action	Code	Date Due	Completed	Days Rem	Child Actions	Responsible User
<input type="checkbox"/>			Erosion & Sediment Control Plans (ESCP)	P-EA-100322183	07-Jun-2024		41		Kylie Amber

Related License – Exploration Permit Coal

P-EA-100322183

Name: EA Dawson

Parties: Anglo Coal (Dawson) Limited (100%)

Official Area: 3 sb

Type: Environment Authority

Status: Active

Jurisdiction: Queensland

Application Date:

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General

Parties (1)

Conditions (32)

EnviroSys AOC (4)

EA Monitoring (10)

Regulations (1)

Shape (1)

Documents (2)

Agreements

Related Licenses

Actions Open (1)

Actions Closed

There are 1 Related licenses in the list (▼)

1

All	Map	Code	Name	Parties	Type Group	Type	Status	Official Area
<input type="checkbox"/>		EPC 28461	Banana	Anglo Coal (Dawson) Limited (50%); Mitsui Moura Investment Pty Ltd (50%)	Exploration	EPC	Active	3 sb

1

Structured Data

- Provides ability to configure customized tabs and fields to track & manage client specific data such as permitting information
- Can be viewed as a Form (one record) or a Table (many records)
- Numerous Data Types:
 - **Action** - related action
 - **Area** - from Area unit lookup table
 - **Commodity** - from Commodity lookup table
 - **Currency** - from Currency lookup table
 - **Date**
 - **Distance** - from Distance Unit lookup table
 - **Legal Entity** - from Parties (Companies / People)
 - **Number** - General number
 - **Option List** - from configurable Option lookup table
 - **Percent**
 - **Text** - free form text field (no character limit)
 - **Time interval** - from Time units lookup table
 - **User Name**
 - **Volume** - from Volume units lookup table
 - **Weight** - from Weight units lookup table
 - **Logical: Yes/No**

Structured Data Example

Queensland (Australia) - Environmental Authority

- Home
- Licenses
- Environment**
- Exploration
- Mining
- Permits
- Agreements
- Projects
- Combined Reporting
- Actions
- Approvals
- Maps
- Reports
- Documents
- Companies
- People
- Competitor Monitoring
- My Settings
- Admin Tools

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General

- Parties (1)
- Conditions (32)
- EnviroSys AOC (4)
- EA Monitoring**
- Regulations (1)
- Shape (1)
- Documents (2)
- Agreements
- Related Licenses (1)
- Actions Open (1)
- Actions Closed
- User Roles (6)
- Discussions
- Audit

EA Monitoring

There are **10** items in the list.

Data and Information	Site Plans	Journal	Photographs	Other	Frequency	Compliant	Action	Responsibility
Topsoil stripping and stockpiling	Yes	No	Yes		Quarterly	Yes	Series of Monthly Flow Tests actions	Bill Brown
Area disturbed and rehabilitation	Yes	Yes	Yes		Bi-Annual	Yes		Bill Brown
Pre and post-mine landform	Yes	Yes	Yes		Bi-Annual	Yes		Bob Black
Water discharge quality	No	Yes	No		Monthly	No		Jill White
Dam maintenance	No	Yes	Yes		Monthly	Yes		Joe Bloggs
Record of complaints	No	Yes	No		Quarterly	Yes		Kylie Amber
Site specific conditions	No	Yes	No		Quarterly	Yes		Kylie Amber
Remediation of contaminated land	Yes	Yes	Yes		Annual	Yes		Bill Brown
Waste Management	Yes	Yes	No		Annual	Yes		Bill Brown
Rehabilitation quotes, estimates and actual costs								

Structured Data – Synchronized with EnviroSys

Home
Licenses
Environment
Exploration
Mining
Permits
Agreements
Projects
Combined Reporting
Actions
Approvals
Maps
Reports
Documents
Companies
People
Competitor Monitoring
My Settings
Admin Tools
Yilmaden - Help
Help

P-EA-100322183

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General
Parties (1)
Conditions (32)
EnviroSys AOC
EA Monitoring (10)
Regulations (1)
Shape (1)
Documents (2)
Agreements
Related Licenses (1)
Actions Open (1)
Actions Closed
User Roles (6)
Discussions
Audit

EnviroSys AOC
There are 4 items in the list.

