

PatBase - Search results 18 March 2017

Search query (1): PN=(US20100185039 OR US20100227381 OR US6019548 OR US2007189855 OR US2007280785 OR US5833855 OR US20020049361 OR US5855797 OR JP2012246434)

Results: 9

15-292647

Exam. Estefanía Páez.

Search history

Search PN=(US20100185039 OR US20100227381 OR US6019548 OR US2007189855 OR US2007280785 OR US5833855 OR US20020049361 OR
1: US5855797 OR JP2012246434) (Results 9)

Title: IN SITU BIOREMEDIATION OF CONTAMINATED GROUNDWATER

Abstract: Source: US5833855A A method for removing heavy metals and halogenated hydrocarbons from contaminated groundwaters is provided. The method provides utilizing a treatment solution comprising a soluble source of organic carbon, ferrous iron, and sulfate. Additionally, the treatment solution may comprise sulfate reducing bacteria as well as nutrients for bacterial metabolism. The treatment is designed to stimulate the growth of naturally occurring sulfate reducing bacteria such that the metals are coprecipitated in iron sulfide and the hydrocarbons are reduced to innocuous byproducts.

Classifications:

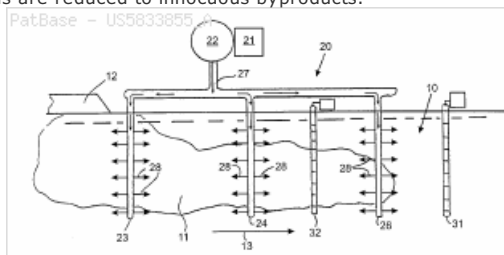
International (IPC 8-9): B09C1/00 B09C1/10 (Advanced/Invention); B09C1/00 B09C1/10 (Core/Invention)

International (IPC 1-7): C02F3/34

CPC: Y10S210/908 Y10S210/912 Y10S210/913 Y10S210/914 B09C1/10 B09C1/002

European: B09C1/00B B09C1/10

US: 210/611 210/717 210/728 210/747 210/747.7 210/908 210/912 210/913 210/914 405/128.5 435/262.5



Family:

Publication number	Publication date	Application number	Application date
US5833855 A	19981110	US19960701709	19960822

Priority:

US19960009660P 19960105 US19960701709 19960822

Probable Assignee: ENVIROTRACE LLC

Assignee(s): (std): UNIV AUBURN

Assignee(s): ARCADIS G AND M INC ; AUBURN UNIV ; AUBURN UNIVERSITY ; ENVIROTRACE LLC ; SAUNDERS JAMES A ; U SA

Inventor(s): (std): SAUNDERS JAMES A

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US5833855 A	19981110	LSGT	+	granted / extensions (spc, cpc, pte)	
US5833855 A	19960822	LSAS	AS	ASSIGNMENT	OWNER NAME : AUBURN UNIVERSITY, ALABAMA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:SAUNDERS, JAMES A.; REEL/FRAME:008165/0268 EFFECTIVE DATE : 19960812
US5833855 A	19990907	LSRE	CC	CERTIFICATE OF CORRECTION	
US5833855 A	20020503	LSAS	AS	ASSIGNMENT	OWNER NAME : SAUNDERS, JAMES A., ALABAMA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUBURN UNIVERSITY; REEL/FRAME:012865/0694 EFFECTIVE DATE : 20010814
US5833855 A	20020510	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5833855 A	20020516	LSAS	AS	ASSIGNMENT	OWNER NAME : ARCADIS G AND M, INC., COLORADO DESCRIPTION : COLLATERAL ASSIGNMENT; ASSIGNOR:HARRINGTON, JOSEPH G.; REEL/FRAME:012896/0888 EFFECTIVE DATE : 20020403
US5833855 A	20060509	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5833855 A	20061204	LSAS	AS	ASSIGNMENT	OWNER NAME : ENVIROTRACE, L.L.C., ALABAMA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:SAUNDERS, JAMES A., MR.; REEL/FRAME:018573/0418 EFFECTIVE DATE : 20061201
US5833855 A	20100409	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12

Title: REMEDIATION OF SOIL CONTAMINATED WITH ORGANIC COMPOUNDS

Abstract: Source: US5855797A A method of remediating water or soil contaminated with contaminants including one or more halogenated, phenyl related biphenyl related, triazine related, and petroleum related compounds includes reacting the contaminated water or soil with an oxidant, and one or more metals in elemental or alloy form until essentially all of the contaminants has been decomposed and the water or soil is essentially free of the contaminants.

Classifications:

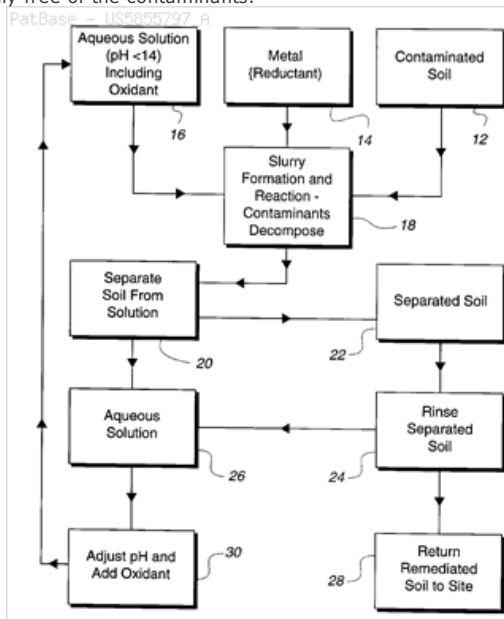
International (IPC 8-9): A62D3/00 A62D3/34 A62D3/37 A62D3/38 B09C1/08 C02F1/72 (Advanced/Invention); A62D101/22 (Advanced/Non-invention)

International (IPC 1-7): B09C1/08 C02F1/72

CPC: Y10S210/909 C02F1/722 A62D3/38 A62D2101/22 B09C1/08

European: A62D3/00E6 A62D3/00K14 A62D3/00M10B A62D3/38 B09C1/08 C02F1/72C K62D101/22

US: 210/747 210/758 210/759 210/909 405/128.5 405/128.75 588/316 588/319 588/320 588/406

**Family:**

Publication number	Publication date	Application number	Application date
CA2283644 AA	20010309	CA19992283644	19990909
US5855797 A	19990105	US19970918095	19970825

Priority:

CA19992283644 19990909 US19970788520 19970124 US19970918095 19970825

Probable Assignee: UNIV ALASKA FAIRBANKS

Assignee(s): (std): UNIV ALASKA FAIRBANKS

Assignee(s): UNIVERSITY OF ALASKA FAIRBANKS ; LIN HSING KUANG ; LUONG HUAN V ; OF ALASKA FAIRBANKS UNIV

Inventor(s): (std): LIN HSING KUANG ; LUONG HUAN V

Agent(s): GOWLING LAFLEUR HENDERSON LLP

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CA2283644 AA	20010309	LSPB	+	published / reissued	
CA2283644 AA	20011212	LSLE	-FZDE	DEAD	
US5855797 A	19990105	LSGT	+	granted / extensions (spc, cpc, pte)	
US5855797 A	20020304	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5855797 A	20070105	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US5855797 A	20070306	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20070105

Title: CHEMICAL OXIDATION OF VOLATILE ORGANIC COMPOUNDS

Abstract: Source: US6019548A Volatile organic compounds are removed from contaminated soil by introducing one or both a water soluble peroxygen compound, such as a persulfate, and a permanganate into the soil, either in situ or ex situ, in amounts and under conditions wherein both the soil oxidant demand is satisfied and volatile organic compounds in the soil are oxidized. In a preferred embodiment, when both are used the peroxygen satisfies the soil oxidant demand and the permanganate oxidizes the volatile organic compounds. Sodium persulfate is the preferred persulfate and potassium permanganate is the preferred permanganate. The persulfate and the permanganate may be added to the soil sequentially, or may be mixed together and added as an aqueous solution.

Classifications:

International (IPC 8-9): A62D3/38 B01D1/00 B09B1/00 B09C1/02 B09C1/06 B09C1/08 C02F1/72 E02B13/00 (Advanced/Invention);

A62D101/20 A62D101/22 A62D101/28 (Advanced/Non-invention);

A62D3/00 B01D1/00 B09B1/00 B09C1/00 C02F1/72 E02B13/00 (Core/Invention)

International (IPC 1-7): B01D B01D1/00 B01D17/06 B09B B09B1/00 B09C1/02 B09C1/08 C07B E02B E02B13/00

CPC: Y10S210/908 B09C1/08

European: B09C1/08

US: 210/747 210/747.8 210/759 210/908 405/128 405/128.5 405/128.55 405/128.75 405/128.8 405/263 588/205 588/249 588/316 588/320 588/405 588/406 588/408 588/409

Family:

Publication number	Publication date	Application number	Application date
AT390962 E	20080415	AT19990920333T	19990504
AU199937855 A1	19991123	AU19990037855	19990504
AU738726 B2	20010927	AU19990037855	19990504
CA2331630 AA	20001103	CA19992331630	19990504
CA2331630 C	20070724	CA19992331630	19990504
DE69938457 D1	20080515	DE19996038457	19990504
DE69938457 T2	20090507	DE19996038457T	19990504
DK1115512 T3	20080728	DK19990920333T	19990504
EP1115512 A1	20010718	EP19990920333	19990504
EP1115512 A4	20040818	EP19990920333	19990504
EP1115512 B1	20080402	EP19990920333	19990504
ES2304809 T3	20081016	ES19990920333T	19990504
IL139440 A0	20011125	IL19990139440	19990504
JP2002513676 T2	20020514	JP20000546901T	19990504
JP2010058121 A2	20100318	JP20090283838	20091215
JP4542703 B2	20100915	JP20000546901T	19990504
JP5042304 B2	20121003	JP20090283838	20091215
MXPA00010833 A1	20020507	MX2000PA10833	19990504
PT1115512 T	20080609	PT19990920333T	19990504
US6019548 A	20000201	US19980073049	19980505
US6474908 BA	20021105	US20010674618	20010507
WO9956894 A1	19991111	WO1999US09742	19990504
ZA200006258 A	20010718	ZA20000006258	20001102

Priority:

JP20000546901 19990504 JP20000546901T 19990504 US20010674618 20010507
WO1999US09742 19990504 US19980073049 19980505

Probable Assignee: UNITED TECHNOLOGIES CORP

Assignee(s): (std): CHHEDA PRADEEP V ; DOBBS GREGORY M ; HOAG GEORGE EDWARD ; UNITED TECHNOLOGIES CORP ; UNIV CONNECTICUT ; WOODY BERNARD A ; UNIV CONNECTICUT UNITED TECHNO ; OF CONNECTICUT UNIV ; OF CONNECTICUT UNITED TECHNOLOGIES CORP UNIV ; UNIV OF CONNECTICUT

Assignee(s): UNITED TECHNOL CORP UTC ; UNITED TECHNOL CORP ; OF CONNECTICUT HEALTH CENTER UNIV ; CONNECTICUT UNIV ; CONNECTICUT UNIV OF

Inventor(s): (std): BERNARD A WOODY ; CHHED PRADEEP ; CHHEDA PRADEEP V ; CHHEDA PRADEEP VISHANJI ; DOBBS GREGORY M ; DOBBS GREGORY MELVILLE ; GEORGE EDWARD HOAG ; GREGORY M DOBBS ; HOAG GEORGE EDWARD ; PRADEEP CHHED ; PRADEEP V CHHEDA ; WOODY BERNARD A ; WOODY BERNARD ALLEN ; WOODY BERNARD ; HOAG GEORGE ; DOBBS GREGORY ; CHHEDA PRADEEP

Agent(s): CULLENS PATENT AND TRADE MARK ATTORNEYS; CULLENS PTY LTD; OGILVY RENAULT LLP SENCRL SRL; STENGER WATZKE AND RING; YOSHIDA KENJI; ISHIDA JUN

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG US UZ VN YU ZA ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
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AT390962 E	20081015	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	

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AU738726 B2	20010927	LSGT	+	granted / extensions (spc, cpc, pte)	
AU738726 B2	20020124	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
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CA2331630 AA	20001103	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2331630 AA	20040423	LSES	+EEER	EXAMINATION REQUEST	
CA2331630 C	20070724	LSGT	+	granted / extensions (spc, cpc, pte)	
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DE69938457 T2	20090507	LSGT	+	granted / extensions (spc, cpc, pte)	
DK1115512 T3	20080728	LSGT	+	granted / extensions (spc, cpc, pte)	
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EP1115512 A1	20080430	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
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EP1115512 A1	20130131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : PT PAYMENT DATE : 20120420 YEAR OF FEE PAYMENT : 14
EP1115512 A1	20130131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : PT PAYMENT DATE : 20120420 YEAR OF FEE PAYMENT : 14
EP1115512 A1	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20130515 YEAR OF FEE PAYMENT : 15
EP1115512 A1	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20130514 YEAR OF FEE PAYMENT : 15
EP1115512 A1	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20130508 YEAR OF FEE PAYMENT : 15
EP1115512 A1	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20130510 YEAR OF FEE PAYMENT : 15
EP1115512 A1	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DK PAYMENT DATE : 20130513 YEAR OF FEE PAYMENT : 15
EP1115512 A1	20130830	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20130510 YEAR OF FEE PAYMENT : 15
EP1115512 A1	20130830	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20130515 YEAR OF FEE PAYMENT : 15
EP1115512 A1	20130830	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130531 YEAR OF FEE PAYMENT : 15
EP1115512 A1	20130830	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : PT PAYMENT DATE : 20130503 YEAR OF FEE PAYMENT : 15
EP1115512 A1	20130830	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20130531 YEAR OF FEE PAYMENT : 15
EP1115512 A1	20140731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20140512 YEAR OF FEE PAYMENT : 16
EP1115512 A1	20140731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20140430 YEAR OF FEE PAYMENT : 16
EP1115512 A1	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20140510 YEAR OF FEE PAYMENT : 16
EP1115512 A1	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20140429 YEAR OF FEE PAYMENT : 16
EP1115512 A1	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20140509 YEAR OF FEE PAYMENT : 16
EP1115512 A1	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20140512 YEAR OF FEE PAYMENT : 16
EP1115512 A1	20140829	LSFE	+PGFP	POSTGRANT:	REF COUNTRY CODE : PT

				ANNUAL FEES PAID TO NATIONAL OFFICE	PAYMENT DATE : 20140428 YEAR OF FEE PAYMENT : 16
EP1115512 A1	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20140430 YEAR OF FEE PAYMENT : 16
EP1115512 A1	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20140513 YEAR OF FEE PAYMENT : 16
EP1115512 A1	20140930	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20140513 YEAR OF FEE PAYMENT : 16
EP1115512 A1	20140930	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DK PAYMENT DATE : 20140512 YEAR OF FEE PAYMENT : 16
EP1115512 A1	20150731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20150429 YEAR OF FEE PAYMENT : 17
EP1115512 A1	20150731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20150413 YEAR OF FEE PAYMENT : 17
EP1115512 A1	20150731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DK PAYMENT DATE : 20150512 YEAR OF FEE PAYMENT : 17
EP1115512 A1	20150731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : PT PAYMENT DATE : 20150504 YEAR OF FEE PAYMENT : 17
EP1115512 A1	20150731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20150428 YEAR OF FEE PAYMENT : 17
EP1115512 A1	20150731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20150512 YEAR OF FEE PAYMENT : 17
EP1115512 A1	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20150514 YEAR OF FEE PAYMENT : 17
EP1115512 A1	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20150512 YEAR OF FEE PAYMENT : 17
EP1115512 A1	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20150510 YEAR OF FEE PAYMENT : 17
EP1115512 A1	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20150508 YEAR OF FEE PAYMENT : 17
EP1115512 A1	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20150515 YEAR OF FEE PAYMENT : 17
EP1115512 A1	20160412	LSFE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 18
EP1115512 A1	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20160324 YEAR OF FEE PAYMENT : 18
EP1115512 A1	20160630	LSFE	+PGFP	POSTGRANT: ANNUAL FEES	REF COUNTRY CODE : NL PAYMENT DATE : 20160510