Reference	Description	Type	Evidence Type	Assessment Frequency	Assessment Mode	Assessment Due Date	Compliance
GEN 1.a	The permittee shall, within 6 months of receipt of the approved licence, must design, install and maintain adequate banks and/or diversion drains to minimise the potential for storm water runoff to enter disturbed areas.	Inspect	Inspection record	Quarterly	Manual	30-Jun-2024	COMPLIANT
GEN 1.b	The holder of the environmental authority must not carry out activities in a category A or B environmentally sensitive area. Activities involving machinery must not be carried out within 1km of a category A environmentally sensitive area or within 500m of category B environmentally sensitive area. Prior to carrying out activities in a category C environmentally sensitive area, consult with the relevant administering authority and the Environmental Protection Agency. If it is determined through the consultation that additional conditions are necessary, the holder must comply with those conditions.	Monitoring	Environmental Incident Reports	Event Driven	Manual		COMPLIANT
GEN 1.c	The holder of the environmental authority must ensure that the area and duration of disturbance to land and vegetation is minimised. Not more than 1000m2 can be disturbed at any one location, excluding campsites.	Audit & Reporting	Regulatory report	Annual	Manual	30-Jun-2024	COMPLIANT
GEN 2.a	The holder of the environmental authority must plan and conduct activities on site to prevent any potential or actual release of a hazardous contaminant to groundwater. shall, within 6 months must conduct monthly water testing.	Monitoring	Monitoring results	Monthly	Automatic	30-Apr-2024	NON-COMPLIANT

Another Structured Data example Form & Table Combination

- Home
- Assets
- Campaigns
- Encumbrances
- Property
- Instruments
- Wind Lease
- Solar Lease
- Lease Agreement
- Permits
- Onshore Wind
- Solar Projects
- Transmission Project
- Tax Group
- Actions
- Approvals
- Maps
- Reports
- Documents

West College Road Section 32 &5

Code: FA.CO.0003

Type: Property

Land Use Type:

Parties: University of Alaska (100%)

Status: Active

Interest: Investment

Lease Date:

Transfer Date:

Official Area: 114.0450 Acres

General

Zoning (1)

Acquisition Details

Parties (1)

Shape (1)

Map References (2)

Address

Documents (2)

Instruments (34)

Groups

Related Assets

Actions Open

Actions Closed


Property Acquisition Detail

Title/Interest Acquired	Fee Simple
Acquisition Type	Acquisition (A)
Date Acquired	23/Oct/1956
Acquisition Value / Price	256,000.00 US Dollar
Expiration Date	01/Apr/2024

Property Acquisition Registration

There are 1 items in the list.

Deed #	Grant #	Patent #	Clearlist #	ADL #	Book	Page
21	No.987-987-001	ABC123-876			82	296



**Spatial
Dimension**

Dik BEDANKT tesekkurler SALAMAT TAKK grazie Khuplei TAK
asante P a x m e T TAK kiitos GRAZAS GRANTANGI MERCI Ngiyabonga
 謝謝 MASI danke ありがとう SALAMAT Diakuju
 mahalo SUWUN tesekkurler
 TAK Dik THANK YOU grassie SUWUN
HVALA tesekkurler
 gracias Спасибо! daank GRANTANGI grazie TAKK
 DAKUJEM TAKK ASANTE Kammagar daank MERCI
GRAZAS kammagar Hвала hvala Dik اركش DANKE Grassie
SUWUN kiitos bedankt DANKE GRAZAS arigato TAK
suwun hvala daank grazas
MERCI dik hvala daank TAK dik

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