EP1115512 A1	20160729	LSFE	+PGFP	PAID TO NATIONAL OFFICE POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	YEAR OF FEE PAYMENT : 18 REF COUNTRY CODE : IE PAYMENT DATE : 20160509 YEAR OF FEE PAYMENT : 18
EP1115512 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20160504 YEAR OF FEE PAYMENT : 18
EP1115512 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20160414 YEAR OF FEE PAYMENT : 18
EP1115512 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20160426 YEAR OF FEE PAYMENT : 18
EP1115512 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20160511 YEAR OF FEE PAYMENT : 18
EP1115512 A1	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DK PAYMENT DATE : 20160510 YEAR OF FEE PAYMENT : 18
EP1115512 A1	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20160412 YEAR OF FEE PAYMENT : 18
EP1115512 A1	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : PT PAYMENT DATE : 20160504 YEAR OF FEE PAYMENT : 18
EP1115512 A1	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20160524 YEAR OF FEE PAYMENT : 18
EP1115512 B1	20080402	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2304809 T3	20081016	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2002513676 T2	20020514	LSPB	+	published / reissued	
JP2010058121 A2	20100318	LSPB	+	published / reissued	
JP2010058121 A2	20100107	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100106
JP2010058121 A2	20100107	LSSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20100106
JP2010058121 A2	20120307	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20120306
JP2010058121 A2	20120605	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20120604
JP2010058121 A2	20120619	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2010058121 A2	20120627	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20120626
JP2010058121 A2	20120628	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01

JP2010058121 A2	20120719	LSFE	+A61	REGISTRATION (UTILITY MODEL) FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20120710
JP2010058121 A2	20120720	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP2010058121 A2	20120723	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20150720 YEAR OF FEE PAYMENT : 3
JP4542703 B2	20100915	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4542703 B2	20060428	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20060427
JP4542703 B2	20090617	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20090616
JP4542703 B2	20091216	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20091215
JP4542703 B2	20100610	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4542703 B2	20100610	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4542703 B2	20100616	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20100615
JP4542703 B2	20100616	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20100615
JP4542703 B2	20100617	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP4542703 B2	20100617	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP4542703 B2	20100701	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20100628
JP4542703 B2	20100701	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20100628
JP4542703 B2	20100702	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP4542703 B2	20100702	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP4542703 B2	20100705	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20130702 YEAR OF FEE PAYMENT : 3

JP4542703 B2	20100705	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20130702 YEAR OF FEE PAYMENT : 3
JP4542703 B2	20160705	LSFE	+R250	RECEIPT OF ANNUAL FEES	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R250
JP5042304 B2	20121003	LSGT	+	granted / extensions (spc, cpc, pte)	
JP5042304 B2	20100107	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100106
JP5042304 B2	20100107	LSSE	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20100106
JP5042304 B2	20120307	LSSE	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20120306
JP5042304 B2	20120605	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20120604
JP5042304 B2	20120619	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP5042304 B2	20120627	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20120626
JP5042304 B2	20120628	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP5042304 B2	20120719	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20120710
JP5042304 B2	20120720	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP5042304 B2	20120723	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20150720 YEAR OF FEE PAYMENT : 3
JP5042304 B2	20160705	LSFE	+R250	RECEIPT OF ANNUAL FEES	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R250
MXPA00010833 A1	20020507	LSPB	+	published / reissued	
MXPA00010833 A1	20131129	LSWD	-FA	ABANDONMENT OR WITHDRAWAL	
PT1115512 T	20080609	LSGT	+	granted / extensions (spc, cpc, pte)	
US6019548 A	20000201	LSGT	+	granted / extensions (spc, cpc, pte)	
US6019548 A	19981020	LSAS	AS	ASSIGNMENT	OWNER NAME : UNITED TECHNOLOGIES CORPORATION, CONNECTICUT DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:WOODY, BERNARD A.; DOBBS, GREGORY M.; REEL/FRAME:009536/0542 EFFECTIVE DATE : 19981014
US6019548 A	19990304	LSAS	AS	ASSIGNMENT	OWNER NAME : UNIVERSITY OF CONNECTICUT, CONNECTICUT DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HOAG, GEORGE E.; CHHEDA, PRADEEP VISHANJ;

					REEL/FRAME:009796/0716; SIGNING DATES FROM 19980505 TO 19980925
US6019548 A	20030801	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6019548 A	20070801	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6019548 A	20110629	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6474908 BA	20021105	LSGT	+	granted / extensions (spc, cpc, pte)	
US6474908 BA	20010507	LSAS	AS	ASSIGNMENT	OWNER NAME : CONNECTICUT, THE UNIVERSITY OF, CONNECTICUT DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HOAG, GEORGE EDWARD; CHHEDA, PRADEEP V.; REEL/FRAME:011776/0242; SIGNING DATES FROM 20010314 TO 20010316
US6474908 BA	20011019	LSAS	AS	ASSIGNMENT	OWNER NAME : UNITED TECHNOLOGIES CORPORATION, CONNECTICUT DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:WOODY, BERNARD A.; DOBBS, GREGORY M.; REEL/FRAME:012279/0191 EFFECTIVE DATE : 20010409
US6474908 BA	20060505	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6474908 BA	20100505	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6474908 BA	20140430	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
WO9956894 A1	19991111	LSPB	+	published / reissued	
WO9956894 A1	20001102	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 139440 COUNTRY OF REF DOCUMENT : IL
WO9956894 A1	20001102	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 200006258 COUNTRY OF REF DOCUMENT : ZA
WO9956894 A1	20001102	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2000/06258 COUNTRY OF REF DOCUMENT : ZA
WO9956894 A1	20001103	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2331630 COUNTRY OF REF DOCUMENT : CA
WO9956894 A1	20001103	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : PA/A/2000/010833 COUNTRY OF REF DOCUMENT : MX
WO9956894 A1	20001104	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1999920333 COUNTRY OF REF DOCUMENT : EP
WO9956894 A1	20001105	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : KR
WO9956894 A1	20001106	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP REF DOCUMENT NUMBER : 2000 546901 KIND CODE OF REF DOCUMENT : A FORMAT OF REF DOCUMENT (F/P) : F
WO9956894 A1	20001116	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 37855/99 COUNTRY OF REF DOCUMENT : AU
WO9956894 A1	20010308	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO9956894 A1	20010507	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 09674618 COUNTRY OF REF DOCUMENT : US
WO9956894 A1	20010718	LSPB	+WWP	WIPO	REF DOCUMENT NUMBER :

WO9956894 A1	20020110	LSGT	+WWG	INFORMATION: PUBLISHED IN NATIONAL OFFICE	1999920333 COUNTRY OF REF DOCUMENT : EP
				WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 37855/99 COUNTRY OF REF DOCUMENT : AU
ZA200006258 A	20010718	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: Method for stabilizing chromium-contaminated materials

Abstract: Source: US2002049361A A cost-effective, long-term, permanent method for stabilizing chromium in a chromium-contaminated waste matrix characterized by high concentrations of alkaline material (such as lime) includes the steps of contacting a source of hexavalent chromium with a source of ferrous ions to produce ferric ions; oxidizing iron pyrite to produce ferrous sulfate and sulfuric acid; and contacting the alkaline chromium-contaminated particulate matter with the ferrous sulfate and the sulfuric acid for a time sufficient to convert ferrous sulfate into ferric sulfate and to reduce mobile hexavalent chromium to non-leachable trivalent chromium. The method is integrated in that ferrous sulfate produced by oxidizing iron pyrite serves as a source of ferrous ions in the first contacting step.

Classifications:

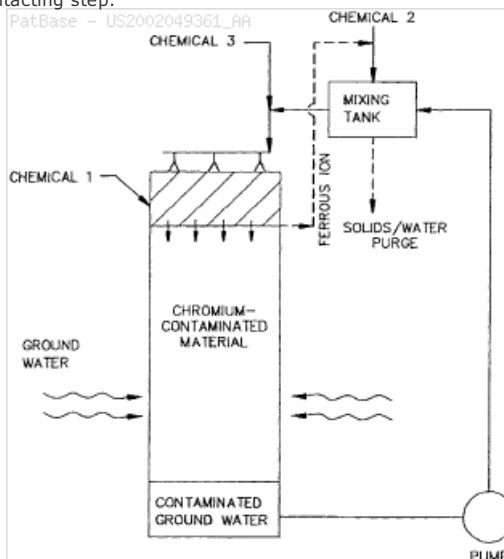
International (IPC 8-9): A62D3/00 A62D3/30 A62D3/36 A62D3/37 A62D3/38 B09C1/00 B09C1/08 (Advanced/Invention); A62D101/24 A62D101/43 (Advanced/Non-invention); A62D3/00 B09C1/00 (Core/Invention)

International (IPC 1-7): A62D3/00 B01D1/00 B09C1/08 C02F7/00 G21F9/00

CPC: A62D3/37 A62D2101/43 B09C1/002 B09C1/08 B09C2101/00 C02F2101/22 C02F2103/06

European: A62D3/00E5 A62D3/00K12 A62D3/00M12D A62D3/37 B09C1/00B B09C1/08 K62D101/43 K62D3/00M12D L09C101/00 M02F101/22 M02F103/06

US: 210/631 210/747 210/747.8 210/747.800S 210/747S 210/761 405/128.5 405/128.500P 405/128.75 405/128.750S 405/129.3 405/129.300S 588/236 588/256 588/256P 588/256S 588/313 588/313S 588/318 588/318S 588/319 588/320 588/407 588/407S 588/412 588/412S



Family:

Publication number	Publication date	Application number	Application date
US2002049361 AA	20020425	US20010892257	20010627
US2004126189 AA	20040701	US20030624826	20030722
US6607474 BB	20030819	US20010892257	20010627

Priority:

US20000215776P 20000630 US20010892257 20010627 US20030624826 20030722

Probable Assignee: RMT INC

Assignee(s): (std): CHOWDHURY AJIT K ; RMT INC

Inventor(s): (std): CHOWDHURY AJIT K

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2002049361 AA	20020425	LSPB	+	published / reissued	
US2004126189 AA	20040701	LSPB	+	published / reissued	
US6607474 BB	20030819	LSGT	+	granted / extensions (spc, cpc, pte)	
US6607474 BB	20030627	LSAS	AS	ASSIGNMENT	OWNER NAME : RMT INC., WISCONSIN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:CHOWDHURY, AJIT K.; REEL/FRAME:014212/0799 EFFECTIVE DATE : 20030619
US6607474 BB	20070108	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6607474 BB	20110819	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6607474 BB	20111011	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20110819

Title: TREATMENT OF ENVIRONMENTAL CONTAMINANTS

Abstract: Source: US2007189855A Contaminants, such as volatile organic compounds, are removed from an environmental medium, such as contaminated soil, rock, groundwater, waste water and the like, by treatment with a combination of a persulfate, such as a sodium persulfate, and hydrogen peroxide.

Classifications:

International (IPC 8-9): A62D3/38 B07B1/46 B09B1/00 B09B3/00 B09C1/00 B09C1/02 B09C1/08 C02F1/72 C09K17/02 C09K17/14 C09K17/42 C09K3/00 (Advanced/Invention); A62D101/22 C09K101/00 (Advanced/Non-invention); C02F (Subclass/Invention)

International (IPC 1-7): B09B1/00 C02F0/00 C02F1/00

CPC: A62D3/38 A62D2101/04 A62D2101/20 A62D2101/22 B09C1/002 B09C1/08 C02F1/722 C02F1/725 C02F2101/322 C02F2103/06

European: A62D3/38 B09C1/00B B09C1/08 C02F1/72C K62D101/04 K62D101/20 K62D101/22 M02F1/72K M02F101/32B M02F103/06

US: 210/759 252/175 252/175S 405/128.75 405/128.750P 588/320

Family:

Publication number	Publication date	Application number	Application date
AU2004261626 AA	20050210	AU20040261626	20040728
AU2004261626 BB	20090423	AU20040261626	20040728
BRPI0412251 A	20060919	BR2004PI12251	20040728
CA2533772 AA	20060124	CA20042533772	20040728
CA2533772 C	20131015	CA20042533772	20040728
EP1667935 A2	20060614	EP20040779363	20040728
EP1667935 A4	20120229	EP20040779363	20040728
JP2007521940 T2	20070809	JP20060522017T	20040728
MXPA06001034 A1	20060411	MX2006PA01034	20040728
US2007189855 AA	20070816	US20040565564	20040728
US2008292404 AA	20081127	US20080187693	20080807
US7524141 BB	20090428	US20080187693	20080807
WO05012181 A2	20050210	WO2004US24274	20040728
WO05012181 A3	20050901	WO2004US24274	20040728

Priority:

US20030491007P 20030729 US20040565564 20040728 WO2004US24274 20040728
US20060565564 20060818 US20080187693 20080807

Probable Assignee: PEROXYCHEM LLC

Assignee(s): (std): BLOCK PHILIP A ; FMC CORP ; KINSMAN LAWRENCE J ; SETHI DALBIR S ; SESSA FRANK C ; SETHI DALBIR

Assignee(s): BANK OF AMERICA NA ADMINISTRATIVE AGENT AS ; MACQUARIE US TRADING LLC ; PEROXYCHEM LLC

Inventor(s): (std): BLOCK PHILIP A ; DALBIR S SETHI ; FRANK C SESSA ; KINSMAN LAWRENCE J ; LAWRENCE J KINSMAN ; PHILIP A BLOCK ; SESSA FRANK C ; SETHI DALBIR ; SETHI DALBIR S

Agent(s): WATERMARK INTELLECTUAL PROPERTY PTY LTD; WATERMARK PATENT AND TRADE MARKS ATTORNEYS; SMART AND BIGGAR; JOHN M SHEEHAN FMC CORP; PATENT ADMINISTRATOR FMC CORP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2004261626 AA	20050210	LSPB	+	published / reissued	
AU2004261626 AA	20090820	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2004261626 AA	20150305	LSAS	PC	ASSIGNMENT REGISTERED	OWNER NAME : PEROXYCHEM LLC DESCRIPTION : FORMER OWNER WAS: FMC CORPORATION
AU2004261626 BB	20090423	LSGT	+	granted / extensions (spc, cpc, pte)	
BRPI0412251 A	20060919	LSPB	+	published / reissued	
BRPI0412251 A	20141111	LSES	B07A	TECHNICAL EXAMINATION (OPINION): PUBLICATION OF TECHNICAL EXAMINATION (OPINION)	

BRPI0412251 A	20151006	LSRV	B09B	DECISION: REFUSAL	DESCRIPTION : INDEFIRO O PEDIDO DE ACORDO COM O(S) ARTIGO(S) DA LPI
BRPI0412251 A	20160119	LSAL	B12B	APPEAL: APPEAL AGAINST REFUSAL	
CA2533772 AA	20060124	LSPB	+	published / reissued	
CA2533772 AA	20060124	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2533772 AA	20090311	LSES	+EEER	EXAMINATION REQUEST	
CA2533772 C	20131015	LSGT	+	granted / extensions (spc, cpc, pte)	
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EP1667935 A2	20060614	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20060117
EP1667935 A2	20070516	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : SESSA, FRANK, C.
EP1667935 A2	20070516	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : BLOCK, PHILIP, A.
EP1667935 A2	20070516	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : KINSMAN, LAWRENCE, J.
EP1667935 A2	20070516	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : SETHI, DALBIR, S.
EP1667935 A2	20120229	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20120127
EP1667935 A2	20120229	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : B09C 1/08 20060101AFI20120123BHEP
EP1667935 A2	20120229	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : B09C 1/00 20060101ALI20120123BHEP
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EP1667935 A2	20120523	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20120423
EP1667935 A2	20150225	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : PEROXYCHEM LLC
JP2007521940 T2	20070809	LSPB	+	published / reissued	
JP2007521940 T2	20070731	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20070730
JP2007521940 T2	20100609	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100608
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JP2007521940 T2	20101027	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20101008
JP2007521940 T2	20110608	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20110607

JP2007521940 T2	20111008	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20111007
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JP2007521940 T2	20111019	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20111018
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MXPA06001034 A1	20100121	LSGT	+FG	GRANT OR REGISTRATION	
MXPA06001034 A1	20100812	LSRE	HH	CORRECTION OR CHANGE IN GENERAL	
US2007189855 AA	20070816	LSPB	+	published / reissued	
US2008292404 AA	20081127	LSPB	+	published / reissued	
US7524141 BB	20090428	LSGT	+	granted / extensions (spc, cpc, pte)	
US7524141 BB	20120927	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7524141 BB	20140303	LSAS	AS	ASSIGNMENT	OWNER NAME : MACQUARIE US TRADING LLC, ILLINOIS DESCRIPTION : SHORT FORM PATENT SECURITY AGREEMENT; ASSIGNOR:PEROXYCHEM LLC; REEL/FRAME:032379/0931 EFFECTIVE DATE : 20140228
US7524141 BB	20140331	LSAS	AS	ASSIGNMENT	OWNER NAME : PEROXYCHEM LLC, PENNSYLVANIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:FMC CORPORATION; REEL/FRAME:032558/0681 EFFECTIVE DATE : 20140224
US7524141 BB	20151021	LSAS	AS	ASSIGNMENT	OWNER NAME : BANK OF AMERICA, N.A., AS ADMINISTRATIVE AGENT, IL DESCRIPTION : SECURITY INTEREST; ASSIGNOR:PEROXYCHEM LLC; REEL/FRAME:036847/0594 EFFECTIVE DATE : 20151021
US7524141 BB	20151104	LSAS	AS	ASSIGNMENT	OWNER NAME : PEROXYCHEM LLC, PENNSYLVANIA DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:MACQUARIE US TRADING LLC, AS COLLATERAL AGENT; REEL/FRAME:036953/0766 EFFECTIVE DATE : 20151021
US7524141 BB	20161020	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
WO05012181 A2	20050210	LSPB	+	published / reissued	
WO05012181 A3	20060117	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2004779363 COUNTRY OF REF DOCUMENT : EP
WO05012181 A3	20060120	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2006522017 COUNTRY OF REF DOCUMENT : JP
WO05012181 A3	20060124	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2533772 COUNTRY OF REF DOCUMENT : CA

WO05012181 A3	20060125	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2004261626 COUNTRY OF REF DOCUMENT : AU
WO05012181 A3	20060126	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : PA/A/2006/001034 COUNTRY OF REF DOCUMENT : MX
WO05012181 A3	20060216	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2004261626 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20040728 KIND CODE OF REF DOCUMENT : A
WO05012181 A3	20060216	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2004261626 COUNTRY OF REF DOCUMENT : AU
WO05012181 A3	20060614	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2004779363 COUNTRY OF REF DOCUMENT : EP
WO05012181 A3	20060818	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 10565564 COUNTRY OF REF DOCUMENT : US
WO05012181 A3	20060818	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2007189855 COUNTRY OF REF DOCUMENT : US
WO05012181 A3	20060919	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : PI0412251 COUNTRY OF REF DOCUMENT : BR
WO05012181 A3	20070816	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 10565564 COUNTRY OF REF DOCUMENT : US

Title: OXIDATION OF ORGANIC COMPOUNDS AT HIGH PH

Abstract: Source: US2007280785A Organic compounds are removed from contaminated soil, ground water and the like by treatment with a combination of a water soluble peroxygen compound, such as sodium persulfate, and a pH modifier capable of maintaining a pH greater than about 10, such as a metal hydroxide.

Classifications:

International (ipc 8-9): A62D3/38 B09C1/00 B09C1/02 B09C1/06 B09C1/08 C02F1/72 C02F1/78 C02F11/06 C09K17/02 C09K17/06 C09K17/14 C09K17/42 (Advanced/Invention);

A62D101/04 A62D101/22 C02F103/06 C02F11/06 C07B35/06 C07C19/01 C07C21/06 (Advanced/Non-invention);

A62D3/00 B09C1/00 C02F1/00 C02F1/72 C02F1/78 C02F11/00 C02F11/06 C09K17/02 C09K17/14

C09K17/40 (Core/Invention);

C02F11/06 C07B35/00 C07C19/00 C07C21/00 (Core/Non-invention)

International (ipc 1-7): C02F1/78

CPC: C02F1/722 B09C1/08 B09C2101/00 C02F1/683 C02F1/725 C02F11/06 C02F2103/06 C02F2209/02 C02F2209/06

European: B09C1/08 C02F1/72C C02F1/72K L09C101/00 M02F1/68K M02F103/06 M02F11/06 M02F209/02 M02F209/06

US: 210/759 405/128.1 405/128.100 405/128.5 405/128.500 405/128.55 405/128.550 405/128.75 588/320

Family:

Publication number	Publication date	Application number	Application date
AU2005216224 AA	20050909	AU20050216224	20050224
AU2005216224 BB	20100204	AU20050216224	20050224
BRPI0507968 A	20070717	BR2005PI07968	20050224
CA2555484 AA	20060804	CA20052555484	20050224
CA2555484 C	20120605	CA20052555484	20050224
DE602005040633 D1	20130926	DE200560040633T	20050224
DK1720802 T3	20130930	DK20050723641T	20050224
EP1720802 A2	20061115	EP20050723641	20050224
EP1720802 A4	20081224	EP20050723641	20050224
EP1720802 B1	20130731	EP20050723641	20050224
ES2431840 T3	20131128	ES20050723641T	20050224
JP2008506511 T2	20080306	JP20070500963T	20050224
PT1720802 T	20131113	PT20050723641T	20050224
SI1720802 T1	20130930	SI20050031763T	20050224
US2007280785 AA	20071206	US20050589767	20050224
US7576254 BB	20090818	US20050589767	20050224
WO05081996 A2	20050909	WO2005US05852	20050224
WO05081996 A3	20051117	WO2005US05852	20050224

Priority:

EP20050723641 20050224 US20040547853P 20040226 WO2005US05852 20050224
US20050589767 20050224

Probable Assignee: PEROXYCHEM LLC

Assignee(s): (std): BLOCK PHILIP A ; BROWN RICHARD A ; FMC CORP ; ROBINSON DAVID S

Assignee(s): MACQUARIE US TRADING LLC ; PEROXYCHEM LLC ; FMC CORP PHILADELPHIA ; BANK OF AMERICA NA ADMINISTRATIVE AGENT AS

Inventor(s): (std): BROWN RICHARD A ; BLOCK PHILIP A ; ROBINSON DAVID S

Inventor(s): ROBINSON DAVID S MOUNT LAUREL ; BLOCK PHILIP A CHESTER HEIGHTS ; BROWN RICHARD ; BROWN RICHARD A LAWRENCEVILLE ; DAVID S ROBINSON ; PHILIP A BLOCK ; RICHARD A BROWN ; ROBINSON DAVID ; BLOCK PHILIP

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; SMART AND BIGGAR; MURGITROYD AND CO; THOM RUSSELL; DE ELZABURU ALBERTO; JOHN M SHEEHAN FMC CORP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

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Patent	Date recorded	Event group	Code	Event	Details
AU2005216224 AA	20050909	LSPB	+	published / reissued	
AU2005216224 AA	20100603	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2005216224 AA	20150305	LSAS	PC	ASSIGNMENT REGISTERED	OWNER NAME : PEROXYCHEM LLC DESCRIPTION : FORMER OWNER WAS: FMC CORPORATION
AU2005216224 BB	20100204	LSGT	+	granted / extensions (spc, cpc, pte)	
BRPI0507968 A	20070717	LSPB	+	published / reissued	

BRPI0507968 A	20140902	LSSES	B07A	TECHNICAL EXAMINATION (OPINION): PUBLICATION OF TECHNICAL EXAMINATION (OPINION)	
BRPI0507968 A	20150331	LSRV	B09B	DECISION: REFUSAL	DESCRIPTION : INDEFIRO O PEDIDO DE ACORDO COM O(S) ARTIGO(S) DA LPI
BRPI0507968 A	20150630	LSAL	B12B	APPEAL: APPEAL AGAINST REFUSAL	
CA2555484 AA	20060804	LSPB	+	published / reissued	
CA2555484 AA	20060804	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2555484 AA	20100111	LSSES	+EEER	EXAMINATION REQUEST	
CA2555484 C	20120605	LSGT	+	granted / extensions (spc, cpc, pte)	
DK1720802 T3	20130930	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1720802 A2	20061115	LSPB	+	published / reissued	
EP1720802 A2	20061115	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20060808
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EP1720802 A2	20081224	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C02F 1/78 20060101AFI20060826BHEP
EP1720802 A2	20081224	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C02F 1/72 20060101ALI20081118BHEP
EP1720802 A2	20081224	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : B09C 1/00 20060101ALI20081118BHEP
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EP1720802 A2	20130731	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1720802 A2	20130731	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1720802 A2	20130815	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 624510 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20130815
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EP1720802 A2	20131010	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : RO REF LEGAL EVENT CODE : EPE

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EP1720802 A2	20140114	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GR REF LEGAL EVENT CODE : EP REF DOCUMENT NUMBER : 20130402259 COUNTRY OF REF DOCUMENT : GR EFFECTIVE DATE : 20131118
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EP1720802 A2	20140530	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GR PAYMENT DATE : 20140129 YEAR OF FEE PAYMENT : 10
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EP1720802 A2	20140630	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : PT PAYMENT DATE : 20140129 YEAR OF FEE PAYMENT : 10
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EP1720802 A2	20150430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : RO PAYMENT DATE : 20150302 YEAR OF FEE PAYMENT : 11
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EP1720802 A2	20151105	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GR REF LEGAL EVENT CODE : ML REF DOCUMENT NUMBER : 20130402259 COUNTRY OF REF DOCUMENT : GR EFFECTIVE DATE : 20150902
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EP1720802 A2	20160224	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 12
EP1720802 A2	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CZ PAYMENT DATE : 20160226 YEAR OF FEE PAYMENT : 12
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EP1720802 A2	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160224 YEAR OF FEE PAYMENT : 12

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ES2431840 T3	20131128	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2008506511 T2	20080306	LSPB	+	published / reissued	
JP2008506511 T2	20080111	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20080110
JP2008506511 T2	20091021	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20091020
JP2008506511 T2	20100114	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100113
JP2008506511 T2	20100210	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100209
JP2008506511 T2	20100210	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100209
JP2008506511 T2	20100804	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20100803
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PT1720802 T	20131113	LSGT	+	granted / extensions (spc, cpc, pte)	
SI1720802 T1	20130930	LSGT	+	granted / extensions (spc, cpc, pte)	
US2007280785 AA	20071206	LSPB	+	published / reissued	
US7576254 BB	20090818	LSGT	+	granted / extensions (spc, cpc, pte)	
US7576254 BB	20070905	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : FMC CORPORATION, PENNSYLVANIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BLOCK, PHILIP A.; BROWN, RICHARD A.; ROBINSON, DAVID S.; REEL/FRAME:019780/0718; SIGNING DATES FROM 20070227 TO 20070314
US7576254 BB	20091110	LSRE	CC	CERTIFICATE OF CORRECTION	
US7576254 BB	20130125	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7576254 BB	20140303	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER

					OWNER : MACQUARIE US TRADING LLC, ILLINOIS OLDPARTY : SHORT FORM PATENT SECURITY AGREEMENT; ASSIGNOR:PEROXYCHEM LLC; REEL/FRAME:032379/0931 EFFECTIVE DATE : 20140228
US7576254 BB	20140331	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : PEROXYCHEM LLC, PENNSYLVANIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:FMC CORPORATION; REEL/FRAME:032558/0681 EFFECTIVE DATE : 20140224
US7576254 BB	20151021	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BANK OF AMERICA, N.A., AS ADMINISTRATIVE AGENT, IL OLDPARTY : SECURITY INTEREST; ASSIGNOR:PEROXYCHEM LLC; REEL/FRAME:036847/0594 EFFECTIVE DATE : 20151021
US7576254 BB	20151104	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : PEROXYCHEM LLC, PENNSYLVANIA OLDPARTY : RELEASE BY SECURED PARTY; ASSIGNOR:MACQUARIE US TRADING LLC, AS COLLATERAL AGENT; REEL/FRAME:036953/0766 EFFECTIVE DATE : 20151021
US7576254 BB	20170216	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
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WO05081996 A3	20060804	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2555484 COUNTRY OF REF DOCUMENT : CA
WO05081996 A3	20060808	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2005723641 COUNTRY OF REF DOCUMENT : EP
WO05081996 A3	20060822	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2005216224 COUNTRY OF REF DOCUMENT : AU
WO05081996 A3	20060822	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2007500963 COUNTRY OF REF DOCUMENT : JP
WO05081996 A3	20060825	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : PA/A/2006/009697 COUNTRY OF REF DOCUMENT : MX
WO05081996 A3	20060914	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2005216224 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20050224 KIND CODE OF REF DOCUMENT : A
WO05081996 A3	20060914	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2005216224 COUNTRY OF REF DOCUMENT : AU
WO05081996 A3	20061115	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2005723641 COUNTRY OF REF DOCUMENT : EP
WO05081996 A3	20070524	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 10589767 COUNTRY OF REF DOCUMENT : US
WO05081996 A3	20070717	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : PI0507968 COUNTRY OF REF DOCUMENT : BR
WO05081996 A3	20071206	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN	REF DOCUMENT NUMBER : 10589767 COUNTRY OF REF DOCUMENT : US

Title: ENHANCED BIODEGRADATION OF NON-AQUEOUS PHASE LIQUIDS USING SURFACTANT ENHANCED IN-SITU CHEMICAL OXIDATION

Abstract: Source: US2010227381A A method for in-situ reduction of contaminants in soil that uses chemical oxidation and biodegradation.

Classifications

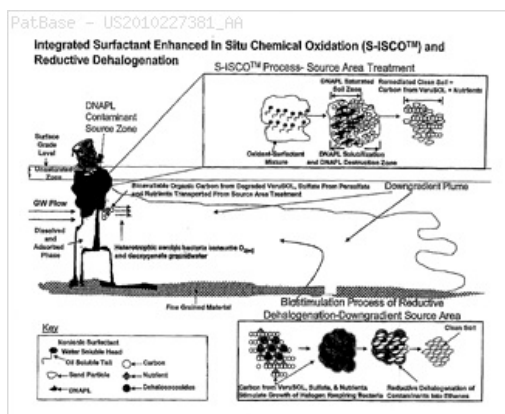
International (IPC 8-9): A62D3/02 B09C1/08 B09C1/10 C02F1/70
C02F1/72 C02F101/36 C02F103/06 C02F3/30

G01N33/24 (Advanced/Invention);
C02F101/36 C02F103/06 (Advanced/Non-invention);
A62D3/00 B09C1/00 B09C1/10 C02F1/70 C02F1/72 C02F3/30
G01N33/24 (Core/Invention)

CPC: Y02W10/45 B09C1/02 B09C1/00 B09C1/08 B09C1/10
C02F2101/36 C02F2103/06

European: B09C1/00 B09C1/02 B09C1/08 B09C1/10 M02F101/36
M02F103/06

US: 210/170.07 210/610 210/614 210/620 210/630 210/631
210/96.1 435/262.5 436/183



Family:

Publication number	Publication date	Application number	Application date
AU2008279649 AA	20090129	AU20080279649	20080723
EP2190789 A2	20100602	EP20080780290	20080723
US2010227381 AA	20100909	US20080670373	20080723
WO09014697 A2	20090129	WO2008US08905	20080723
WO09014697 A3	20090702	WO2008US08905	20080723

Priority:

US20070935033P 20070723 US20080670373 20080723 WO2008US08905 20080723

Probable Assignee: VERUTEK TECHNOLOGIES INC

Assignee(s): (std): COLLINS JOHN : GEORGE HOAG : HOAG GEORGE E : VERUTEK TECHNOLOGIES INC

Assignee(s): JOHN COLLINS

Inventor(s): (std): COLLINS JOHN : HOAG GEORGE E

Inventor(s): JOHN COLLINS : GEORGE E HOAG

Agent(s): FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; HERBERT SMITH FREEHILLS; FPA PATENT ATTORNEYS PTY LTD; VON KREISLER SELTING WERNER; VENABLE LLP; GENIESER LARS H

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2008279649 AA	20090129	LSPB	+	published / reissued	
AU2008279649 AA	20130221	LSLE	-MK4	APPLICATION LAPSED SECTION 142(2)(D) - NO CONTINUATION FEE PAID FOR THE APPLICATION	
EP2190789 A2	20100602	LSPB	+	published / reissued	
EP2190789 A2	20100602	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20100218
EP2190789 A2	20110126	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20100608
US2010227381 AA	20100909	LSPB	+	published / reissued	
WO09014697 A2	20090129	LSPB	+	published / reissued	
WO09014697 A3	20100122	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 12670373 COUNTRY OF REF DOCUMENT : US
WO09014697 A3	20100126	LSNE	NENP	NON-ENTRY INTO THE NATIONAL	REF COUNTRY

PHASE IN:					CODE : DE
WO09014697 A3	20100217	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2008279649 COUNTRY OF REF DOCUMENT : AU
WO09014697 A3	20100318	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2008279649 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20080723 KIND CODE OF REF DOCUMENT : A

Title: METHOD FOR EXTRACTION AND SURFACTANT ENHANCED SUBSURFACE CONTAMINANT RECOVERY

Abstract: Source: US2010185039A Methods and compositions for removing contaminants from soil and groundwater by extracting the contaminants and assisting the extraction by provision of an oxidant introduced prior to or simultaneously with a surfactant into the subsurface. Extractable contaminant can be extracted from the subsurface. The amount and/or distribution of contaminant in the subsurface can be characterized. The extracting of contaminant and the introducing of oxidant and surfactant can be coordinated to reduce contaminant to a target amount. A portion of the contaminant can be oxidizable.

Classifications:

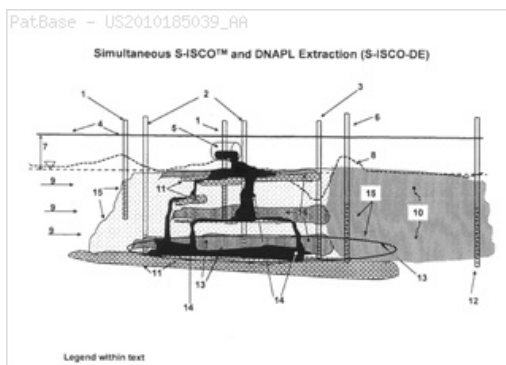
International (IPC 8-9): A62D3/00 B09C1/00 B09C1/02 B09C1/08 C02F1/52 C02F1/72 (Advanced/Invention);

A62D3/00 C02F1/52 C02F1/72 (Core/Invention)

CPC: B09C1/00 B09C1/002 B09C1/02 B09C1/08

European: B09C1/00 B09C1/00B B09C1/02 B09C1/08

US: 210/704 210/721 588/320



Family:

Publication number	Publication date	Application number	Application date
AU2008305539 AA	20090402	AU20080305539	20080926
AU2008305539 BB	20141106	AU20080305539	20080926
CA2700766 AA	20100325	CA20082700766	20080926
DE602008019998 D1	20130103	DE200860019998T	20080926
EP2209533 A1	20100728	EP20080833656	20080926
EP2209533 A4	20101013	EP20080833656	20080926
EP2209533 B1	20121107	EP20080833656	20080926
EP2556859 A2	20130213	EP20120191353	20080926
EP2556859 A3	20140122	EP20120191353	20080926
US2010185039 AA	20100722	US20080667478	20080926
WO09042224 A1	20090402	WO2008US11229	20080926
WO09042224 A8	20090709	WO2008US11229	20080926

Priority:

EP20080833656 20080926 US20070960347P 20070926 US20080071526P 20080505
 WO2008US11229 20080926 US20080667478 20080926 US20080071526 20080505

Probable Assignee: ETHICAL SOLUTIONS LLC

Assignee(s): (std): ANDERSON DOUGLAS K ; COLLINS JOHN B ; VERUTEK INC ; HOAG GEORGE E ; VERUTEK TECHNOLOGIES INC ; VERUTEX TECHNOLOGIES INC

Assignee(s): ETHICAL SOLUTIONS LLC ; ETHICAL SOLUTIONS LLC SOUTH WINDSOR

Inventor(s): (std): ANDERSON DOUGLAS K ; COLLINS JOHN B ; HOAG GEORGE E ; HOAG GEORGE E

Inventor(s): JOHN B COLLINS ; DOUGLAS K ANDERSON ; GEORGE E HOAG

Agent(s): FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; HERBERT SMITH FREEHILLS; FPA PATENT ATTORNEYS PTY LTD; GOWLING LAFLEUR HENDERSON LLP; VON KREISLER SELTING WERNER PARTNERSCHAFT VON PATENTANWAELTEN U RECHTSANWAELTEN MBB; VON KREISLER SELTING WERNER; VENABLE LLP; GENIESER LARS H ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2008305539 AA	20090402	LSPB	+	published / reissued	
AU2008305539 AA	20141204	LSRE	DA3	AMENDMENTS MADE SECTION 104	DESCRIPTION : THE NATURE OF THE AMENDMENT IS: AMEND THE INVENTION TITLE TO READ METHOD FOR EXTRACTION AND SURFACTANT ENHANCED SUBSURFACE CONTAMINANT RECOVERY
AU2008305539 AA	20150226	LSAS	PC1	ASSIGNMENT BEFORE GRANT (SECT. 113)	OWNER NAME : ETHICAL SOLUTIONS, LLC DESCRIPTION : FORMER APPLICANT(S): VERUTEK TECHNOLOGIES, INC.
AU2008305539 AA	20150305	LSGT	+FGA	LETTERS PATENT	

AU2008305539 BB	20141106	LSGT	+	SEALED OR GRANTED (STANDARD PATENT)	
CA2700766 AA	20100325	LSPB	+	granted / extensions (spc, cpc, pte)	
CA2700766 AA	20100325	LSNP	+AFNE	published / reissued	
CA2700766 AA	20141003	LSSES	+EEER	NATIONAL PHASE ENTRY	
EP2209533 A1	20100728	LSPB	+	EXAMINATION REQUEST	EFFECTIVE DATE : 20140926
EP2209533 A1	20100728	LSSES	+17P	published / reissued	
EP2209533 A1	20101013	LSSES	+A4	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20100422
EP2209533 A1	20110914	LSRE	RTI1	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20100913
EP2209533 A1	20110928	LSSES	+17Q	TITLE (CORRECTION)	TEXT : METHOD FOR DECREASING THE AMOUNT OF A CONTAMINANT AT A SIDE IN A SUBSURFACE
EP2209533 A1	20121107	LSGT	REG	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20110829
EP2209533 A1	20121115	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
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				POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20121107
EP2209533 A1	20130430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20121107
EP2209533 A1	20130430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20121107
EP2209533 A1	20130430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : NL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20121107
EP2209533 A1	20130430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : NO NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20130207
EP2209533 A1	20130531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20130208
EP2209533 A1	20130531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20130307
EP2209533 A1	20130531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20121107
EP2209533 A1	20130531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20121107
EP2209533 A1	20130531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : HR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20121107
EP2209533 A1	20130531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20121107
EP2209533 A1	20130531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LV NOTIFICATIONOFLAPSE : LAPSE

				STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20121107
EP2209533 A1	20130628	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : AT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20121107
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EP2209533 A1	20130731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BG NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20130207
EP2209533 A1	20130731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20121107
EP2209533 A1	20130731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CZ NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20121107
EP2209533 A1	20130731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20121107
EP2209533 A1	20130731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : EE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20121107
EP2209533 A1	20130830	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20121107
EP2209533 A1	20130830	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RO NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20121107
EP2209533 A1	20131016	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20130808
EP2209533 A1	20131031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : ES NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20130218

EP2209533 A1	20131129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CY NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20121107
EP2209533 A1	20131205	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602008019998 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20130808
EP2209533 A1	20140430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MC NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20121107
EP2209533 A1	20140430	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP2209533 A1	20140627	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20140530
EP2209533 A1	20140702	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP2209533 A1	20140731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LI NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20130930
EP2209533 A1	20140731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IE NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20130926
EP2209533 A1	20140731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CH NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20130930
EP2209533 A1	20140814	LSAS	REG	REFERENCE TO A NATIONAL CODE	PARTYTYPE : OWNER REF COUNTRY CODE : DE OWNER : VERUTEK TECHNOLOGIES, INC., SOUTH WINDSOR, US REF LEGAL EVENT CODE : R081 REF DOCUMENT NUMBER : 602008019998 COUNTRY OF REF DOCUMENT : DE OLD PARTY : FORMER OWNER: VERUTEK TECHNOLOGIES, INC., BLOOMFIELD, CONN., US EFFECTIVE DATE : 20140703
EP2209533 A1	20140814	LSAS	REG	REFERENCE TO A NATIONAL CODE	PARTYTYPE : OWNER REF COUNTRY CODE : DE OWNER : ETHICAL SOLUTIONS, LLC, SOUTH WINDSOR, US REF LEGAL EVENT CODE : R081 REF DOCUMENT NUMBER : 602008019998 COUNTRY OF REF DOCUMENT : DE OLD PARTY : FORMER OWNER: VERUTEK TECHNOLOGIES, INC., BLOOMFIELD, CONN., US EFFECTIVE DATE : 20140703
EP2209533 A1	20140829	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FR NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20130930
EP2209533 A1	20150423	LSAS	REG	REFERENCE TO A	PARTYTYPE : OWNER

				NATIONAL CODE	REF COUNTRY CODE : DE OWNER : ETHICAL SOLUTIONS, LLC, SOUTH WINDSOR, US REF LEGAL EVENT CODE : R081 REF DOCUMENT NUMBER : 602008019998 COUNTRY OF REF DOCUMENT : DE OLDPARTY : FORMER OWNER: VERUTEK TECHNOLOGIES, INC., SOUTH WINDSOR, CONN., US EFFECTIVE DATE : 20150316
EP2209533 A1	20150630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : TR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20121107
EP2209533 A1	20150630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20121107
EP2209533 A1	20150731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20130926
EP2209533 A1	20150731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : HU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT; INVALID AB INITIO LAPSED DATE : 20080926
EP2209533 A1	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20160927 YEAR OF FEE PAYMENT : 9
EP2209533 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160928 YEAR OF FEE PAYMENT : 9
EP2209533 B1	20121107	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2556859 A2	20130213	LSPB	+	published / reissued	
EP2556859 A2	20140122	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : B09C 1/02 20060101ALI20131216BHEP
EP2556859 A2	20140122	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : B09C 1/08 20060101ALI20131216BHEP
EP2556859 A2	20140122	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A62D 3/00 20070101AFI20131216BHEP
EP2556859 A2	20140122	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : B09C 1/00 20060101ALI20131216BHEP
EP2556859 A2	20140813	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : VERUTEK TECHNOLOGIES, INC.
EP2556859 A2	20141217	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20141105
EP2556859 A2	20150527	LSSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20150423
US2010185039 AA	20100722	LSPB	+	published / reissued	
US2010185039 AA	20100318	LSAS	AS	ASSIGNMENT	OWNER NAME : VERUTEK TECHNOLOGIES, INC., CONNECTICUT DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST;

					ASSIGNORS:HOAG, GEORGE E.; COLLINS, JOHN B.; ANDERSON, DOUGLAS K.; REEL/FRAME:024098/0083 EFFECTIVE DATE : 20100317
US2010185039 AA	20100318	LSAS	AS	ASSIGNMENT	OWNER NAME : VERUTEK TECHNOLOGIES, INC.,CONNECTICUT DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HOAG, GEORGE E.; COLLINS, JOHN B.; ANDERSON, DOUGLAS K.; REEL/FRAME:24098/83 EFFECTIVE DATE : 20100317
US2010185039 AA	20141023	LSAS	AS	ASSIGNMENT	OWNER NAME : ETHICAL SOLUTIONS, LLC, CONNECTICUT DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:VERUTEK TECHNOLOGIES, INC.; REEL/FRAME:034016/0139 EFFECTIVE DATE : 20141017
WO09042224 A1	20090402	LSPB	+	published / reissued	
WO09042224 A8	20100318	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 12667478 COUNTRY OF REF DOCUMENT : US
WO09042224 A8	20100325	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2700766 COUNTRY OF REF DOCUMENT : CA
WO09042224 A8	20100327	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO09042224 A8	20100421	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2008305539 COUNTRY OF REF DOCUMENT : AU
WO09042224 A8	20100520	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2008305539 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20080926 KIND CODE OF REF DOCUMENT : A

Title: CHEMICAL SUBSTANCE DECOMPOSITION AGENT COMPOSITION AND METHOD FOR DECOMPOSING CHEMICAL SUBSTANCE USING THE COMPOSITION

Abstract: Source: JP2012246434A PROBLEM TO BE SOLVED: To provide a chemical substance decomposition agent composition having high decomposition efficiency on a chemical substance such as trichloroethylene and maintaining the decomposing ability for a long period of time without consuming a persulfate in a short time. SOLUTION: The chemical substance decomposition agent composition contains, in one mol of a persulfate, 0.1 to 1 mol of divalent or trivalent iron ion and 0.005 to 0.1 mol of ascorbic acid. By bringing the chemical substance decomposition agent composition into contact with soil or water contaminated with a chemical substance, the chemical substance can be efficiently decomposed.

Classifications:

International (IPC 8-9): A62D3/38 B01J27/053 B01J27/10 B09C1/02 B09C1/08 C02F1/72 C02F11/00 C09K3/00 (Advanced/Invention); A62D101/22 A62D101/28 (Advanced/Non-invention)

Family:

Publication number	Publication date	Application number	Application date
JP2012246434 A2	20121213	JP20110120620	20110530
JP5888877 B2	20160322	JP20110120620	20110530

Priority:

JP20110120620 20110530

Probable Assignee: ADEKA CORP

Assignee(s): (std): ADEKA CORP ; ADEKA ENG AND CONSUTRUCTION CO LTD ; ADEKA ENGINEERING AND CONSUTRUCTION CO LTD

Assignee(s): N A

Inventor(s): (std): KANEDA TAKAYOSHI ; TOMIOKA HIDEKAZU

Agent(s): SOGA MICHIHARU

Legal status (INPADOC)

[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
JP2012246434 A2	20121213	LSPB	+	published / reissued	
JP2012246434 A2	20140311	LSSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20140310
JP2012246434 A2	20150603	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20150602
JP2012246434 A2	20160126	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2012246434 A2	20160203	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20160202
JP2012246434 A2	20160225	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20160216
JP5888877 B2	20160322	LSGT	+	granted / extensions (spc, cpc, pte)	